



# Indian Health Focus

# *Women*



**1998-99**

U.S. Department of Health and Human Services

**Indian Health Service**

Office of Public Health

Office of Program Support

*Program Statistics Team*



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**Indian Health Service**

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# INTRODUCTION



The Indian Health Service (IHS) is an agency of the Department of Health and Human Services. The IHS goal is to assure that comprehensive, culturally acceptable personal and public health services are available and accessible to American Indian and Alaska Native people. The mission of the IHS, in partnership with American Indian and Alaska Native 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 IHS through contractual arrangements with providers in the private sector, and delivered through Tribally-operated programs and urban Indian health programs.

The IHS is concerned with the health of American Indians and Alaska Natives of all ages. The IHS presents an overview of the health status of Indians in its annual publication, *Trends in Indian Health*. However, IHS recognizes that there are segments and conditions of the Indian population that require special attention, such as infants, youth, women, the elderly, and injuries. This publication examines the health status of Indian women. It is based on data published in the IHS publications *1998-99 Trends in Indian Health* and *1998-99 Regional Differences in Indian Health*.

The population of interest for this publication is American Indian and Alaska Native women residing in the IHS service area. The IHS service area comprises the geographic areas in which IHS has responsibility (counties on and near reservations). Approximately 60 percent of American Indians and Alaska Natives in the U.S. reside in the IHS service area. In 1999, there were 1.49 million Indians in the IHS service area compared to 2.44 million in the entire U.S.



# Summary of Data Shown

American Indian and Alaska Native women comprise 51 percent of the IHS service population, as is true for U.S. All Races and White women in their population groups. However, Indian women are considerably younger than their counterparts in these populations. According to the 1990 Census, 49.6 percent of Indian women are younger than 25 years of age and 6.5 percent are older than 64 years. The comparable percentages for U.S. All Races women are 34.8 and 14.6, and for U.S. White women are 33.4 and 15.7. Indian women generally have a lower social and economic status than women in the general U.S. population. According to the 1990 Census, 13.4 percent of Indian women aged 16 and older were unemployed in contrast to 6.2 and 5.0 percent for the U.S. All Races and White populations, respectively.

Indian women give birth to children at younger ages than do women in the general U.S. population. For Indian women, 45.7 percent are under age 20 when they have their first child. This compares to 24.9 percent for U.S. All Races mothers and 22.3 percent for U.S. White mothers. Despite the large number of young mothers, low birthweight (under 2,500 grams) occurs at lower rates among Indian women than it does for women in the U.S. All Races and White populations. For Indian women, 6.0 percent of live births with reported birthweight are of low birthweight, just below the level for the White population (6.2 percent). The percentage for U.S. All Races population is considerably higher at 7.3. High birthweight births (4,000 grams or more) are a relatively greater problem for Indian women than are low weight births. For

Indian women, 12.7 percent of live births with birthweight reported are of high birthweight, compared to 10.3 percent for U.S. All Races women and 11.5 percent for U.S. White women.

Family planning occurs at widely different rates among the IHS Areas. Indian women of childbearing age (15 to 44 years) have family planning visits in the California Area at a rate of 268.7 visits per 1,000 women (15 to 44 years). This, the lowest rate, is in sharp contrast to the highest rate of 838.1 in Alaska.

Indian women generally begin prenatal care later than women in the U.S. All Races population. Prenatal care begins in the first trimester for 66.5 percent of Indian live births, whereas this percentage for the general population is 81.3. None of the IHS Areas reach the U.S. All Races rate; Alaska is closest at 77.4. The Navajo rate of 53.5, the lowest Area rate, is only 66 percent of the U.S. All Races rate.

Indian women are more likely to exhibit risky behaviors during pregnancy than their counterparts in the U.S. All Races population. For example, 20.4 percent of Indian women report that they smoke during pregnancy. Women in the U.S. All Races population, in contrast, smoke at a lower rate during pregnancy, i.e., 13.9 percent. There appears to be a relationship between smoking and low birthweight births. Of all Indian low weight births, 29.0 percent are to women who report smoking during pregnancy. Alcohol consumption is another risky behavior more prevalent among Indian pregnant women. Indian



## Summary of Data Shown

women report that they drink during pregnancy at a rate triple the rate for women in the U.S. All Races population, i.e., 4.5 percent of Indian mothers compared to 1.5 percent for U.S. All Races mothers. Partially as a result of behaviors (e.g., dietary) prior to pregnancy, Indian women giving birth are 1.8 times as likely to be diabetic than U.S. All Races women giving birth.

Indian women tend to give birth using various methods of delivery than women in the U.S. All Races population. They have a 19 percent lower rate of first cesarean deliveries (i.e., number of first cesarean deliveries per 100 live births to women who have not had a prior cesarean delivery) than U.S. All Races women. Also, Indian women who have had a cesarean delivery are 14 percent more likely to have a subsequent vaginal delivery than women in the U.S. All Races population.

The life expectancy (adjusted for misreporting of Indian race on death certificates) for Indian females is 7.1 years greater than it is for Indian males, i.e., 74.7 compared to 67.6. Therefore, it follows that Indian females die at relatively older ages than Indian males. The percentage of deaths pertaining to ages under 45 is 23 percent for Indian females and 35 percent for males. However, for ages over 64, the female percentage is 53 compared to the male percentage of 39. Indian females die mainly from diseases of the heart and malignant neoplasms (the two leading causes of death). The same is true for U.S. All Races and White females. Diseases of the heart is also the leading cause of death for Indian males, but accidents is the second leading cause. These Indian counts are adjusted for misreporting of Indian race on death certificates.

Substance abuse, especially alcohol, is a serious problem in many Indian communities. Although alcohol abuse is a more serious problem for Indian males than Indian females, it still takes a considerable death toll among Indian females. The Indian female alcoholism death rate peaks at 97.8 deaths per 100,000 population for age group 45 to 54 years. For U.S. All Races females, the highest rate for one age group is 9.5 for 55 to 64 year old women. The age-specific rate for U.S. White females also peaks for the 55 to 64 year age group (8.6). In contrast to alcoholism death rates, age-specific drug-related death rates for Indian females are closer to those for Indian males. The highest female rate (13.0) occurs among the 35 to 44 year age group. Indian female age-specific rates are generally higher than those for U.S. All Races and White females. These Indian rates are adjusted for misreporting of Indian race on death certificates.

Indian women are less likely to die from accidents, homicide, and suicide than Indian men, but, for most age groups, Indian women are more at risk from these causes than women in the general U.S. population. The age-specific death rate for accidents for Indian females is higher for all age groups in comparison to U.S. All Races and White females. Indian female suicide rates are greater than those for U.S. All Races and White females for age groups under 55 years. However, for older age groups, the Indian female rates are lower. The Indian female age-specific homicide rate is greater than the rate for U.S. All Races females for all age groups except 55 to 64 and over 74 years. It exceeds the rate for U.S. White females for all age groups except 55 to 64 and over 84 years. These Indian rates are adjusted for misreporting of Indian race on death certificates.

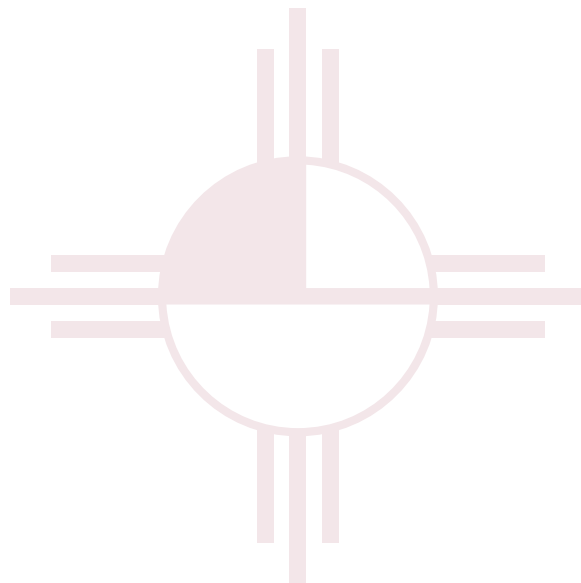




## Summary of Data Shown

Indian women die from diseases of the heart at lower rates than Indian men for all age groups, except 1 to 4 and 15 to 24 years, and for chronic liver disease and cirrhosis for all age groups except under 15 years. The cerebrovascular diseases death rate is similar for Indian males and females among the various age groups, except for age groups 65-74 years and 85 years and over. In contrast, Indian women are more likely to die from diabetes mellitus than Indian men for age groups 45 years and older. In comparison to females in the U.S. All Races and White populations, Indian females for most age groups have much higher death rates due to chronic liver disease and cirrhosis and diabetes mellitus. The Indian female death rates for diseases of the heart and cerebrovascular diseases tend to be greater than the rates for U.S. All Races and White females in age groups under 75 years, except age group under 1 year, but are less for age group 85 years and over. These Indian rates are adjusted for misreporting of Indian race on death certificates.

Persons in the U.S. All Races and White populations are more likely to die from malignant neoplasms than Indians. For all cancer deaths, Indian female age-specific rates are less than those for females of these two population groups for all age groups over 44 years except one (45 to 54 years for Whites). Women in all three population groups have the same top three leading sites for cancer deaths; trachea, bronchus, and lung; breast; and colon. Ovary and pancreas are the fourth and fifth leading sites for Indian and White women, while the order is reversed for U.S. All Races women. The Indian female age-adjusted cervical cancer death rate (3.8 deaths per 100,000 population) is 1.5 times the rate for U.S. All Races females (2.5). In contrast, the Indian female age-adjusted breast cancer death rate (14.5 deaths per 100,000 population) is 69 percent of the rate for U.S. All Races females (21.1). These Indian counts and rates are adjusted for misreporting of Indian race on death certificates.





# Sources and Limitations of Data

## POPULATION STATISTICS

The IHS service population consists of American Indians and Alaska Natives identified to be eligible for IHS services. IHS service population estimates are based on official U.S. Bureau of the Census county data. The Census Bureau enumerates those individuals who identify themselves as being American Indian, Eskimo or Aleut. The IHS service population is estimated by counting those American Indians, Eskimos, and Aleuts (as identified during the census) who reside in the geographic areas in which IHS has responsibilities (“on or near” reservations, i.e., contract health service delivery areas). These people may or may not use IHS services.

IHS service populations between census years (e.g., 1980 and 1990) are estimated by a smoothing technique in order to show a gradual transition between census years. IHS service populations beyond the latest census year (1990) are projected through linear regression techniques, using the most current 10 years of Indian birth and death data provided by the National Center for Health Statistics. The natural change (estimated number of births minus estimated number of deaths) is applied to the latest census enumeration.

IHS user population estimates are based on data from the IHS Patient Registration System. Patients who receive direct or contract health services from IHS or Tribally-operated programs are registered in the Patient Registration System. Those registered Indian patients that had at least one direct or contract inpatient stay, ambulatory

medical visit, or dental visit during the last 3 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 Indian vital event rates since State birth and death certificates do not provide information on use of IHS services.

The social and economic data contained in this publication are from the 1990 Census. They reflect the characteristics of persons that self-identified as American Indian, Eskimo, or Aleut during the 1990 Census.

## VITAL EVENT STATISTICS

American Indian and Alaska Native vital event statistics are derived from data furnished annually to the IHS by the National Center for Health Statistics (NCHS). Vital event statistics for the U.S. population were derived from data appearing in various NCHS publications, as well as from some unpublished data from NCHS. NCHS obtains birth and death records for all U.S. residents from the State departments of health, based on information reported on official State birth and death certificates. The records NCHS provides IHS contain the same basic demographic items as the vital event records maintained by NCHS for all U.S. residents, but with names, addresses, and record identification numbers deleted. It should be noted that Tribal identity is not recorded on these records. Tabulations of vital events for this publication are by place of residence.



## Sources and Limitations of Data

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

The results of the NDI study provide sufficient numbers to calculate adjustments for each IHS Area, IHS overall, and selected age groups. In addition to these adjustments based on the study findings, IHS assumed the following; 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 10 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 is shown, as applicable. The adjustments were applied to the results obtained from using an unadjusted death file.

### **PATIENT CARE STATISTICS**

Patient care statistics are derived from IHS reporting systems. There are four main patient care reporting systems. The Monthly Inpatient Services Report is a patient census report that is prepared by each IHS hospital. It indicates the number of discharges and days by type of service (e.g., adult, pediatric, obstetric, newborn), and is used for the direct inpatient workload statistics. The Inpatient Care System is the source of IHS hospital inpatient data pertaining to various patient characteristics (age, sex, principal diagnoses, other diagnoses, community of residence, etc.). The data are collected daily, one record per discharge. The Contract Care System is the source of similar contract hospital inpatient data.

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



# Sources of Additional Information

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

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This publication, other IHS statistical publications, and additional IHS statistical information are available on the IHS Program Statistics Team Web Site at:

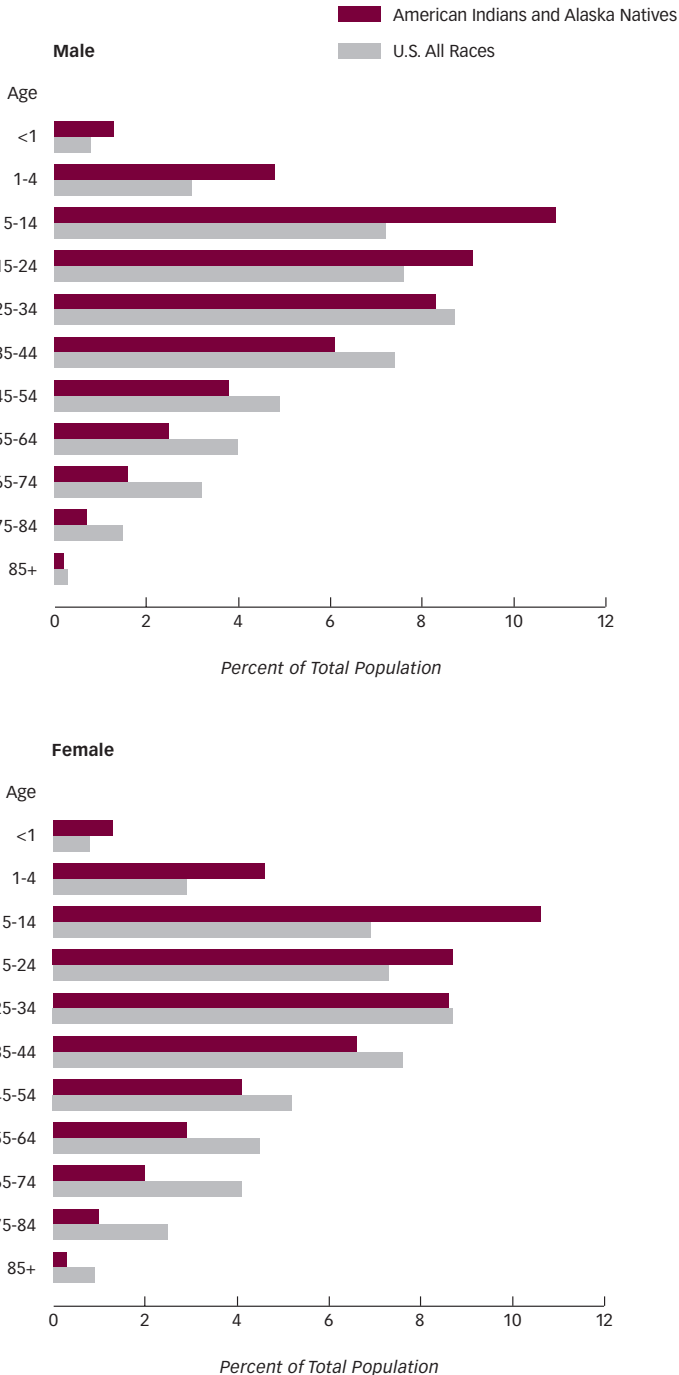
**[http://www.ihs.gov/NonMedicalPrograms/IHS\\_Stats/](http://www.ihs.gov/NonMedicalPrograms/IHS_Stats/)**

# Charts and Tables

## CHART 1

### Population by Age and Sex, 1990 Census

Indian women comprise 51 percent of the IHS service population, as is true for U.S. All Races and White women in their respective population groups. Indian women are considerably younger than women in the general population. According to the 1990 Census, 49.6 percent of Indian women are younger than 25 years of age compared to 34.8 percent for the U.S. All Races population and 33.4 percent for the U.S. White population. For Indian women, 6.5 percent are older than 64 years in contrast to 14.6 and 15.7 percents for the U.S. All Races and White populations, respectively.



**TABLE 1****Age and Sex Percent Distribution**

Age Group	American Indian & Alaska Native IHS Service Area <sup>1</sup>		U.S. All Races		U.S. White	
	Male	Female	Male	Female	Male	Female
<b>Percent of Both Sexes:</b>						
All Ages	49.274	50.726	48.747	51.253	48.941	51.059
Under 1 year	1.322	1.294	0.812	0.775	0.768	0.730
1-4 years	4.774	4.616	3.048	2.907	2.909	2.761
5-14 years	10.921	10.568	7.226	6.885	6.932	6.567
15-24 years	9.066	8.690	7.605	7.277	7.374	6.995
25-34 years	8.284	8.643	8.670	8.684	8.658	8.508
35-44 years	6.148	6.564	7.442	7.610	7.579	7.587
45-54 years	3.794	4.136	4.918	5.156	5.091	5.245
55-64 years	2.537	2.913	4.003	4.486	4.223	4.647
65-74 years	1.566	1.977	3.179	4.076	3.415	4.335
75-84 years	0.687	1.022	1.506	2.520	1.628	2.725
85 years and over	0.175	0.303	0.338	0.877	0.364	0.959
<b>Percent of Within Each Sex:</b>						
All Ages	100.000	100.000	100.000	100.000	100.000	100.000
Under 1 year	2.683	2.551	1.665	1.512	1.570	1.430
1-4 years	9.689	9.100	6.253	5.673	5.944	5.407
5-14 years	22.164	20.834	14.823	13.434	14.163	12.862
15-24 years	18.399	17.133	15.602	14.198	15.066	13.700
25-34 years	16.812	17.038	17.787	16.941	17.693	16.663
35-44 years	12.477	12.940	15.267	14.847	15.487	14.859
45-54 years	7.700	8.153	10.089	10.061	10.401	10.272
55-64 years	5.149	5.742	8.211	8.753	8.628	9.101
65-74 years	3.178	3.897	6.522	7.954	6.978	8.491
75-84 years	1.394	2.015	3.089	4.917	3.326	5.337
85 years and over	0.355	0.597	0.694	1.710	0.744	1.878

<sup>1</sup> Based upon data from the 1990 Census modified age, race, and sex file, and current IHS service area boundaries. Percentage point distributions were adjusted for error due to rounding. More recent population estimates for the American Indian and Alaska Native population by age and sex are unavailable at the county level. As a result, IHS service area estimates by age and sex, which need to be based on county level data, could not be prepared.



**CHART 2**

**Employment Status by Sex,  
American Indians and U.S. All Races,  
1990 Census**

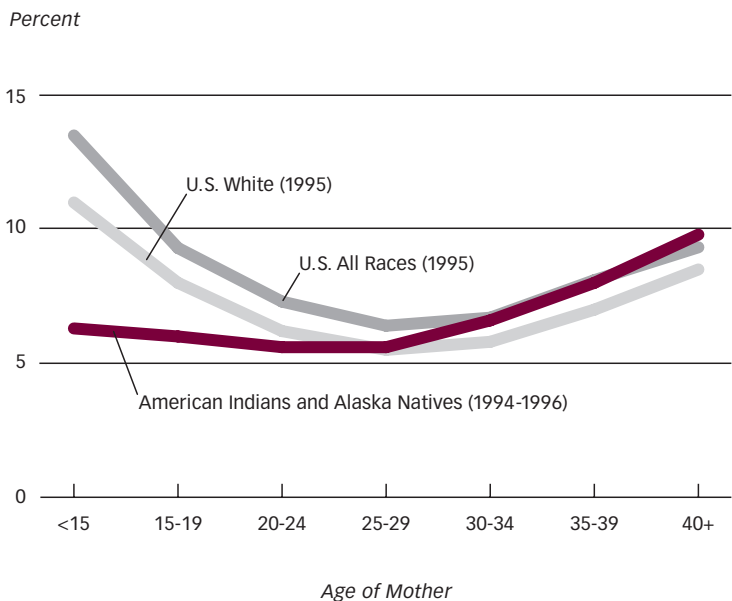
Indian women do not fare as well in the job market as do women in the general population. According to the 1990 Census, 13.4 percent of civilian Indian women aged 16 and older were unemployed in contrast to 6.2 and 5.0 percent for the U.S. All Races and White populations, respectively.



**CHART 3**

**Births of Low Birthweight  
(Under 2,500 Grams) as Percent of  
Total Live Births by Age of Mother**

Low birthweight occurs at lower rates among Indian women than it does for women in the U.S. All Races and White populations. For Indian women, 6.0 percent of live births with birthweight reported are of low birthweight, just below the level for the U.S. White population (6.2 percent). This compares to 7.3 percent for the U.S. All Races population. Indian women experience their highest rate of low weight births (9.8 percent) in the age group 40 years and older. For the U.S. All Races and White populations, this occurs in the under 15 year old age group, the rates are 13.5 and 11.0 percent, respectively.





**TABLE 2**

**Selected Economic Profiles for the United States, 1990 Census**

	American Indian & Alaska Native	All Races	White	Black	Asian & Pacific Islander	Hispanic
<b>Educational Attainment</b>						
(Persons 25 years and older):						
Percent less than 9th grade	14.1	10.4	8.9	13.8	12.9	30.7
Percent 9th to 12th grade, no diploma	20.6	14.4	13.1	23.2	9.5	19.5
Percent high school grad or higher	65.3	75.2	77.9	63.1	77.5	49.8
Percent bachelor's degree or higher	8.9	20.3	21.5	11.4	36.6	9.2
<b>Employment Status by Sex</b>						
(Civilian Persons 16 years and older):						
Percent unemployed, males	16.2	6.4	5.3	13.7	5.1	9.8
Percent unemployed, females	13.4	6.2	5.0	12.2	5.5	11.2
<b>Household Income in 1989</b>						
Median household income	\$19,897	\$30,056	\$31,435	\$19,758	\$36,784	\$24,156
<b>Percent Below the Poverty Level by Age</b>						
All ages	31.6	13.1	9.8	29.5	14.1	25.3
Under 5 years	43.1	20.1	13.8	44.0	17.5	33.4
5 years	41.6	19.7	13.6	42.8	18.0	33.9
6 to 11 years	37.7	18.3	12.5	39.8	17.3	32.6
12 to 17 years	33.1	16.3	11.0	35.5	16.3	30.3
18 to 64 years	27.7	11.0	8.5	23.4	13.0	21.3
65 to 74 years	26.9	10.4	8.4	28.6	11.3	21.9
75 years and older	33.3	16.5	14.6	37.3	13.5	27.8

**Note:** American Indian data are for residents of the 35 Reservation States.  
(South Carolina was added as a Reservation State in FY 1994. Indiana was added as a Reservation State in 1995.)

**Source:** U.S. Bureau of the Census, Minority Economic Profiles, July 24, 1992, Tables CPH-L-92, 93, 94, and unpublished data from the U.S. Bureau of the Census.



**TABLE 3**

**Births of Low Birthweight  
(Under 2,500 Grams)  
by Age of Mother**

American Indians and  
Alaska Natives, IHS  
Service Area, 1994-1996,  
and U.S. All Races and  
White Populations, 1995

**American Indian and Alaska Native**

Age of Mother	Total Live Births	Number Low Weight	Percent Low Weight
All Ages	98,808 <sup>1</sup>	5,962	6.0
Under 20 years	20,905	1,249	6.0
Under 15 years	477	30	6.3
15-19 years	20,428	1,219	6.0
20-24 years	32,022	1,779	5.6
25-29 years	22,946	1,283	5.6
30-34 years	15,134	1,000	6.6
35-39 years	6,448	519	8.0
40 years and over	1,353	132	9.8

**U.S. All Races**

Age of Mother	Total Live Births	Number Low Weight	Percent Low Weight
All Ages	3,895,532 <sup>1</sup>	285,152	7.3
Under 20 years	511,561	48,158	9.4
Under 15 years	12,219	1,647	13.5
15-19 years	499,342	46,511	9.3
20-24 years	964,574	70,578	7.3
25-29 years	1,062,519	68,302	6.4
30-34 years	903,730	60,439	6.7
35-39 years	383,269	31,007	8.1
40 years and over	69,879	6,668	9.5

**U.S. White**

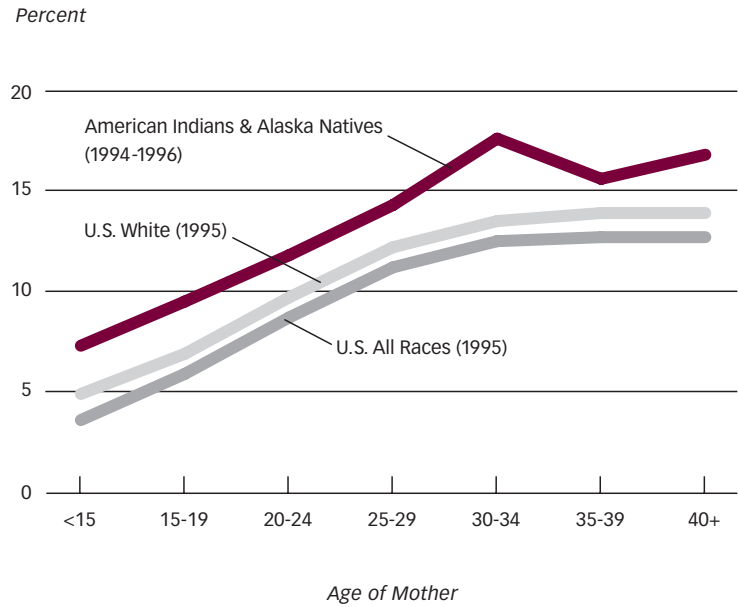
Age of Mother	Total Live Births	Number Low Weight	Percent Low Weight
All Ages	3,096,063 <sup>1</sup>	192,594	6.2
Under 20 years	355,159	28,427	8.0
Under 15 years	5,845	642	11.0
15-19 years	349,314	27,785	8.0
20-24 years	742,502	45,890	6.2
25-29 years	872,281	47,898	5.5
30-34 years	753,957	43,478	5.8
35-39 years	315,813	22,139	7.0
40 years and over	56,351	4,762	8.5

<sup>1</sup> Excludes 215 American Indian and Alaska Native live births, 4,057 U.S. All Races live births, and 2,822 U.S. White live births with birthweight not stated.

**CHART 4**

**Births of High Birthweight (4,000 Grams or More) as Percent of Total Live Births by Age of Mother**

High birthweight births (4,000 grams or more) are a relatively greater problem for Indian women than are low weight births. High birthweight infants may be a complication of diabetic pregnancies and should be of concern. For Indian women, 12.7 percent of live births with birthweight reported are of high birthweight compared to 6.0 percent for low weight births. The U.S. All Races population has a lower rate of high birthweight births, i.e., 10.3 percent, whereas the U. S. White population has a higher rate, 11.5. The highest rates for all three population groups occur in age groups 35 years and over.



**TABLE 4**

**Births of High Birthweight  
(4,000 Grams or More)  
by Age of Mother**

**American Indian and Alaska Native**

Age of Mother	Total Live Births	Number Low Weight	Percent Low Weight
All Ages	98,808 <sup>1</sup>	12,530	12.7
Under 20 years	20,905	1,966	9.4
Under 15 years	477	35	7.3
15-19 years	20,428	1,931	9.5
20-24 years	32,022	3,785	11.8
25-29 years	22,946	3,280	14.3
30-34 years	15,134	2,665	17.6
35-39 years	6,448	1,007	15.6
40 years and over	1,353	227	16.8

**U.S. All Races**

Age of Mother	Total Live Births	Number Low Weight	Percent Low Weight
All Ages	3,895,532 <sup>1</sup>	402,533	10.3
Under 20 years	511,561	29,903	5.8
Under 15 years	12,219	442	3.6
15-19 years	499,342	29,461	5.9
20-24 years	964,574	83,712	8.7
25-29 years	1,062,519	118,557	11.2
30-34 years	903,730	112,636	12.5
35-39 years	383,269	48,842	12.7
40 years and over	69,879	8,883	12.7

**U.S. White**

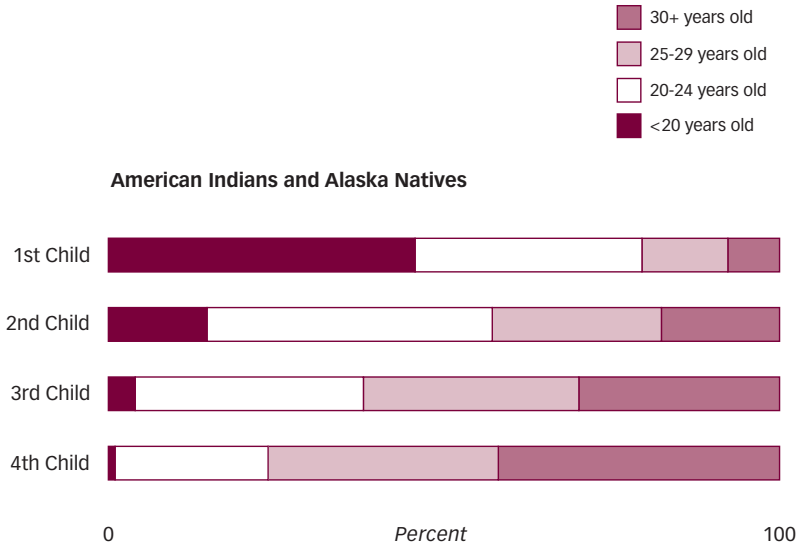
Age of Mother	Total Live Births	Number Low Weight	Percent Low Weight
All Ages	3,096,063 <sup>1</sup>	356,535	11.5
Under 20 years	355,159	24,402	6.9
Under 15 years	5,845	285	4.9
15-19 years	349,314	24,117	6.9
20-24 years	742,502	72,256	9.7
25-29 years	872,281	106,398	12.2
30-34 years	753,957	101,903	13.5
35-39 years	315,813	43,759	13.9
40 years and over	56,351	7,817	13.9

<sup>1</sup> Excludes 215 American Indian and Alaska Native live births, 4,057 U.S. All Races live births, and 2,822 U.S. White live births with birthweight not stated.

**CHART 5.1**

**Birth Order by Age of Mother, Percent Within Birth Order, American Indians and Alaska Natives**

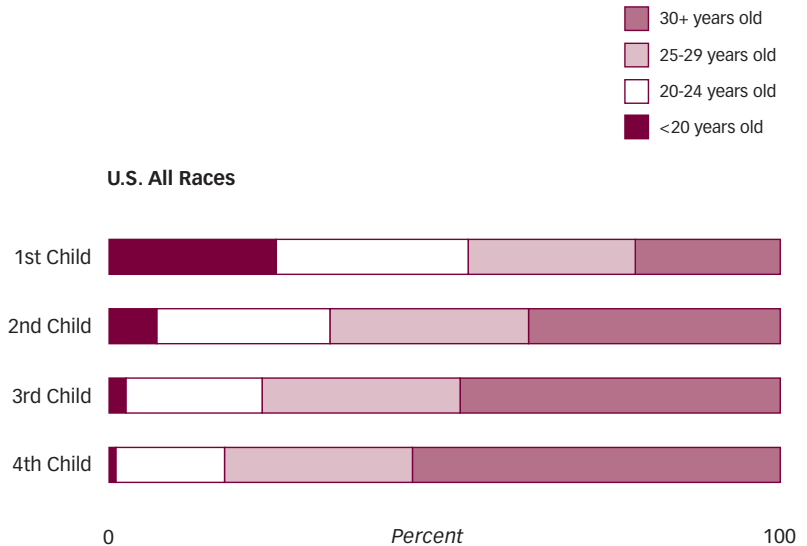
Indian women give birth to children at younger ages than do women in the general population. For Indian women, 45.7 percent are under age 20 when they have their first child. Only 2.1 percent are older than age 34 at the time of their first born.



**CHART 5.2**

**Birth Order by Age of Mother, Percent Within Birth Order, U.S. All Races**

Women in the U.S. All Races population tend to wait longer to have their first child than Indian women. For the All Races population, 24.9 percent of women are under age 20 and 6.1 percent are older than age 34 when they have their first child.

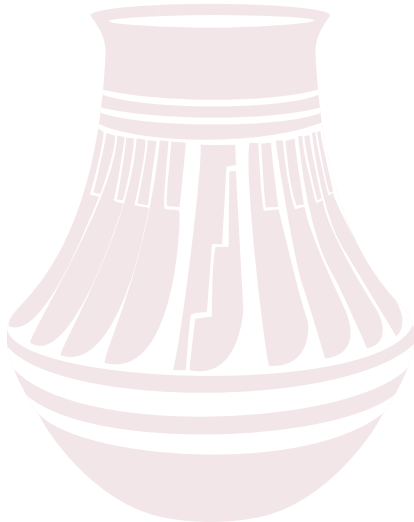
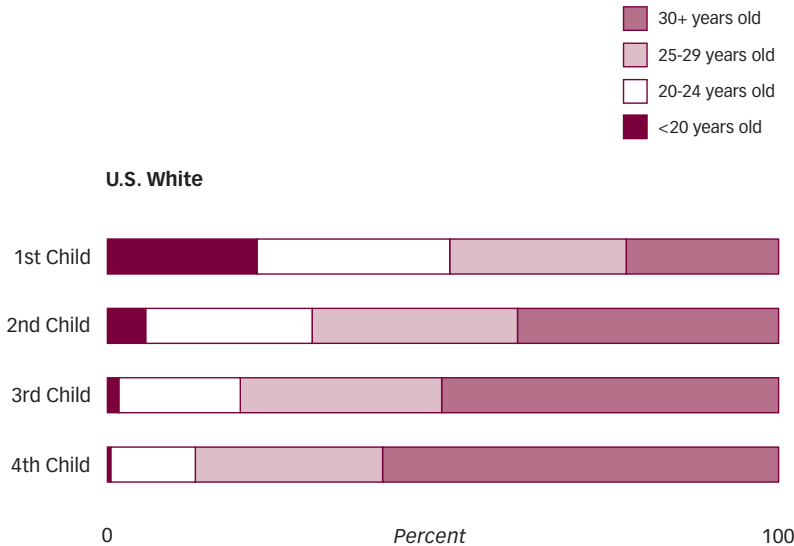




**CHART 5.3**

**Birth Order by Age of Mother,  
Percent Within Birth Order,  
U.S. White**

The U.S. White population is similar to the general population in terms of mother's age when the birth of their first child occurs. For the White population, 22.3 percent of women are under age 20 and 6.4 percent are older than age 34 when they have their first child.



**TABLE 5****Number and Percent Distribution of Live Births**

By Age of Mother Within Birth Order

Age Group	Live Birth Order						
	Total Live Births	1st Child	2nd Child	3rd Child	4th Child	5th Child	6th+ Child
<b>American Indian and Alaska Native, IHS Service Area, 1994-1996</b>							
All Ages	98,683 <sup>1</sup>	35,422	26,166	17,182	9,675	5,179	5,059
All Ages	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Under 20 years	21.2	45.7	14.7	4.0	1.0	0.3	0.0
20-24 years	32.4	33.8	42.5	34.0	22.8	12.8	4.3
25-29 years	23.2	12.8	25.2	32.1	34.3	34.1	23.7
30-34 years	15.3	5.6	12.8	20.8	27.7	32.5	36.9
35-39 years	6.5	1.8	4.1	7.7	12.1	16.5	27.3
40-49 years	1.4	0.3	0.7	1.4	2.1	3.8	7.8
<b>U.S. All Races, 1995</b>							
All Ages	3,871,709 <sup>2</sup>	1,610,453	1,243,433	617,755	237,647	89,463	72,958
All Ages	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Under 20 years	13.1	24.9	7.1	2.5	1.0	0.3	0.1
20-24 years	24.8	28.6	25.8	20.3	16.2	11.9	5.1
25-29 years	27.3	24.9	29.6	29.5	28.0	26.1	19.7
30-34 years	23.2	15.5	26.2	31.0	32.6	33.2	33.0
35-39 years	9.8	5.2	9.8	14.4	18.6	22.8	30.1
40-49 years	1.8	0.9	1.5	2.3	3.6	5.7	12.0
<b>U.S. White, 1995</b>							
All Ages	3,076,929 <sup>3</sup>	1,287,470	1,008,994	491,536	179,355	62,725	46,849
All Ages	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Under 20 years	11.5	22.3	5.7	1.7	0.5	0.2	0.1
20-24 years	24.0	28.7	24.8	18.1	12.6	7.8	3.0
25-29 years	28.1	26.3	30.6	30.0	27.9	24.5	15.7
30-34 years	24.4	16.3	27.4	32.8	35.0	35.8	32.9
35-39 years	10.2	5.5	10.0	15.1	20.2	25.4	34.2
40-49 years	1.8	0.9	1.5	2.3	3.8	6.3	14.1

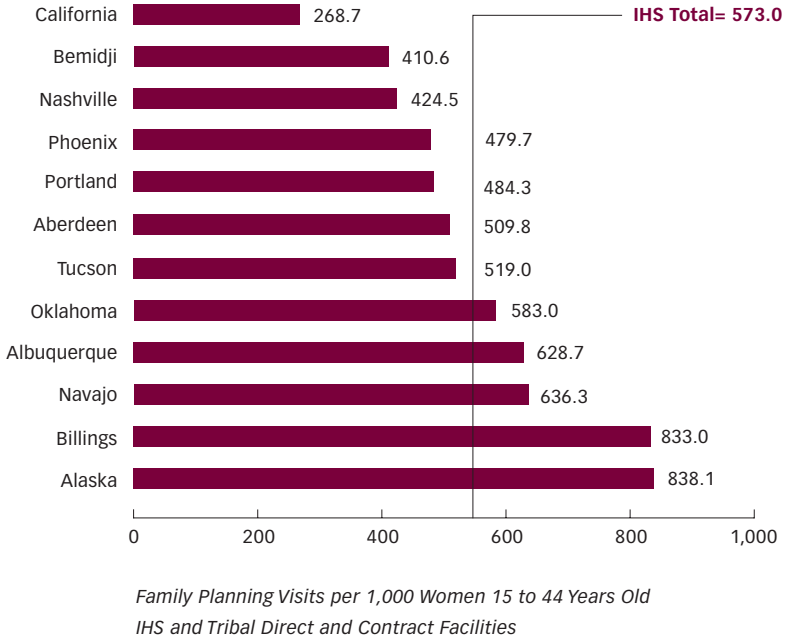
<sup>1</sup> Excludes 340 American Indian and Alaska Native births (0.3 percent) with birth order not reported.<sup>2</sup> Excludes 27,880 U.S. All Races births (0.7 percent) with birth order not reported.<sup>3</sup> Excludes 21,956 U.S. All Races White births (0.7 percent) with birth order not reported.**Note:** 0.0 Rounds to zero. Where needed percents were adjusted to sum to 100.0 due to rounding



**CHART 6**

**Family Planning  
Visit Rates, FY 1997**

Indian women of child-bearing age (15 to 44 years) have family planning visits to IHS and Tribal direct and contract facilities at a rate of 573.0 visits per 1,000 women (15 to 44 years). The rate varies considerably by IHS Area, ranging from 268.7 in California to 838.1 in Alaska.



**TABLE 6**

**Number and Rate of  
Family Planning Visits,  
FY 1997**

*Indian Health Service and Tribal Direct and Contract Facilities, FY 1997*

	Total Visit Rate <sup>1</sup>	Total Visits	Direct Visits	Contract Visits	Women 15-44 Years
All IHS Areas	573.0	185,282	183,799	1,483	323,328
Aberdeen	509.8	13,955	13,928	27	27,373
Alaska	838.1	21,242	21,237	5	25,344
Albuquerque	628.7	13,702	13,648	54	21,794
Bemidji	410.6	7,705	7,635	70	18,767
Billings	833.0	13,094	12,930	164	15,720
California	268.7	4,283	4,277	6	15,940
Nashville	424.5	3,801	3,801	0	8,954
Navajo	636.3	35,707	34,910	797	56,115
Oklahoma	583.0	42,447	42,410	37	72,809
Phoenix	479.7	16,036	15,974	62	33,432
Portland	484.3	10,380	10,130	250	21,434
Tucson	519.0	2,930	2,919	11	5,646

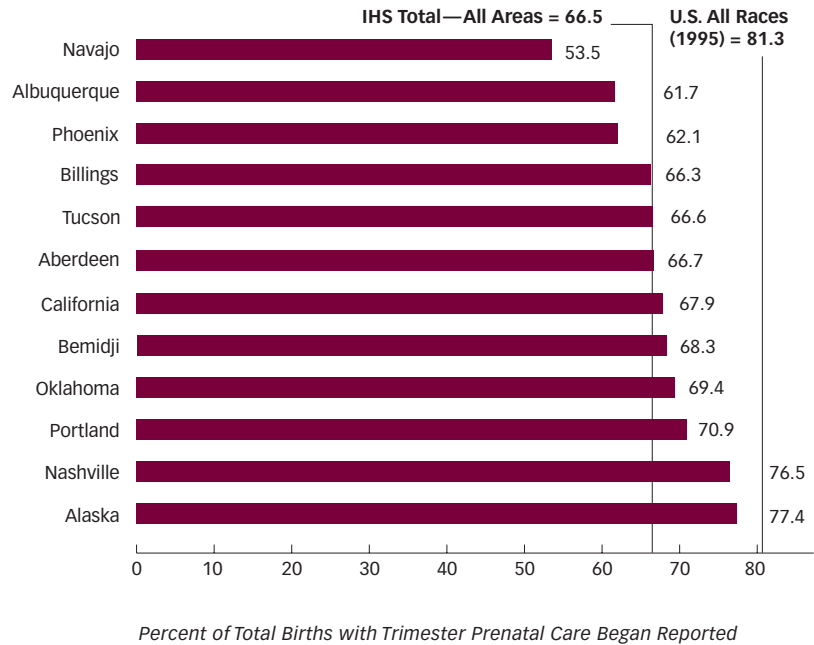
<sup>1</sup> Number of family planning visits per 1,000 women of childbearing age (15-44 years) in the IHS user population.

**Sources:** IHS Direct: APC Data System (Report 1A)  
IHS Contract: Contract Statistical System (Report 3G)  
Tribal Direct and Contract: Area Submissions

**CHART 7**

**Live Births with Prenatal Care Beginning in First Trimester (1994-1996)**

Indian women generally begin prenatal care later than women in the U.S. All Races population. Prenatal care begins in the first trimester for 66.5 percent of Indian live births, whereas this percentage for the general population is 81.3. None of the IHS Areas reach the U.S. All Races rate, although Alaska is closest at 77.4. The Navajo rate of 53.5, the lowest Area rate, is only 66 percent of the U.S. All Races rate.





**TABLE 7****Live Births with  
Prenatal Care  
Beginning in  
First Trimester  
(1994-1996)**

	Total Live Births <sup>1</sup>	Live Births With trimester Prenatal Care Began Reported	Live Births With Prenatal Care Beginning in the First Trimester <sup>2</sup>	
			Number	Percent
U.S. All Races (1995)	3,899,589	3,807,446	3,094,402	81.3
All IHS Areas	99,023	96,479	64,164	66.5
Aberdeen	7,924	7,796	5,198	66.7
Alaska	7,840	7,748	5,994	77.4
Albuquerque	5,151	4,901	3,024	61.7
Bemidji	5,865	5,765	3,935	68.3
Billings	4,066	4,039	2,678	66.3
California	8,208	8,139	5,527	67.9
Nashville	4,627	4,557	3,484	76.5
Navajo	14,091	13,836	7,408	53.5
Oklahoma	18,759	17,917	12,438	69.4
Phoenix	10,235	10,032	6,228	62.1
Portland	10,494	9,992	7,080	70.9
Tucson	1,763	1,757	1,170	66.6

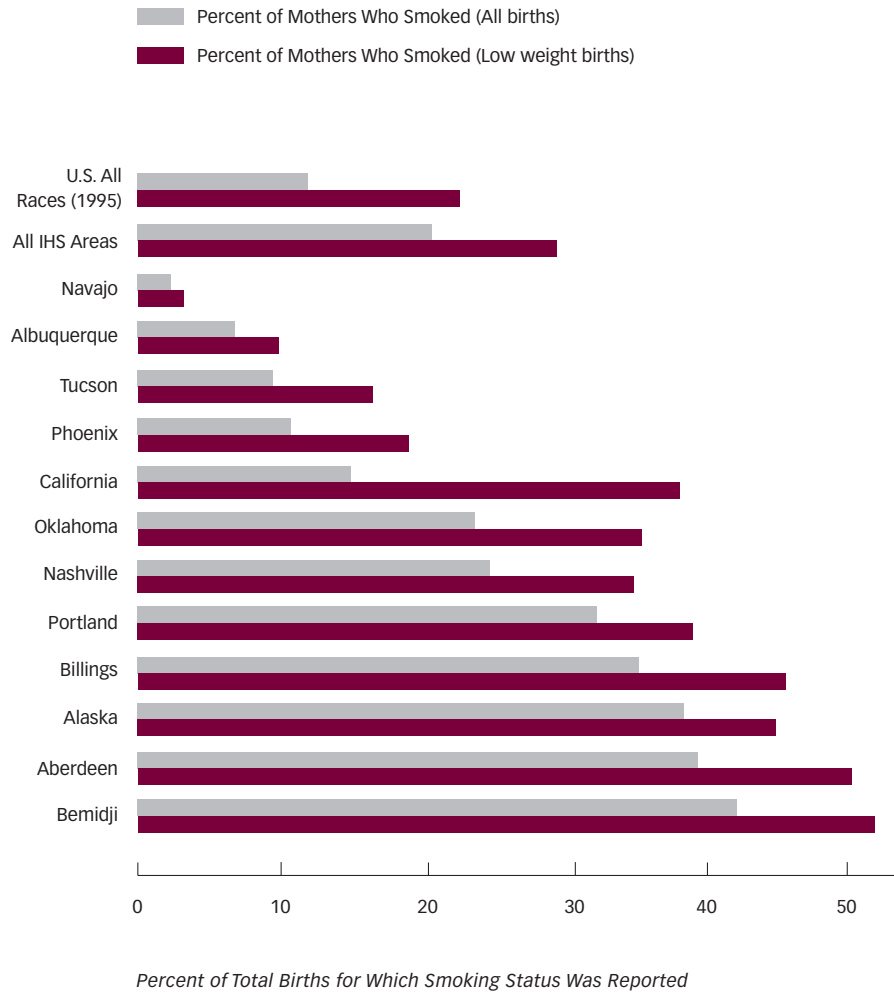
<sup>1</sup> Includes 92,143 U.S. All Races live births and 2,544 American Indian/Alaska Native live births for which trimester of pregnancy that prenatal care began was not reported on the State birth certificate.

<sup>2</sup> Percent based on live births with this information reported.

**CHART 8**

**Mothers Who Smoked During Pregnancy (1994-1996)**

In the Indian population, 20.4 percent of women report that they smoke during pregnancy. Women in the U.S. All Races population smoke at a lower rate during pregnancy, i.e., 13.9 percent. There appears to be a relationship between smoking and low birth-weight births. Of all Indian low weight births, 29.0 percent are to women who report smoking during pregnancy. There are regional variations among the IHS Areas in terms of the rate of smoking during pregnancy. Higher rates of smoking are associated with the IHS Areas in the northern segment of the country, excluding the East Coast. The low weight-births rates for Bemidji, Aberdeen, Billings, Alaska, and Portland reach a high of 53.5 percent and a low of 39.3 percent. For the other IHS Areas, the rates range from 3.6 percent in Navajo to 37.5 percent in California.



**TABLE 8**

**Percent of Mothers Who Smoked During Pregnancy for All Births and Low Weight Births by Age of Mother (1994-1996)**

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

**Percent of Live Births<sup>1</sup> for Which the Mother Reported Smoking**

	All Ages	Under 15 Years	15-19 Years	20-34 Years	35-49 Years
U.S. All Races (1995)	13.9	7.3	16.8	13.8	11.7
All IHS Areas	20.4	13.5	21.7	20.2	19.1
Aberdeen	38.2	30.0	34.5	39.4	39.8
Alaska	36.7	15.4	43.4	35.5	34.4
Albuquerque	5.4	4.5	5.6	5.3	5.9
Bemidji	41.1	27.3	40.3	41.5	39.7
Billings	31.6	16.0	31.6	31.6	33.5
California	13.5	—*	14.3*	13.6	—*
Nashville	23.3	—*	20.9	24.0	24.9
Navajo	2.3	5.1	3.7	2.0	1.6
Oklahoma	20.5	9.9	19.4	20.4	28.7
Phoenix	10.0	5.1	9.8	10.1	10.0
Portland	29.2	23.0	33.6	28.1	27.5
Tucson	9.0	18.8*	8.8	8.7	11.8

**Percent of Low Weight Births<sup>1</sup> for Which the Mother Reported Smoking**

	All Ages	Under 15 Years	15-19 Years	20-34 Years	35-49 Years
U.S. All Races (1995)	22.5	7.8	19.6	23.1	23.6
All IHS Areas	29.0	19.3	27.1	29.1	32.3
Aberdeen	51.9	66.7*	51.1	51.7	53.3*
Alaska	46.4	—*	31.5	51.4	40.8
Albuquerque	8.7	—*	3.5	8.9	15.8
Bemidji	53.5	100.0*	39.3	56.7	57.1
Billings	47.4	—*	43.5	47.1	55.2
California	37.5*	—*	—*	42.9*	—*
Nashville	34.3	—*	25.0	36.9	43.5
Navajo	3.6	—*	7.6	2.6	4.6
Oklahoma	34.7	—*	32.2	33.5	56.0
Phoenix	17.5	33.3*	18.9	16.0	24.6
Portland	39.3	50.0*	37.3	39.4	42.2
Tucson	13.7	—*	10.7*	12.2	33.3*

— Represents zero.

\*Percent based on less than 20 births in the age group specified.

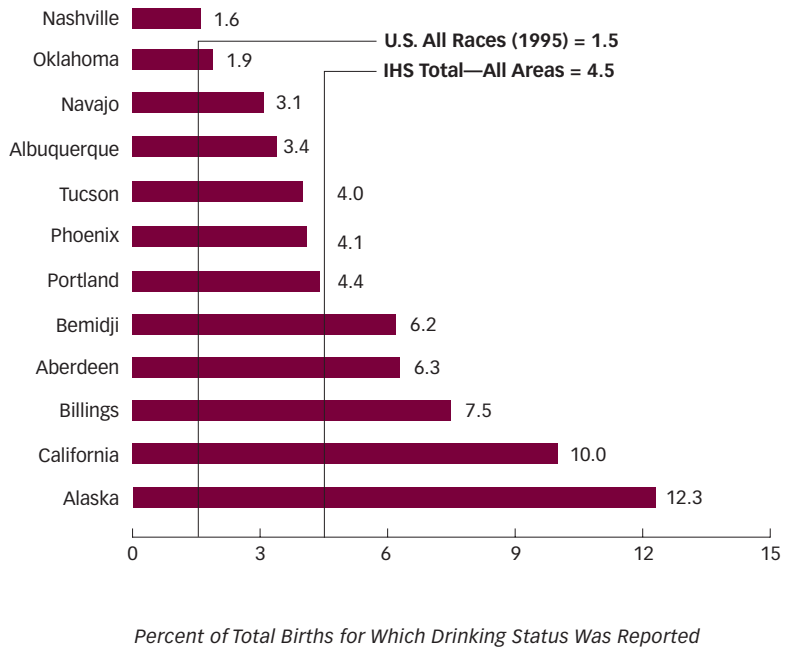
<sup>1</sup> Based on the number of live births with smoking status of the mother reported.

**Note:** The States of California, Indiana, New York (except New York City) and South Dakota do not include a question on smoking history of the mother during pregnancy. Persons usually residing in one of these 4 States responding to this question reported their smoking history on a form from another State, since the delivery was performed out of their usual State of residence.

## CHART 9

### Mothers Who Drank During Pregnancy (1994-1996)

Indian women report that they consume alcohol during pregnancy at a rate triple the rate for women in the U.S. All Races population. That is, 4.5 percent of Indian mothers are reported to have drunk during pregnancy compared to 1.5 percent for All Races mothers. The highest rate among the IHS Areas occurs in Alaska, where 12.3 percent of mothers report drinking during pregnancy. This is 23 percent higher than the rate for the next highest Area (California at 10.0 percent) and 7.7 times the lowest Area rate (1.6 percent in Nashville, which is close to the U.S. All Races rate of 1.5).





**TABLE 9**

**Percent of Mothers  
Who Drank  
During Pregnancy  
by Age of Mother  
(1994-1996)**

*(Mothers who drank during pregnancy includes those who drank even less than one drink per week during pregnancy.)*

	All Ages	Under 18 Years	18-19 Years	20-24 Years	25-29 Years	30-34 Years	35-49 Years
U.S. All Races (1995)	1.5	0.8	0.9	1.2	1.4	2.0	2.5
All IHS Areas	4.5	3.6	3.3	4.1	4.8	5.7	6.0
Aberdeen	6.3	5.5	4.7	5.8	7.1	7.9	7.6
Alaska	12.3	12.4	8.6	10.6	12.4	15.2	15.5
Albuquerque	3.4	3.0	3.2	2.7	3.9	4.1	3.6
Bemidji	6.2	4.1	5.1	5.5	6.2	8.3	10.7
Billings	7.5	4.5	5.0	8.0	8.7	7.7	10.9
California	10.0	25.0*	25.0*	6.3*	10.5*	10.0*	—*
Nashville	1.6	0.3	1.6	1.6	2.1	1.3	2.7
Navajo	3.1	3.8	3.1	2.8	3.2	3.1	3.1
Oklahoma	1.9	1.0	1.0	2.0	1.6	2.7	3.7
Phoenix	4.1	2.8	3.5	3.4	4.3	6.1	4.8
Portland	4.4	3.3	2.9	4.6	3.4	4.7	5.5
Tucson	4.0	3.7	3.1	3.7	4.4	4.7	4.4

— Represents zero

\*Percent based on less than 20 births in the age group specified.

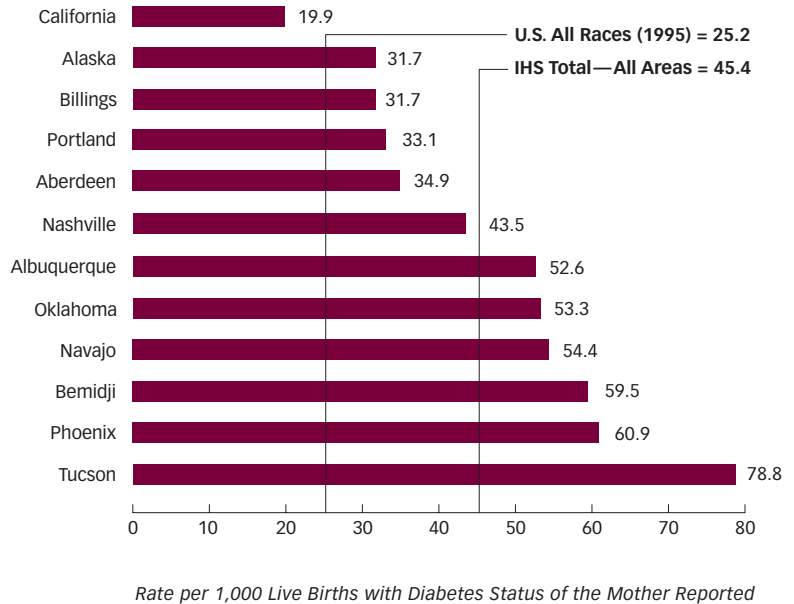
<sup>1</sup> Based on the number of live births with drinking status of the mother reported.

**Note:** The States of California and South Dakota do not include a question on drinking history of the mother during pregnancy on State birth certificates. Persons usually residing in one of these two States responding to this question reported their drinking history on a form from another State, since the delivery was performed out of their usual State of residence.

**CHART 10**

**Births Rates with Diabetic Mother (1994-1996)**

Indian women giving birth are more likely to be diabetic (medical risk factor of diabetes is reported on the birth certificate) than their counterparts in the U.S. All Races population. For the Indian population, there are 45.4 births with a diabetic mother per 1,000 live births. This is 1.8 times the U.S. All Races rate of 25.2. The Tucson Area rate (78.8) is over three times the U.S. All Races rate, while the California Area rate (19.9) is the only Area rate below the U.S. All Races rate.



**TABLE 10**

**Rate of Live Births with Diabetic Mother by Age of Mother (1994-1996)**

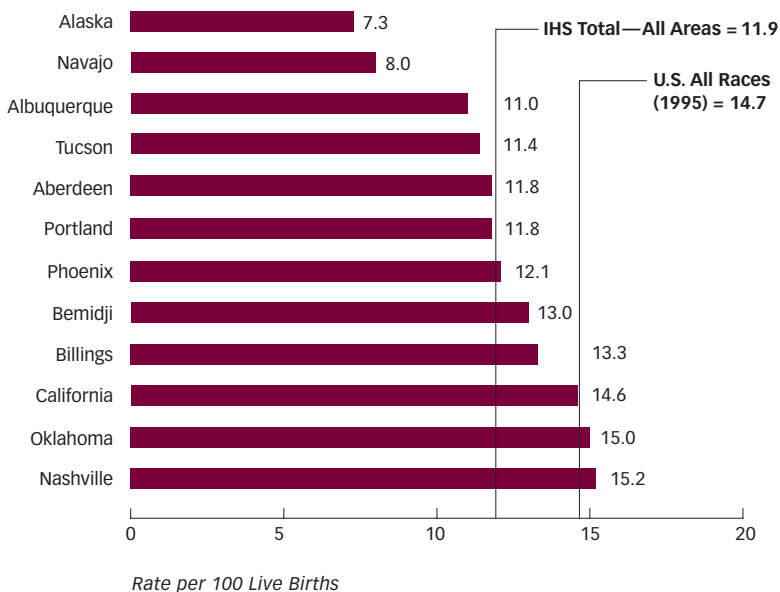
	All Ages	Under 20 Years	20-24 Years	25-29 Years	30-34 Years	35-39 Years	40-49 Years
U.S. All Races (1995)	25.2	8.1	16.0	24.6	33.5	46.2	62.8
All IHS Areas	45.4	13.7	28.4	49.7	78.4	112.5	162.2
Aberdeen	34.9	12.0	22.7	37.9	64.5	105.6	171.4
Alaska	31.7	11.4	20.0	34.2	49.4	53.8	104.5
Albuquerque	52.6	15.9	27.1	45.3	96.2	137.2	195.1
Bemidji	59.5	22.8	38.0	64.6	108.5	164.4	211.5
Billings	31.7	12.1	18.0	41.6	65.7	47.8	170.2
California	19.9	6.6	17.5	20.7	30.8	39.0	51.7
Nashville	43.5	10.6	32.1	51.6	77.5	100.0	100.0
Navajo	54.4	9.1	24.5	49.9	91.6	133.5	209.6
Oklahoma	53.3	17.9	40.2	68.2	85.8	151.3	170.2
Phoenix	60.9	15.8	33.5	68.7	102.9	173.1	184.0
Portland	33.1	12.4	21.0	36.1	62.0	69.6	109.6
Tucson	78.8	26.6	43.4	88.3	166.0	166.7	363.6

<sup>1</sup> Number of live births with a diabetic mother per 1,000 live births with diabetes status reported in age group specified.

**CHART 11.1**

**First Cesarean Delivery  
(1994-1996)**

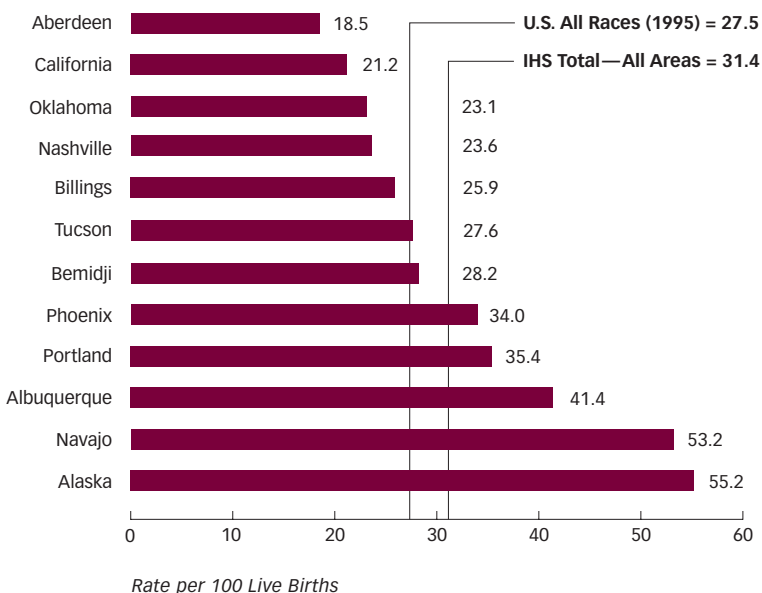
Indian women have a lower rate of cesarean deliveries than do women in the U.S. All Races population. The Indian rate of first cesarean deliveries (11.9 first cesarean deliveries per 100 live births to women who have not had a prior cesarean delivery) is 19 percent less than the U.S. All Races rate, 14.7. Only two IHS Areas exceed the U.S. All Races rate, Nashville (15.2) and Oklahoma (15.0). The two lowest rates occur in the Alaska (7.3) and Navajo (8.0) Areas.



**CHART 11.2**

**Vaginal Births After  
Previous Cesarean Delivery  
(1994-1996)**

Indian women who have had a cesarean delivery are 14 percent more likely to have a subsequent vaginal delivery than do women in the U.S. All Races population. The Indian rate is 31.4 vaginal births per 100 live births to women with a prior cesarean delivery compared to a U.S. All Races rate of 27.5. In the Alaska (55.2) and Navajo (53.2) IHS Areas, the rate is about twice the U.S. rate. Five IHS Areas have rates lower than the U.S. rate (Aberdeen, California, Oklahoma, Nashville, and Billings).



**TABLE 11***(Rates per 100 live births)*

**Rates of First  
Cesarean Delivery  
and Vaginal Birth  
after Previous  
Cesarean Delivery  
by Age of Mother  
(1994-1996)**

**Rate of First Cesarean Delivery**

	All Ages	Under 25 Years	25-34 Years	35-49 Years
U.S. All Races (1995)	14.7	13.4	15.0	18.3
All IHS Areas	11.9	11.6	11.7	15.0
Aberdeen	11.8	11.5	12.1	12.6
Alaska	7.3	6.6	7.3	10.7
Albuquerque	11.0	10.4	10.7	16.7
Bemidji	13.0	12.9	12.6	16.7
Billings	13.3	12.4	13.8	5.7
California	14.6	14.1	14.6	18.5
Nashville	15.2	14.6	15.1	21.7
Navajo	8.0	7.3	8.0	11.2
Oklahoma	15.0	15.0	14.3	18.6
Phoenix	12.1	11.5	12.2	15.6
Portland	11.8	10.8	12.6	15.3
Tucson	11.4	9.8	12.7	5.7

**Rate of Vaginal Births After Previous Cesarean Delivery**

	All Ages	Under 25 Years	25-34 Years	35-49 Years
U.S. All Races (1995)	27.5	30.0	27.8	23.7
All IHS Areas	31.4	32.5	31.1	29.3
Aberdeen	18.5	22.2	15.9	15.6
Alaska	55.2	54.3	54.6	58.8
Albuquerque	41.4	47.4	40.6	35.8
Bemidji	28.2	28.9	28.7	23.1
Billings	25.9	31.0	24.1	16.0
California	21.2	23.0	20.7	19.4
Nashville	23.6	24.1	25.1	10.9
Navajo	53.2	58.8	54.3	42.7
Oklahoma	23.1	24.1	23.2	18.8
Phoenix	34.0	37.5	32.2	32.9
Portland	35.4	39.9	34.7	27.8
Tucson	27.6	37.5	15.6	40.9

**Note:** Rate of first cesarean delivery is computed by dividing the total number of such deliveries by the number of all women who have never had a cesarean delivery. The denominator for this rate includes all births less those with method of delivery classified as repeat cesarian, vaginal birth after previous cesarian, or method not stated.

Rate of vaginal births after previous cesarian delivery is computed by dividing the number of such deliveries by the sum of these deliveries plus repeat cesarian deliveries, that is, to women with a previous cesarian section.

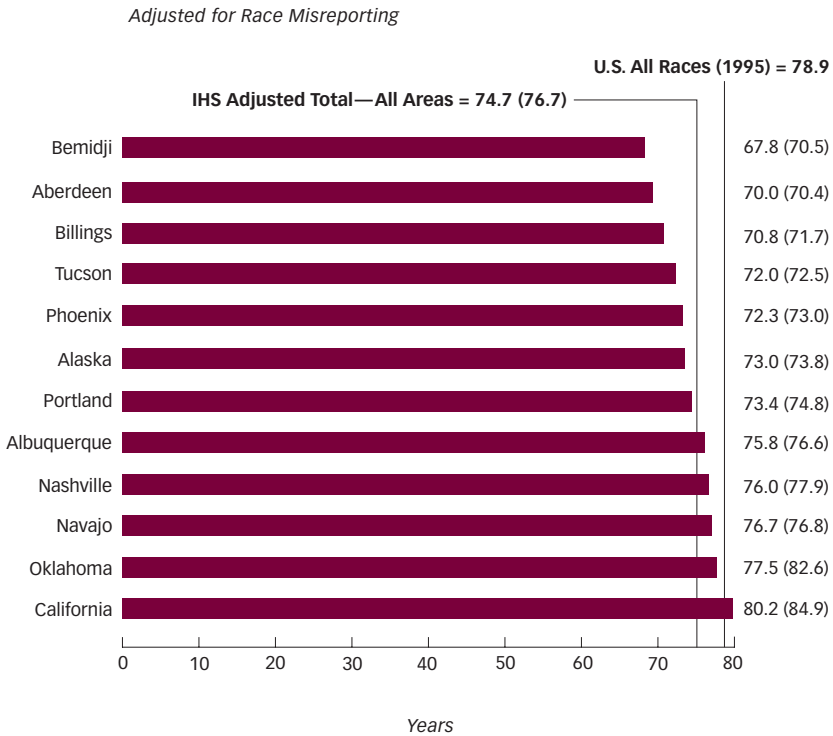




**CHART 12**

**Life Expectancy  
at Birth, Females  
(1994-1996)**

The life expectancy for Indian females is 7.1 years greater than it is for Indian males, i.e., 74.7 compared to 67.6. Indian females are within 4.1 years of the life expectancy of U.S. All Races females, which is 78.9. The Bemidji Area has the lowest female life expectancy (67.8) among the IHS Areas. These Indian life expectancies have been adjusted for misreporting of Indian race on death certificates.

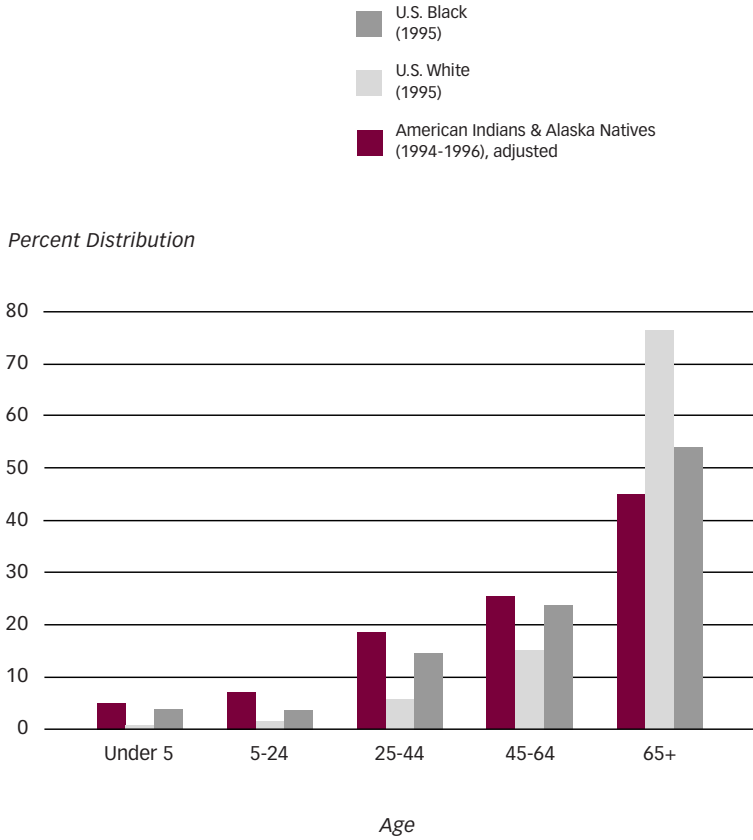


Note: Actual life expectancies (i.e., not adjusted for misreporting of Indian race) are shown in parentheses.

**CHART 13**

**Deaths by Age and Race,  
American Indians and  
Alaska Natives (1994-1996)**

Indian females die at relatively older ages than Indian males. The percentage of deaths pertaining to ages under 45 is 23 percent for Indian females and 35 percent for males. However, for ages over 64, the female percentage is 53 compared to the male percentage of 39. These Indian rates are adjusted for mis-reporting of Indian race on death certificates.



**TABLE 13****Number and Percent Distribution of Deaths by Age and Sex**

American Indians and Alaska Natives, IHS Service Area, 1994-1996, and Selected U.S. Populations, 1995

Age Group	American Indian and Alaska Native											
	Both Sexes				Male				Female			
	Number		Percent		Number		Percent		Number		Percent	
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>
All Ages	22,143	25,304	100.0	100.0	12,452	14,185	100.0	100.0	9,691	11,119	100.0	100.0
Under 1 year	753	922	3.4	3.6	395	492	3.2	3.5	358	430	3.7	3.9
1 to 4	297	353	1.3	1.4	166	197	1.3	1.4	131	156	1.4	1.4
5 to 14	329	366	1.5	1.4	195	216	1.6	1.5	134	150	1.4	1.3
15 to 24	1,191	1,433	5.4	5.7	895	1,029	7.2	7.3	296	404	3.1	3.6
25 to 34	1,712	2,003	7.7	7.9	1,208	1,368	9.7	9.6	504	635	5.2	5.7
35 to 44	2,136	2,432	9.6	9.6	1,436	1,597	11.5	11.3	700	835	7.2	7.5
45 to 54	2,453	2,798	11.1	11.1	1,496	1,683	12.0	11.9	957	1,115	9.9	10.0
55 to 64	3,132	3,616	14.1	14.3	1,807	2,072	14.5	14.6	1,325	1,544	13.7	13.9
65 to 74	4,032	4,629	18.2	18.3	2,164	2,489	17.4	17.5	1,868	2,140	19.3	19.2
75 to 84	3,705	4,252	16.7	16.8	1,781	2,079	14.3	14.7	1,924	2,173	19.9	19.5
85 and over	2,390	2,487	10.8	9.8	900	954	7.2	6.7	1,490	1,533	15.4	13.8
Age not stated	13	13	0.1	0.1	9	9	0.1	0.1	4	4	0.0	0.0

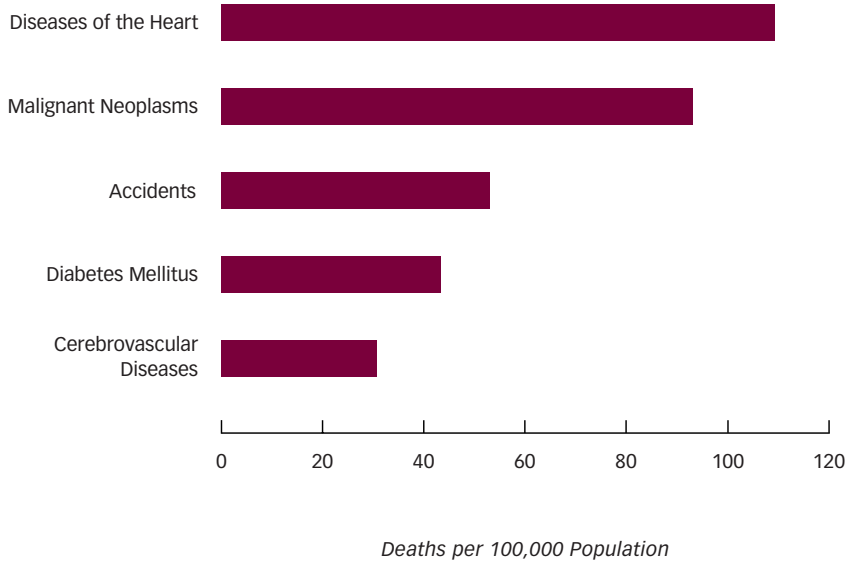
Age Group	United States		
	All Races	White	Black
Number of Deaths, All Ages	2,312,132	1,987,437	286,401
Percent Distribution, All Ages	100.0	100.0	100.0
Under 1	1.3	0.6	3.2
1 to 4	0.3	0.2	0.6
5 to 14	0.4	0.3	0.7
15 to 24	1.5	1.2	3.0
25 to 34	2.5	2.0	5.4
35 to 44	4.4	3.7	9.2
45 to 54	6.2	5.5	10.3
55 to 64	10.2	9.6	13.5
65 to 74	20.8	20.9	20.1
75 to 84	28.2	29.5	20.0
85 and over	24.3	26.0	13.8
Age not stated	0.0	0.0	0.0

<sup>1</sup> Adjusted to compensate for misreporting of Indian race on death certificates.**Note:** 0.0 rounds to zero.

**CHART 14**

**Death Rates for  
Leading Causes:  
Females, American  
Indians and Alaska  
Natives (1994-1996)**

The two leading causes of death for Indian females are diseases of the heart and malignant neoplasms. The same is true for U.S. All Races and White females. Diseases of the heart is also the leading cause of death for Indian males, but accidents is the second leading cause and malignant neoplasms is third. For Indian females, accidents is third. These Indian rates are adjusted for misreporting of Indian race on death certificates.



**TABLE 14**

**Leading Causes  
of Death by Sex,  
American Indians  
and Alaska Natives  
(1994-1996)**

**MALE**

Cause of Death	Number		Rate	
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>
All Causes	12,452	14,185	615.2	700.9
Diseases of the heart	2,704	3,202	133.6	158.2
Accidents	2,172	2,460	107.3	121.5
Motor vehicle	1,186	1,361	58.6	67.2
Other accidents	986	1,099	48.7	54.3
Malignant neoplasms	1,709	1,936	84.4	95.7
Chronic liver disease and cirrhosis	582	654	28.8	32.3
Suicide	548	604	27.1	29.8
Diabetes mellitus	514	587	25.4	29.0
Cerebrovascular diseases	454	501	22.4	24.8
Pneumonia and influenza	458	500	22.6	24.7
Homicide and legal intervention	415	468	20.5	23.1
Chronic obstructive pulmonary diseases and allied conditions	299	332	14.8	16.4
All other causes	2,597	2,941		

**FEMALE**

Cause of Death	Number		Rate	
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>
All Causes	9,691	11,119	465.1	533.6
Diseases of the heart	1,984	2,280	95.2	109.4
Malignant neoplasms	1,704	1,943	81.8	93.2
Accidents	921	1,105	44.2	53.0
Motor vehicle	581	722	27.9	34.6
Other accidents	340	383	16.3	18.4
Diabetes mellitus	760	904	36.5	43.4
Cerebrovascular diseases	575	642	27.6	30.8
Chronic liver disease and cirrhosis	458	529	22.0	25.4
Pneumonia and influenza	382	412	18.3	19.8
Chronic obstructive pulmonary diseases and allied conditions	275	300	13.2	14.4
Nephritis, nephrotic syndrome, and nephrosis	150	160	7.2	7.7
Suicide	124	149	6.0	7.2
All other causes	2,358	2,695		

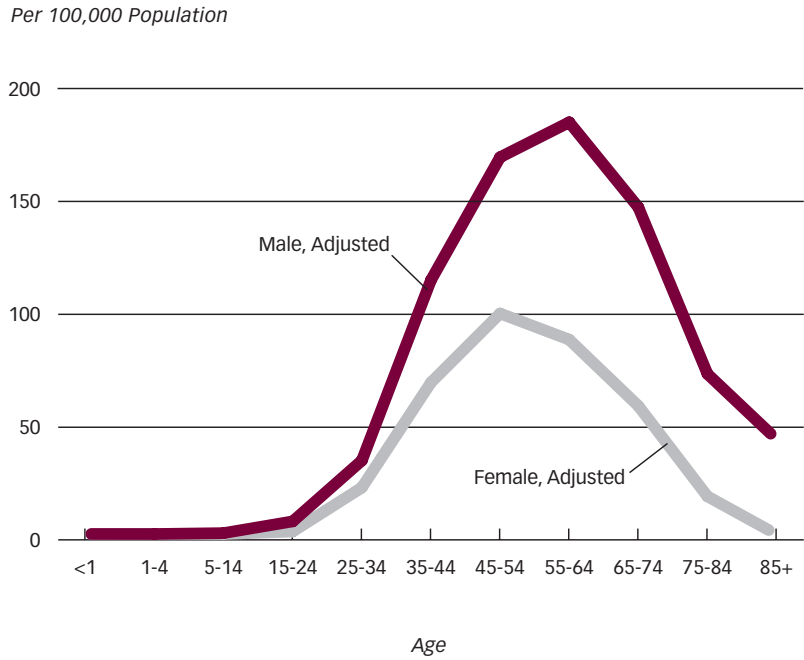
<sup>1</sup> Adjusted to compensate for misreporting of Indian race on death certificates.

**Note:** Causes of death are listed based upon the order of adjusted number of deaths. During 1994-1996 there were 158 male deaths and 46 female deaths (adjusted counts) due to HIV infection among the American Indian and Alaska Native population residing in the IHS service delivery area.

**CHART 15**

**Alcoholism Death Rates by Age and Sex, American Indians and Alaska Natives (1994-1996)**

Although alcohol abuse is a more serious problem for Indian males than females, it still takes a considerable death toll among Indian females. The Indian female alcoholism death rate for age groups 35 through 74 ranges from 56.8 to 97.8 deaths per 100,000 population. For U.S. All Races and White females, the highest age-specific rates are 9.5 and 8.6, respectively. These Indian rates have been adjusted for misreporting of Indian race on death certificates.



**TABLE 15****Alcoholism Death Rates by Age and Sex**

American Indians and Alaska Natives, IHS Service Area, 1994-1996, and U.S. All Races and White Populations, 1995  
(Rate per 100,000 Population)

American Indian and Alaska Native						
Age Group	Both Sexes		Male		Female	
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>
Under 1 year	—	—	—	—	—	—
1-4 years	—	—	—	—	—	—
5-14 years	0.2	0.2	0.4	0.4	—	—
15-24 years	3.2	3.4	5.4	5.6	0.8	1.1
25-34 years	24.0	26.5	30.9	32.6	17.5	20.6
35-44 years	76.7	89.1	99.9	112.6	54.9	67.2
45-54 years	109.8	131.0	143.9	167.1	78.4	97.8
55-64 years	109.6	131.1	151.9	182.6	72.8	86.2
65-74 years	84.0	95.7	126.2	144.9	50.6	56.8
75-84 years	34.3	38.6	60.4	71.0	16.7	16.7
85 years +	15.3	15.3	41.8	41.8	—	—

U.S. All Races			
Age Group	Both Sexes	Male	Female
Under 1 year	0.1	0.1	0.1
1-4 years	—	—	—
5-14 years	0.0	0.0	0.0
15-24 years	0.3	0.5	0.1
25-34 years	2.1	3.0	1.1
35-44 years	9.8	14.8	4.9
45-54 years	17.5	27.9	7.5
55-64 years	22.3	36.4	9.5
65-74 years	19.0	32.6	8.1
75-84 years	11.1	20.8	4.9
85 years +	5.3	12.7	2.4

U.S. White			
Age Group	Both Sexes	Male	Female
Under 1 year	0.1	0.1	0.2
1-4 years	—	—	—
5-14 years	0.0	0.0	—
15-24 years	0.3	0.4	0.1
25-34 years	1.9	2.8	1.0
35-44 years	8.9	13.6	4.1
45-54 years	15.7	25.0	6.6
55-64 years	20.4	33.1	8.6
65-74 years	17.9	30.6	7.6
75-84 years	10.9	20.5	4.8
85 years +	5.0	12.0	2.3

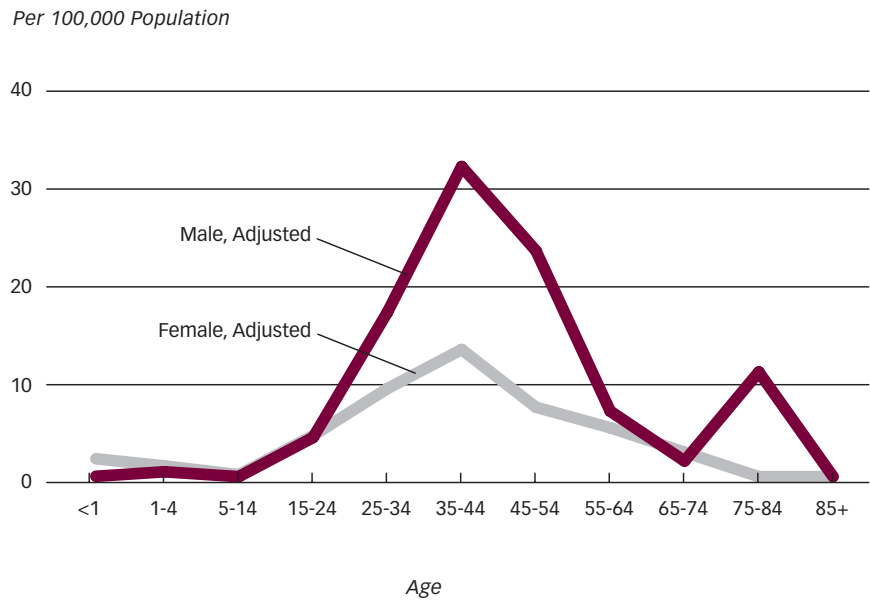
<sup>1</sup> Adjusted to compensate for misreporting of Indian race on death certificates.

**Note:** — Represents zero. 0.0 rounds to zero.

## CHART 16

### Drug-Related Death Rates by Age and Sex, American Indians and Alaska Natives (1994-1996)

Age-specific drug-related death rates for Indian females are similar to those for Indian males except for age groups 25 through 54 years and 75 to 84 years, where the death rates are higher. However, some of these rates are based on small numbers and should be interpreted with caution. The highest female rate (13.0) occurs among the 35 to 44 year age group. Indian female age-specific rates are generally higher than those for U.S. All Races and White females. These Indian rates have been adjusted for misreporting of Indian race on death certificates.





**TABLE 16****Drug-Related Death Rates by Age and Sex**

American Indians and Alaska Natives, IHS Service Area, 1994-1996, and U.S. All Races and White Populations, 1995  
(Rate per 100,000 Population)

American Indian and Alaska Native						
Age Group	Both Sexes		Male		Female	
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>
Under 1 year	0.9	0.9	—	—	1.9	1.9
1-4 years	0.5	0.8	0.5	0.5	0.5	1.1
5-14 years	0.1	0.1	—	—	0.2	0.2
15-24 years	3.0	4.1	3.5	4.0	2.5	4.2
25-34 years	10.5	12.8	14.4	16.8	6.8	9.0
35-44 years	18.2	22.0	26.6	31.7	10.4	13.0
45-54 years	13.2	14.8	19.9	23.1	7.1	7.1
55-64 years	5.4	5.8	5.8	6.7	5.0	5.0
65-74 years	2.1	2.1	1.6	1.6	2.5	2.5
75-84 years	2.9	4.3	7.1	10.7	—	—
85 years +	—	—	—	—	—	—

U.S. All Races			
Age Group	Both Sexes	Male	Female
Under 1 year	0.6	0.5	0.6
1-4 years	0.2	0.2	0.1
5-14 years	0.1	0.1	0.1
15-24 years	2.4	3.3	1.4
25-34 years	8.3	12.3	4.4
35-44 years	13.5	20.2	7.0
45-54 years	8.1	11.5	5.0
55-64 years	3.3	3.9	2.8
65-74 years	2.3	2.1	2.5
75-84 years	2.7	2.9	2.6
85 years +	4.4	5.9	3.9

U.S. White			
Age Group	Both Sexes	Male	Female
Under 1 year	0.4	0.5	0.3
1-4 years	0.1	0.1	0.1
5-14 years	0.1	0.1	0.1
15-24 years	2.5	3.5	1.5
25-34 years	8.3	12.4	4.2
35-44 years	12.4	18.4	6.3
45-54 years	7.1	9.4	4.8
55-64 years	3.1	3.3	2.8
65-74 years	2.3	2.0	2.6
75-84 years	2.7	2.8	2.6
85 years +	4.6	6.3	4.0

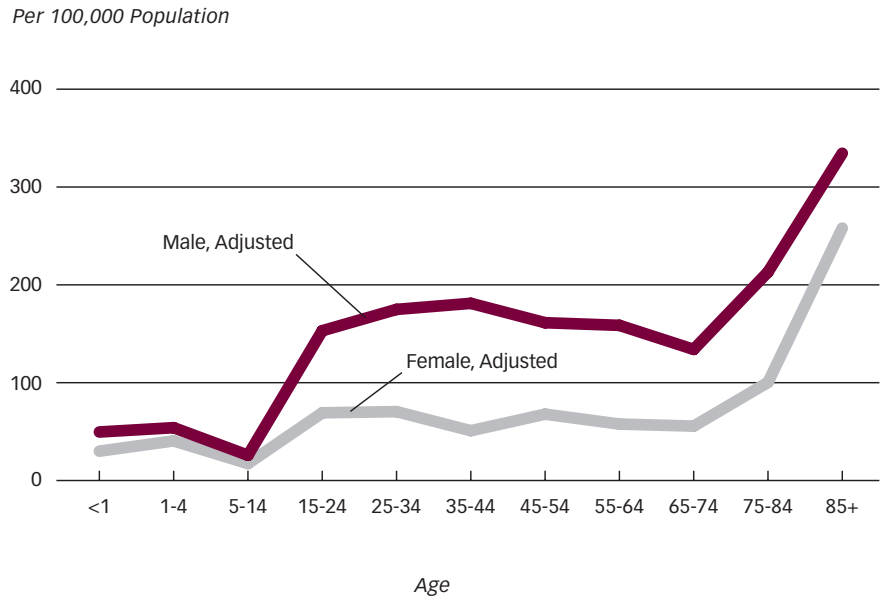
<sup>1</sup> Adjusted to compensate for misreporting of Indian race on death certificates.

**Note:** — Represents zero.

## CHART 17

### Accident Death Rates by Age and Sex, American Indians and Alaska Natives (1994-1996)

The age-specific death rate for accidents for Indian females is lower for all age groups in comparison with Indian males. However, when compared to U.S. All Races and White females, the Indian female rate is higher for all age groups. The Indian female rate is at least 30 deaths per 100,000 population for all age groups except 5 to 14 years. These Indian rates have been adjusted for misreporting of Indian race on death certificates.



**TABLE 17****Accident Death Rates by Age and Sex**

American Indians and Alaska Natives, IHS Service Area, 1994-1996, and U.S. All Races and White Populations, 1995  
(Rate per 100,000 Population)

American Indian and Alaska Native						
Age Group	Both Sexes		Male		Female	
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>
Under 1 year	36.2	39.9	42.3	49.6	30.0	30.0
1-4 years	40.1	47.4	45.3	54.0	34.7	40.5
5-14 years	20.0	21.6	23.8	25.8	16.1	17.3
15-24 years	90.6	112.0	131.4	153.1	48.2	69.2
25-34 years	103.3	121.5	152.2	174.9	56.0	70.4
35-44 years	99.9	113.9	159.7	181.1	43.8	50.9
45-54 years	99.9	112.5	145.2	161.3	58.4	67.8
55-64 years	97.1	104.7	147.1	158.6	53.5	57.7
65-74 years	87.5	90.2	127.7	134.0	55.6	55.6
75-84 years	134.3	145.7	191.8	213.1	95.6	100.3
85 years +	286.0	286.0	334.5	334.5	258.0	258.0

U.S. All Races			
Age Group	Both Sexes	Male	Female
Under 1 year	20.6	21.5	19.5
1-4 years	14.5	16.9	12.1
5-14 years	9.4	11.8	6.8
15-24 years	38.9	56.8	20.2
25-34 years	33.2	51.0	15.4
35-44 years	33.7	51.4	16.2
45-54 years	30.0	45.3	15.4
55-64 years	32.1	46.0	19.5
65-74 years	45.0	60.1	32.9
75-84 years	98.6	131.0	78.0
85 years +	268.4	368.9	229.2

U.S. White			
Age Group	Both Sexes	Male	Female
Under 1 year	17.4	19.0	15.8
1-4 years	13.3	15.4	11.1
5-14 years	8.8	11.1	6.4
15-24 years	40.6	58.7	21.4
25-34 years	33.0	50.6	15.1
35-44 years	32.2	48.9	15.3
45-54 years	28.1	42.0	14.4
55-64 years	30.4	42.9	18.9
65-74 years	43.5	57.3	32.3
75-84 years	98.0	129.1	78.2
85 years +	274.1	374.0	235.6

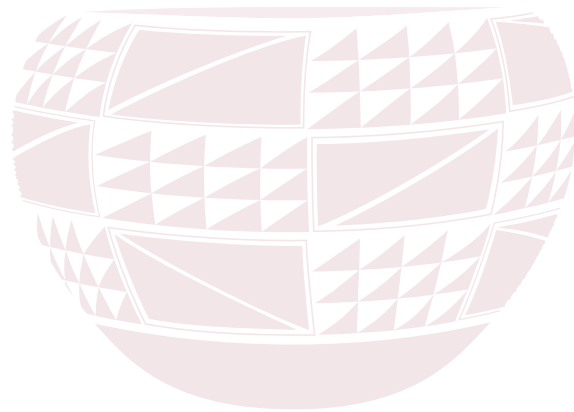
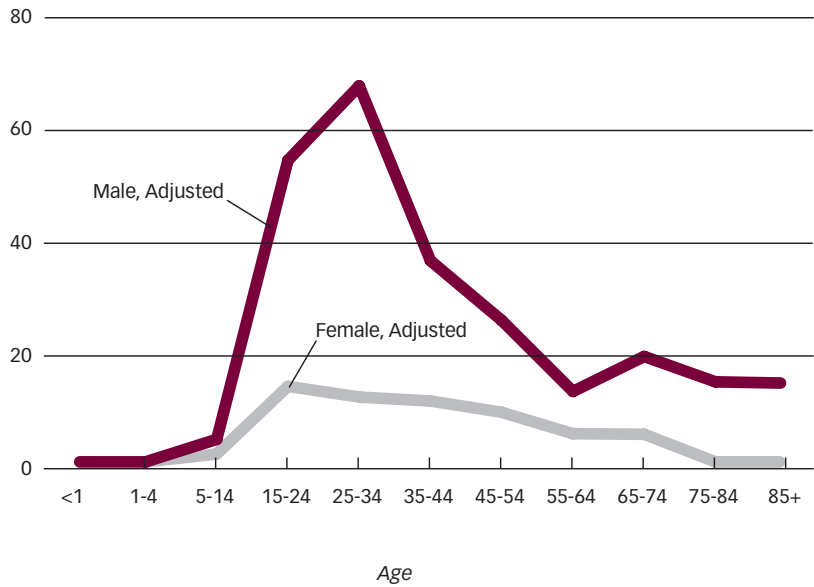
<sup>1</sup> Adjusted to compensate for misreporting of Indian race on death certificates.

**CHART 18**

**Suicide Death Rates  
by Age and Sex,  
American Indians  
and Alaska Natives  
(1994-1996)**

Indian males are much more likely to die from suicide than Indian females. However, Indian female suicide rates are greater than those for U.S. All Races and White females for age groups under 55 years. For older age groups, the Indian female rates are lower. These Indian rates have been adjusted for misreporting of Indian race on death certificates.

Per 100,000 Population



**TABLE 18****Suicide Death Rates by Age and Sex**

American Indians and Alaska Natives, IHS Service Area, 1994-1996, and U.S. All Races and White Populations, 1995  
(Rate per 100,000 Population)

American Indian and Alaska Native						
Age Group	Both Sexes		Male		Female	
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>
Under 1 year	—	—	—	—	—	—
1-4 years	—	—	—	—	—	—
5-14 years	2.7	2.7	4.0	4.0	1.4	1.4
15-24 years	29.1	33.9	46.7	53.5	10.6	13.4
25-34 years	33.9	38.5	59.7	66.7	9.3	11.5
35-44 years	21.1	22.8	34.1	35.7	8.9	10.8
45-54 years	15.7	16.6	24.4	25.1	7.7	8.8
55-64 years	8.1	8.5	11.5	12.5	5.0	5.0
65-74 years	10.3	11.0	17.1	18.7	4.9	4.9
75-84 years	5.7	5.7	14.2	14.2	—	—
85 years +	5.1	5.1	13.9	13.9	—	—

U.S. All Races			
Age Group	Both Sexes	Male	Female
Under 1 year	—	—	—
1-4 years	—	—	—
5-14 years	0.9	1.3	0.4
15-24 years	13.4	22.6	3.7
25-34 years	15.4	25.7	5.2
35-44 years	15.3	24.2	6.5
45-54 years	14.6	22.9	6.7
55-64 years	13.3	22.1	5.3
65-74 years	15.8	28.7	5.4
75-84 years	20.8	44.8	5.5
85 years +	21.6	63.1	5.5

U.S. White			
Age Group	Both Sexes	Male	Female
Under 1 year	—	—	—
1-4 years	—	—	—
5-14 years	1.0	1.4	0.4
15-24 years	14.0	23.6	3.9
25-34 years	16.3	26.8	5.5
35-44 years	16.5	25.9	7.2
45-54 years	15.9	24.6	7.4
55-64 years	14.4	23.6	5.8
65-74 years	16.7	30.4	5.7
75-84 years	22.1	47.6	5.8
85 years +	23.0	68.2	5.6

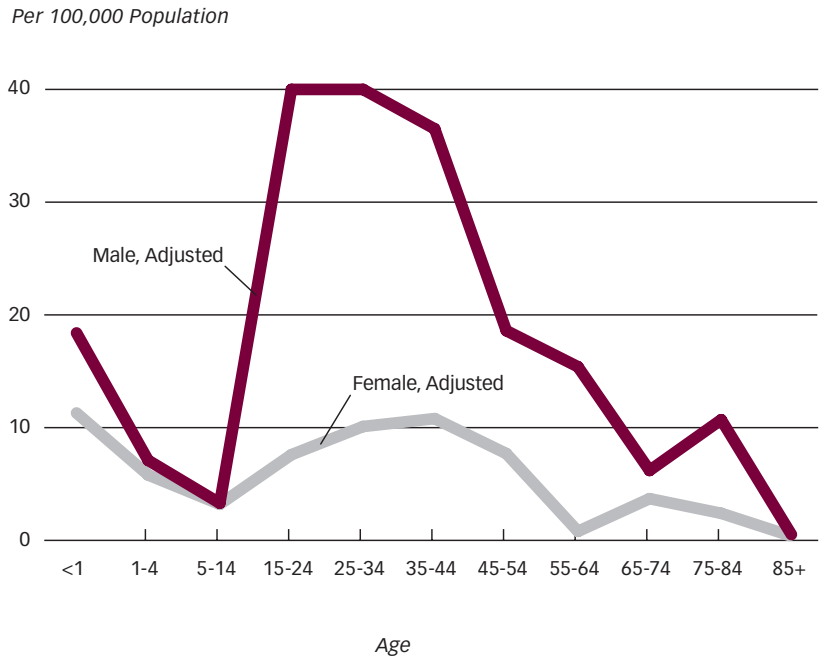
<sup>1</sup> Adjusted to compensate for misreporting of Indian race on death certificates.

**Note:** — Represents zero.

## CHART 19

### Homicide Death Rates by Age and Sex, American Indians and Alaska Natives, (1994-1996)

The age-specific homicide death rate for Indian females is lower for all age groups except 85 years and older (where both rates are zero) in comparison with Indian males. However, the Indian female rate is greater than the rate for U.S. All Races females for all age groups except 55 to 64 and over 74 years. It exceeds the rate for U.S. White females for all age groups except 55 to 64 and over 84 years. These Indian rates have been adjusted for misreporting of Indian race on death certificates.



**TABLE 19****Homicide Death Rates by Age and Sex**

American Indians and Alaska Natives, IHS Service Area, 1994-1996, and U.S. All Races and White Populations, 1995  
(Rate per 100,000 Population)

American Indian and Alaska Native						
Age Group	Both Sexes		Male		Female	
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>
Under 1 year	10.2	14.9	11.0	18.4	9.4	11.3
1-4 years	6.2	6.5	7.1	7.1	5.3	5.8
5-14 years	2.7	3.3	2.7	3.3	2.8	3.2
15-24 years	21.0	24.1	35.2	40.0	6.2	7.6
25-34 years	21.4	24.7	35.0	40.0	8.4	10.1
35-44 years	20.5	23.2	32.9	36.5	8.9	10.8
45-54 years	11.7	12.9	17.3	18.6	6.5	7.7
55-64 years	7.6	7.6	15.4	15.4	0.8	0.8
65-74 years	4.8	4.8	6.2	6.2	3.7	3.7
75-84 years	5.7	5.7	10.7	10.7	2.4	2.4
85 years +	—	—	—	—	—	—

U.S. All Races			
Age Group	Both Sexes	Male	Female
Under 1 year	8.1	8.9	7.2
1-4 years	2.9	3.1	2.6
5-14 years	1.5	1.9	1.0
15-24 years	20.3	34.0	6.1
25-34 years	15.1	23.8	6.5
35-44 years	9.7	14.6	4.9
45-54 years	6.2	9.7	3.0
55-64 years	4.5	7.2	2.1
65-74 years	3.3	4.6	2.2
75-84 years	3.1	3.7	2.7
85 years +	3.3	4.3	2.9

U.S. White			
Age Group	Both Sexes	Male	Female
Under 1 year	6.1	7.1	5.0
1-4 years	1.9	2.1	1.8
5-14 years	1.0	1.3	0.8
15-24 years	10.5	16.6	4.1
25-34 years	8.7	13.0	4.2
35-44 years	6.3	9.2	3.4
45-54 years	4.4	6.4	2.5
55-64 years	3.3	5.0	1.7
65-74 years	2.4	3.2	1.9
75-84 years	2.4	2.5	2.3
85 years +	2.5	3.6	2.1

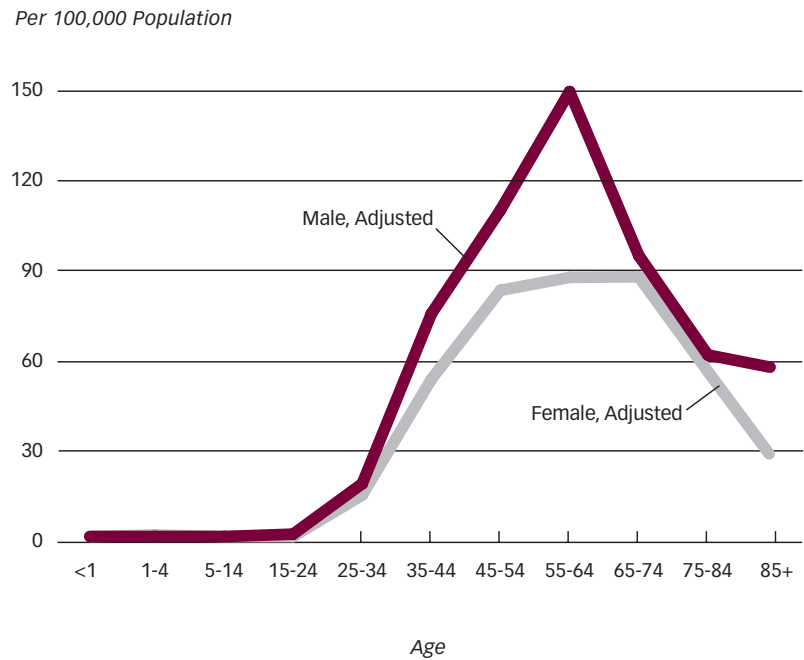
<sup>1</sup> Adjusted to compensate for misreporting of Indian race on death certificates.

**Note:** — Represents zero.

## CHART 20

### Chronic Liver Disease and Cirrhosis Death Rates by Age and Sex, American Indians and Alaska Natives (1994-1996)

Indian males are more likely to die from chronic liver disease and cirrhosis than Indian females for all age groups over 14 years. In contrast, Indian females have a much higher death rate due to this cause than females in the U.S. All Races and White populations. For example, the peak death rate for Indian females (86.4 deaths per 100,000 population for women aged 65 to 74 years) is 3.4 and 3.3 times the peak rates (25.4 and 25.8 for women 75 to 84 years old) for U.S. All Races and White females, respectively. These Indian rates have been adjusted for misreporting of Indian race on death certificates.





**TABLE 20****Chronic Liver Disease and Cirrhosis Death Rates by Age and Sex**

American Indians and Alaska Natives, IHS Service Area, 1994-1996, and U.S. All Races and White Populations, 1995  
(Rate per 100,000 Population)

American Indian and Alaska Native						
Age Group	Both Sexes		Male		Female	
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>
Under 1 year	—	—	—	—	—	—
1-4 years	0.3	0.3	—	—	0.5	0.5
5-14 years	—	—	—	—	—	—
15-24 years	0.4	0.4	0.8	0.8	—	—
25-34 years	14.4	15.7	16.5	17.6	12.4	13.8
35-44 years	54.4	62.9	65.8	74.1	43.8	52.3
45-54 years	81.5	94.7	96.4	108.6	67.8	81.9
55-64 years	100.6	115.0	100.6	148.0	77.0	86.2
65-74 years	81.3	89.5	81.3	93.5	77.8	86.4
75-84 years	52.9	57.1	52.9	60.4	52.6	54.9
85 years +	35.8	35.8	35.8	55.8	24.2	24.2

U.S. All Races			
Age Group	Both Sexes	Male	Female
Under 1 year	0.6	0.7	0.5
1-4 years	0.0	0.0	0.1
5-14 years	0.0	0.0	0.0
15-24 years	0.1	0.1	0.0
25-34 years	1.5	2.0	0.9
35-44 years	8.7	12.9	4.7
45-54 years	16.9	25.7	8.6
55-64 years	25.4	36.6	15.2
65-74 years	31.5	44.1	21.5
75-84 years	31.4	40.8	25.4
85 years +	22.9	34.8	18.3

U.S. White			
Age Group	Both Sexes	Male	Female
Under 1 year	0.5	0.7	0.3
1-4 years	0.0	0.0	0.0
5-14 years	0.0	0.0	0.0
15-24 years	0.1	0.1	0.0
25-34 years	1.4	2.0	0.8
35-44 years	8.2	12.2	4.2
45-54 years	16.0	24.1	7.7
55-64 years	24.5	35.4	14.4
65-74 years	32.1	44.7	21.9
75-84 years	32.2	42.3	25.8
85 years +	23.4	35.6	18.7

<sup>1</sup> Adjusted to compensate for misreporting of Indian race on death certificates.

**Note:** — Represents zero.

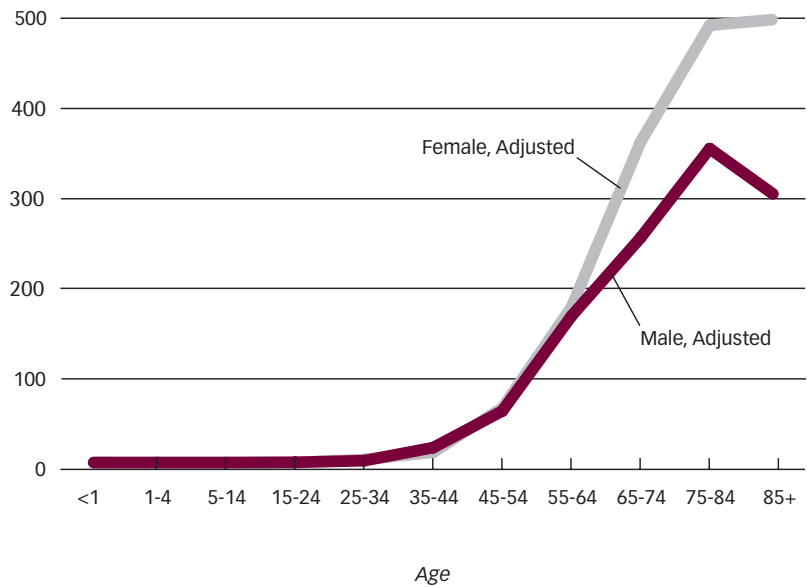
0.0 rounds to zero.

## CHART 21

### Diabetes Mellitus Death Rates by Age and Sex, American Indians and Alaska Natives (1994-1996)

Indian women die from diabetes mellitus at a greater rate than Indian males for age groups 45 years and older. In the U.S. All Races and White populations, however, the male rate exceeds the female rate for each of these age groups. Deaths due to diabetes mellitus become relatively high starting with age 45. For these age groups, Indian females are much more likely to die from this cause than females in the other two population groups. In these groups, the Indian female rate ranges from 60.7 deaths per 100,000 population to 491.7, while the U.S. All Races female rate ranges from 10.7 to 273.1 and the White female rate ranges from 8.7 to 258.1. These Indian rates have been adjusted for misreporting of Indian race on death certificates.

Per 100,000 Population



**TABLE 21****Diabetes Mellitus Death Rates by Age and Sex**

American Indians and Alaska Natives, IHS Service Area, 1994-1996, and U.S. All Races and White Populations, 1995  
(Rate per 100,000 Population)

American Indian and Alaska Native						
Age Group	Both Sexes		Male		Female	
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>
Under 1 year	—	—	—	—	—	—
1-4 years	—	—	—	—	—	—
5-14 years	—	—	—	—	—	—
15-24 years	0.1	0.1	0.3	0.3	—	—
25-34 years	2.3	2.7	2.1	2.1	2.5	3.4
35-44 years	12.5	14.0	15.9	16.6	9.3	11.5
45-54 years	49.5	59.0	50.1	57.2	48.9	60.7
55-64 years	138.2	167.7	138.4	162.5	138.0	172.3
65-74 years	263.8	308.6	221.2	249.3	297.6	355.6
75-84 years	368.5	429.9	287.7	348.1	422.8	484.9
85 years +	413.7	418.8	292.7	292.7	483.7	491.7

U.S. All Races			
Age Group	Both Sexes	Male	Female
Under 1 year	—	—	—
1-4 years	0.0	0.1	0.0
5-14 years	0.0	0.0	0.0
15-24 years	0.4	0.5	0.3
25-34 years	1.5	1.7	1.3
35-44 years	4.3	5.1	3.6
45-54 years	12.9	15.1	10.7
55-64 years	38.8	41.6	36.3
65-74 years	86.6	90.9	83.3
75-84 years	162.8	176.5	154.1
85 years +	278.0	289.3	273.1

U.S. White			
Age Group	Both Sexes	Male	Female
Under 1 year	—	—	—
1-4 years	0.0	0.1	—
5-14 years	0.0	0.0	0.0
15-24 years	0.3	0.3	0.2
25-34 years	1.3	1.4	1.1
35-44 years	3.8	4.5	3.1
45-54 years	10.7	12.8	8.7
55-64 years	32.6	36.3	29.2
65-74 years	77.3	83.9	71.9
75-84 years	150.9	168.7	139.5
85 years +	264.1	279.5	258.1

<sup>1</sup> Adjusted to compensate for misreporting of Indian race on death certificates.

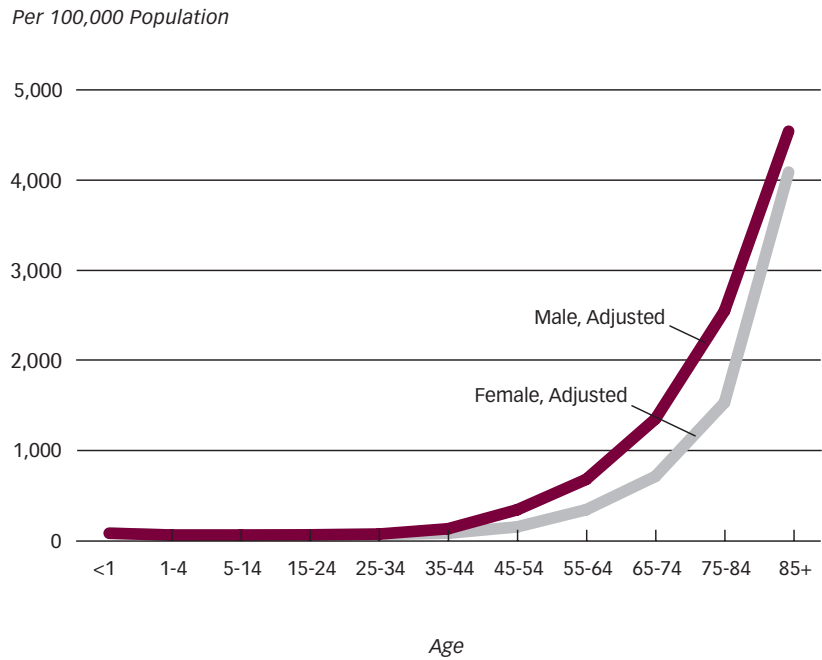
**Note:** — Represents zero.

0.0 rounds to zero.

## CHART 22

### Heart Disease Death Rates by Age and Sex, American Indians and Alaska Natives (1994-1996)

Indian men are more apt to die from diseases of the heart than Indian women for every age group, except 1 to 4 and 15 to 24. For Indian adult age groups over the age of 24, the ratio of the male death rate to the female rate ranges from 1.1 to 1 to 3.2 to 1. The Indian female death rate for diseases of the heart is greater than the rates for U.S. All Races and White females in age groups 15 to 74 years, but is less for age groups 75 years and over. These Indian rates have been adjusted for misreporting of Indian race on death certificates.



**TABLE 22****Heart Disease Death Rates by Age and Sex**

American Indians and Alaska Natives, IHS Service Area, 1994-1996, and U.S. All Races and White Populations, 1995  
(Rate per 100,000 Population)

American Indian and Alaska Native						
Age Group	Both Sexes		Male		Female	
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>
Under 1 year	15.8	19.5	16.5	23.9	15.0	15.0
1-4 years	1.6	2.1	1.5	1.5	1.6	2.6
5-14 years	0.7	1.0	1.1	1.8	0.2	0.2
15-24 years	3.2	4.3	3.5	3.8	2.8	4.8
25-34 years	9.1	10.1	11.8	12.6	6.5	7.6
35-44 years	39.7	46.0	62.2	71.3	18.6	22.3
45-54 years	154.9	182.6	238.4	281.4	78.4	92.0
55-64 years	369.5	439.2	523.9	619.0	235.1	282.8
65-74 years	785.2	933.3	1,079.6	1,288.3	551.9	651.9
75-84 years	1,569.6	1,878.1	2,021.0	2,486.2	1,266.1	1,469.2
85 years +	4,070.7	4,377.1	4,167.8	4,627.8	4,014.5	4,232.2

U.S. All Races			
Age Group	Both Sexes	Male	Female
Under 1 year	17.2	17.6	16.8
1-4 years	1.6	1.7	1.5
5-14 years	0.8	0.8	0.7
15-24 years	2.9	3.6	2.2
25-34 years	8.5	11.4	5.6
35-44 years	32.1	47.4	17.1
45-54 years	111.3	169.2	56.1
55-64 years	324.1	467.1	194.4
65-74 years	801.8	1,105.1	558.9
75-84 years	2,067.0	2,618.5	1,716.6
85 years +	6,486.5	7,043.8	6,269.5

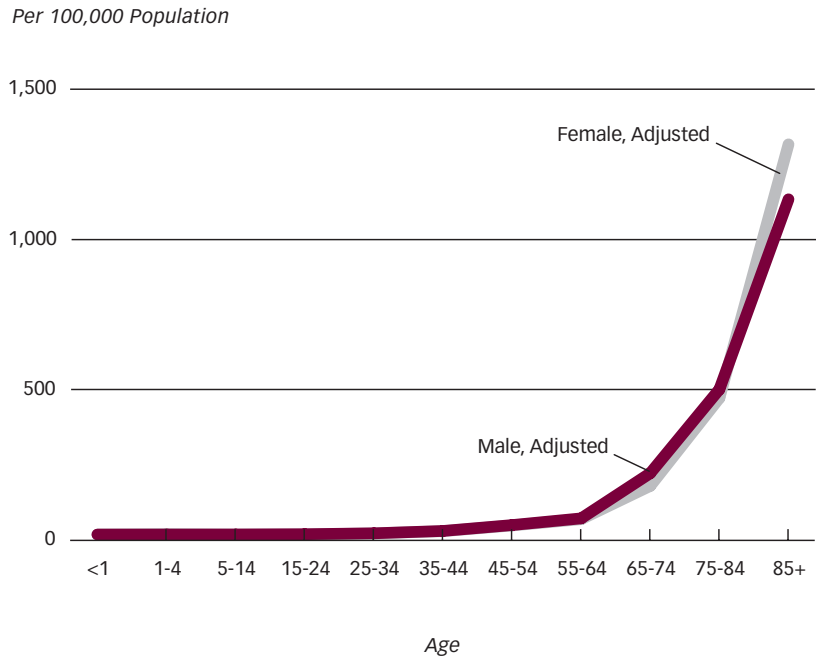
U.S. White			
Age Group	Both Sexes	Male	Female
Under 1 year	15.0	15.4	14.6
1-4 years	1.2	1.3	1.2
5-14 years	0.6	0.7	0.6
15-24 years	2.2	2.8	1.6
25-34 years	7.0	9.5	4.4
35-44 years	27.9	42.5	13.1
45-54 years	100.4	156.2	46.0
55-64 years	303.9	444.7	173.6
65-74 years	776.3	1,083.3	527.3
75-84 years	2,053.0	2,619.5	1,691.2
85 years +	6,581.1	7,169.8	6,354.3

<sup>1</sup> Adjusted to compensate for misreporting of Indian race on death certificates.

### CHART 23

#### Cerebrovascular Diseases Death Rates by Age and Sex, American Indians and Alaska Natives (1994-1996)

The cerebrovascular diseases death rates are similar for Indian males and females among the various age groups, except for age groups 65-74 years (males have a higher rate) and 85 years and over (females have a higher rate). The Indian female death rate for this cause tends to be greater than the rates for U.S. All Races and White females in age groups under 75 years, except for age groups under 1 year. The Indian female rate, however, is less than the rates for females in these populations for age group 85 years and over. These Indian rates have been adjusted for misreporting of Indian race on death certificates.



**TABLE 23****Cerebrovascular Diseases Death Rates by Age and Sex**

American Indians and Alaska Natives, IHS Service Area, 1994-1996, and U.S. All Races and White Populations, 1995  
(Rate per 100,000 Population)

American Indian and Alaska Native							
Age Group	Both Sexes		Male		Female		
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>	
Under 1 year	0.9	—	—	—	1.9	—	
1-4 years	0.5	0.8	—	—	1.1	1.6	
5-14 years	0.1	0.1	0.2	0.2	—	—	
15-24 years	0.7	0.7	1.1	1.1	0.3	0.3	
25-34 years	3.0	4.0	3.5	4.1	2.5	3.9	
35-44 years	10.5	11.5	11.1	11.9	10.0	11.1	
45-54 years	27.1	30.7	29.6	31.5	24.8	30.1	
55-64 years	47.4	52.3	49.0	53.8	46.0	51.0	
65-74 years	157.7	180.5	177.6	204.1	142.0	161.8	
75-84 years	411.3	465.6	429.8	483.0	398.9	453.9	
85 years +	1,190.1	1,230.9	1,073.3	1,115.1	1,257.6	1,297.9	

U.S. All Races			
Age Group	Both Sexes	Male	Female
Under 1 year	5.8	6.3	5.2
1-4 years	0.4	0.4	0.3
5-14 years	0.2	0.2	0.2
15-24 years	0.5	0.5	0.4
25-34 years	1.8	1.9	1.7
35-44 years	6.5	7.1	6.0
45-54 years	17.7	19.8	15.6
55-64 years	46.2	53.5	39.6
65-74 years	137.5	156.2	122.5
75-84 years	481.8	517.5	459.2
85 years +	1,637.1	1,538.4	1,675.5

U.S. White			
Age Group	Both Sexes	Male	Female
Under 1 year	5.3	6.0	4.6
1-4 years	0.3	0.3	0.2
5-14 years	0.2	0.2	0.1
15-24 years	0.4	0.5	0.4
25-34 years	1.5	1.6	1.4
35-44 years	4.8	5.2	4.5
45-54 years	13.8	14.9	12.8
55-64 years	39.0	44.8	33.8
65-74 years	126.7	143.8	112.8
75-84 years	470.7	503.4	449.9
85 years +	1,651.7	1,550.9	1,690.6

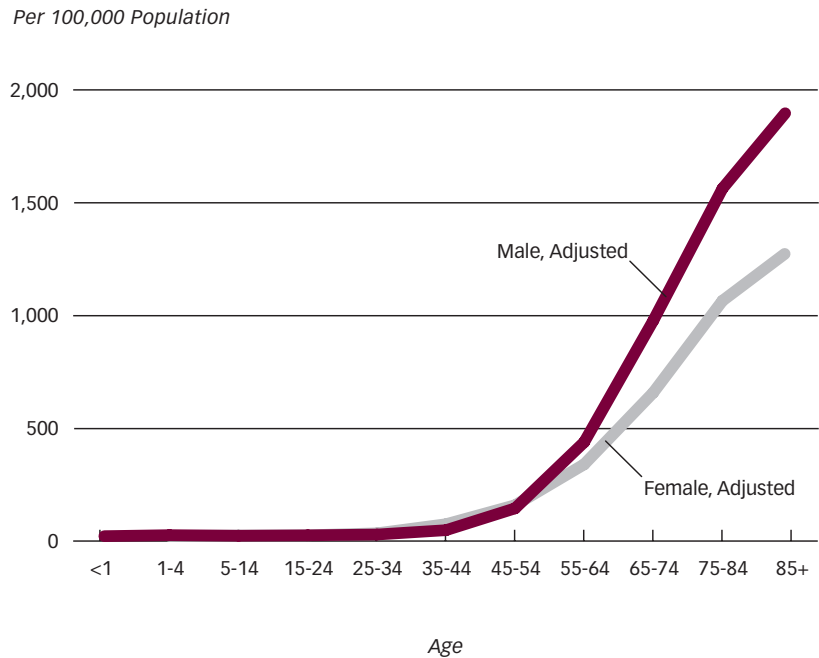
<sup>1</sup> Adjusted to compensate for misreporting of Indian race on death certificates.

**Note:** — Represents zero.

## CHART 24

### Malignant Neoplasm Death Rates by Age and Sex, American Indians and Alaska Natives (1994-1996)

The age-specific malignant neoplasm death rate (1994-1996) for Indian males is fifty percent greater than that for Indian females for age groups over 64 years. However, for the age group 35 to 44 years, the female rate is twice the male rate. When compared to the general population, it is clear that U.S. All Races and White people are more likely to die from malignant neoplasms than Indians. Indian female age-specific rates are less than those for females of these two population groups for all age groups over 44 years except for one group (45 to 54 years for Whites). These Indian rates have been adjusted for misreporting of Indian race on death certificates.





**TABLE 24****Malignant Neoplasm Death Rates by Age and Sex**

American Indians and Alaska Natives, IHS Service Area, 1994-1996, and U.S. All Races and White Populations, 1995  
(Rate per 100,000 Population)

American Indian and Alaska Native						
Age Group	Both Sexes		Male		Female	
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>
Under 1 year	1.9	0.9	3.7	1.8	—	—
1-4 years	2.6	2.8	4.1	4.6	1.1	1.1
5-14 years	1.9	2.5	1.8	2.0	2.1	3.0
15-24 years	3.4	3.8	3.5	3.8	3.4	3.9
25-34 years	8.5	10.1	6.8	7.3	10.1	12.7
35-44 years	34.3	40.3	25.4	26.6	42.7	53.1
45-54 years	117.7	130.7	112.4	123.4	122.6	137.3
55-64 years	313.6	364.5	360.5	417.2	272.7	318.7
65-74 years	675.7	778.3	825.7	956.5	556.9	637.1
75-84 years	1,096.9	1,244.0	1,353.2	1,541.5	924.5	1,043.9
85 years +	1,465.9	1,506.7	1,812.1	1,909.7	1,265.6	1,273.7

U.S. All Races			
Age Group	Both Sexes	Male	Female
Under 1 year	1.8	1.8	1.8
1-4 years	3.1	3.6	2.6
5-14 years	2.7	3.0	2.4
15-24 years	4.6	5.6	3.6
25-34 years	12.0	11.7	12.3
35-44 years	40.4	36.6	44.1
45-54 years	142.3	143.9	140.9
55-64 years	416.4	481.1	357.9
65-74 years	868.7	1,090.7	691.0
75-84 years	1,365.3	1,843.1	1,061.8
85 years +	1,824.2	2,838.1	1,429.4

U.S. White			
Age Group	Both Sexes	Male	Female
Under 1 year	1.8	1.9	1.7
1-4 years	3.1	3.7	2.4
5-14 years	2.7	3.1	2.3
15-24 years	4.6	5.5	3.5
25-34 years	11.4	11.3	11.5
35-44 years	38.2	34.3	42.1
45-54 years	135.4	134.4	136.3
55-64 years	404.7	460.5	353.0
65-74 years	858.1	1,065.5	689.8
75-84 years	1,353.3	1,811.6	1,060.5
85 years +	1,811.5	2,806.0	1,428.4

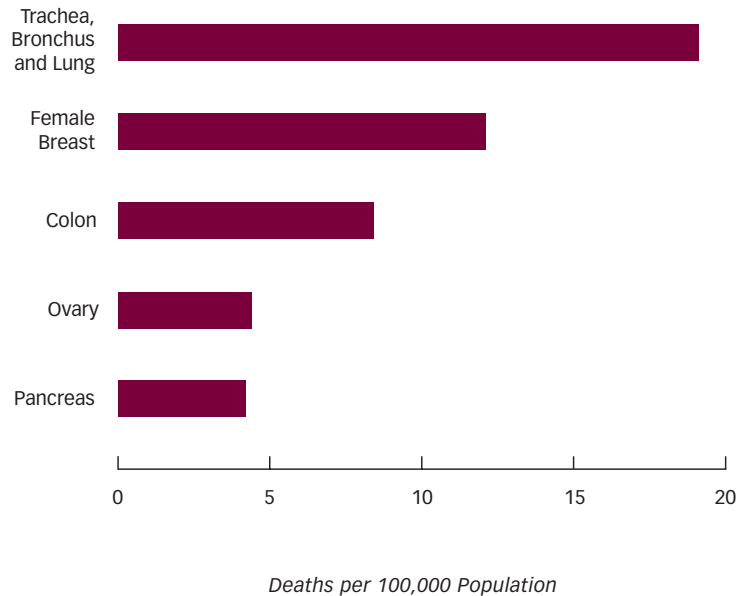
<sup>1</sup> Adjusted to compensate for misreporting of Indian race on death certificates.

**Note:** — Represents zero.

## CHART 25

### Death Rates, Leading Cancer Sites: Females, American Indians and Alaska Natives (1994-1996)

The leading site for cancer deaths among Indian women is trachea, bronchus, and lung. Forty-eight percent more Indian women die of this type of cancer than the next leading site, breast. In turn, 49 percent more Indian women die from breast cancer than colon cancer, the third leading site. There is also a big drop in frequency of deaths from colon cancer to the fourth leading site, ovary. In contrast, the next two leading sites (pancreas and liver) have cancer mortality rates similar to ovary. Women in the U.S. All Races and White populations have the same top three leading sites as Indian women. Their fourth and fifth leading sites for U.S. All Races women, pancreas and ovary, are in the reverse order for Indian and White women. However, their sixth leading site, leukemia, is number eight for Indian women. The seventh site for Indian women, cervix uteri, is number 11 for U.S. All Races women and number 13 for White women. These Indian rates are adjusted for misreporting of Indian race on death certificates.



**TABLE 25****Leading Sites for Cancer Deaths for Female Decedents (1994-1996)**

FEMALE Site of Cancer Death	Number		Rate	
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>
All Sites	1,703	1,943	81.7	93.2
Trachea, bronchus and lung	329	398	15.8	19.1
Female breast	222	253	10.7	12.1
Colon	149	175	7.2	8.4
Ovary	84	92	4.0	4.4
Pancreas	78	88	3.7	4.2
Liver	69	74	3.3	3.6
Cervix uteri	60	69	2.9	3.3
Leukemia	61	69	2.9	3.3
Stomach	55	64	2.6	3.1
Kidney	57	58	2.7	2.8
Multiple myeloma	48	51	2.3	2.4
Gallbladder	40	42	1.9	2.0
Rectum, rectosigmoid junction and anus	34	40	1.6	1.9
Brain	19	21	0.9	1.0
Connective and other soft tissue	15	19	0.7	0.9
Melanoma of skin	13	16	0.6	0.8
Bladder	12	16	0.6	0.8
Bone and articular cartilage	8	11	0.4	0.5
Esophagus	7	10	0.3	0.5
Thyroid gland	7	8	0.3	0.4
Pharynx	7	7	0.3	0.3
Tongue	5	6	0.2	0.3
Hodgkin's disease	5	6	0.2	0.3
Larynx	5	5	0.2	0.2
Small intestine	3	3	0.1	0.1
Lymphosarcoma and reticulosarcoma	2	2	0.1	0.1
All other sites	309	340		

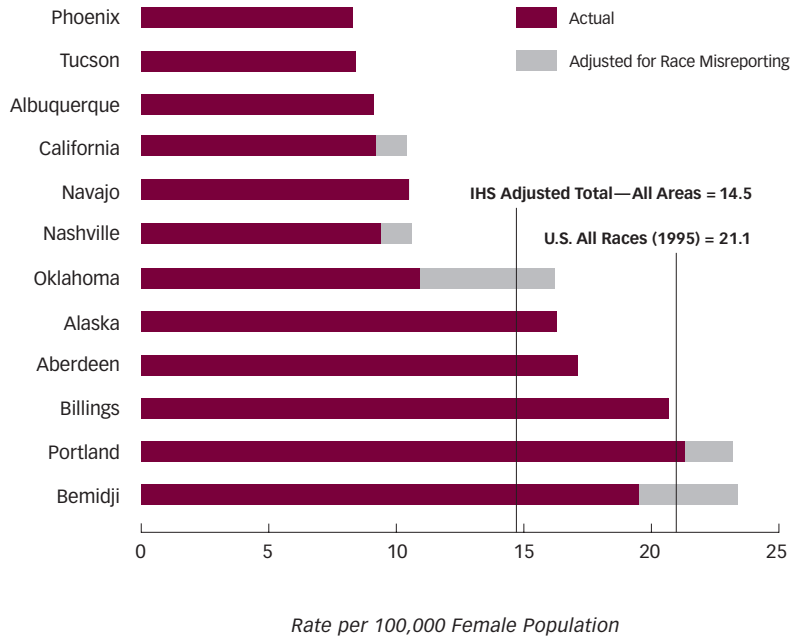
<sup>1</sup> Adjusted to compensate for misreporting of Indian race on death certificates.

**Note:** See appendix titled "Method Used to Rank Leading Sites of Cancer Deaths." Causes of death are listed based upon the order of adjusted number of deaths.

**CHART 26**

**Age-Adjusted Breast Cancer Death Rates for Females (1994-1996)**

The Indian female age-adjusted breast cancer death rate (14.5 deaths per 100,000 population) is 69 percent of the rate for U.S. All Races females (21.1). The rate varies considerably by IHS Area, ranging from 8.3 in Phoenix to 23.4 in Bemidji, which is higher than the U.S. All Races rate. These Indian rates have been adjusted for misreporting of Indian race on death certificates.



**TABLE 26**

**Age-Adjusted Breast Cancer Death Rates for Females (1994-1996)**

	Deaths		Rate <sup>1</sup>	
	Actual	Adj <sup>2</sup>	Actual	Adj <sup>2</sup>
U.S. All Races (1995)	43,877		21.1	
All IHS Areas	222	253	12.7	14.5
Aberdeen	17	17	17.1	17.1
Alaska	19	19	16.3	16.3
Albuquerque	7	7	9.1	9.1
Bemidji	17	20	19.5	23.4
Billings	11	11	20.7	20.7
California	16	18	9.2	10.4
Nashville	9	10	9.4	10.6
Navajo	24	24	10.5	10.5
Oklahoma	51	73	10.9	16.2
Phoenix	13	13	8.3	8.3
Portland	34	37	21.3	23.2
Tucson	4	4	8.4	8.4

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

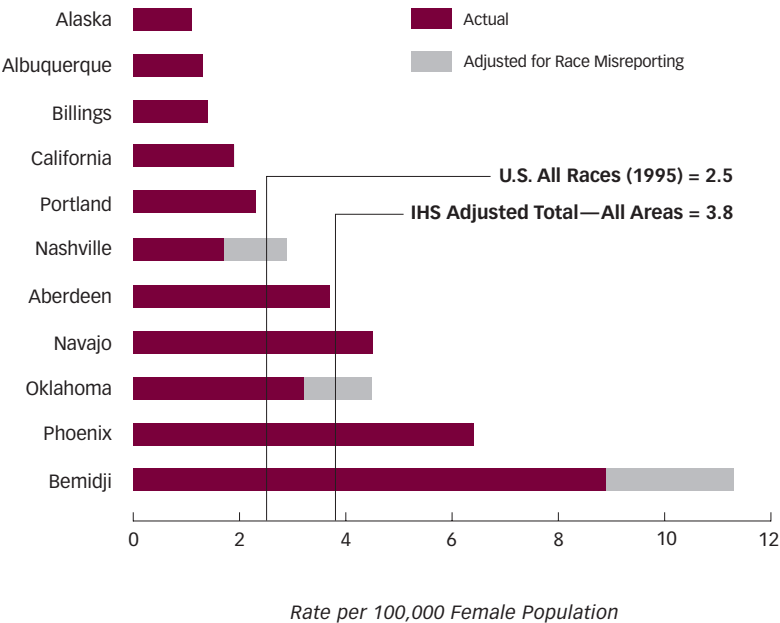
<sup>2</sup> Adjusted to compensate for misreporting of Indian race on death certificates.



**CHART 27**

**Age-Adjusted Cervical Cancer Death Rates for Females (1994-1996)**

The Indian female age-adjusted cervical cancer death rate (3.8 deaths per 100,000 population) is 1.5 times the rate for U.S. All Races females (2.5). The rate varies considerably by IHS Area, ranging from 0.0 (no deaths) in Tucson to 11.3 in Bemidji, which is 4.5 times the U.S. All Races rate. These Indian rates have been adjusted for misreporting of Indian race on death certificates.



**TABLE 27**

**Age-Adjusted Cervical Cancer Death Rates for Females (1994-1996)**

	Deaths		Rate <sup>1</sup>	
	Actual	Adj <sup>2</sup>	Actual	Adj <sup>2</sup>
U.S. All Races (1995)	4,511		2.5	
All IHS Areas	60	69	3.3	3.8
Aberdeen	4	4	3.7	3.7
Alaska	1	1	1.1	1.1
Albuquerque	1	1	1.3	1.3
Bemidji	8	10	8.9	11.3
Billings	1	1	1.4	1.4
California	3	3	1.9	1.9
Nashville	2	3	1.7	2.9
Navajo	11	11	4.5	4.5
Oklahoma	15	21	3.2	4.5
Phoenix	10	10	6.4	6.4
Portland	4	4	2.3	2.3
Tucson	—	—	—	—

— Represents zero.

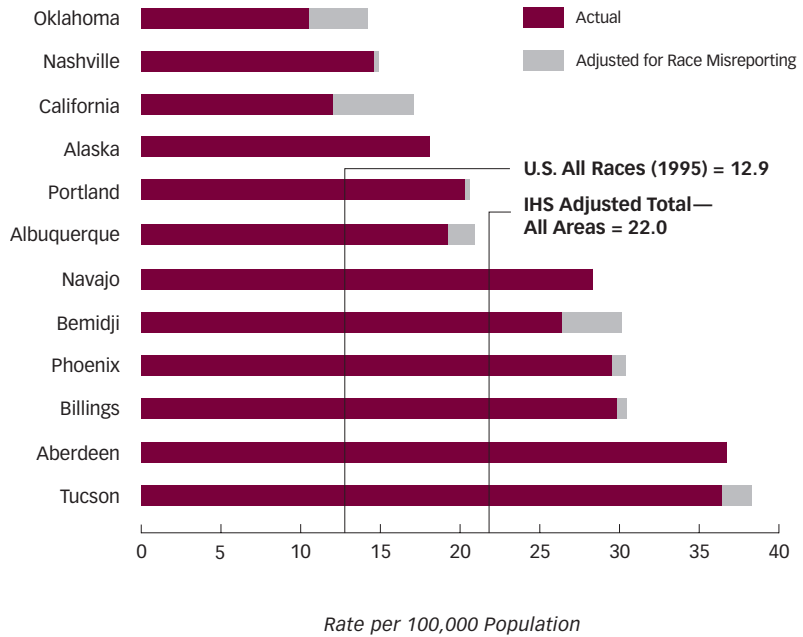
<sup>1</sup> Age-adjusted rate per 100,000 female population. Rates based on a small number of deaths should be interpreted with caution.

<sup>2</sup> Adjusted to compensate for misreporting of Indian race on death certificates.

**CHART 28**

**Pneumonia and Influenza  
Death Rates by Age  
and Sex, American Indians  
and Alaska Natives  
(1994-1996)**

Indian female age-specific pneumonia and influenza death rates are less than Indian male rates for all age groups, except 5 to 24 years. When compared to the general population, it is clear that Indians are more likely to die from pneumonia and influenza than U.S. All Races and White people. Indian female age-specific rates are greater than those for females of these two population groups for all age groups except for one group (1 to 4 years for U.S. All Races, they are both 1.1). These Indian rates have been adjusted for misreporting of Indian race on death certificates.



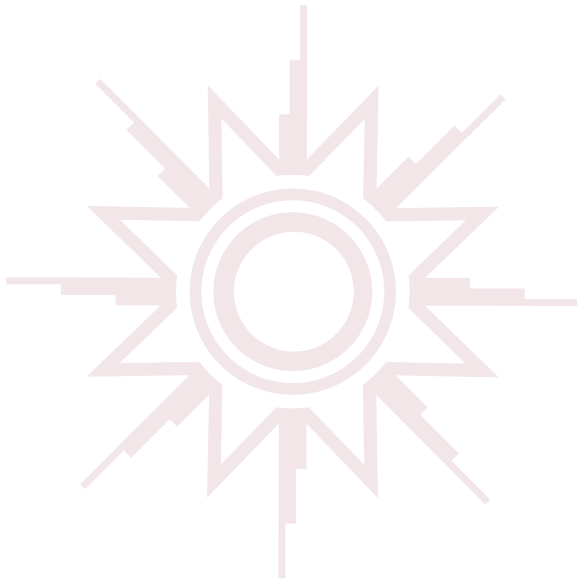
**TABLE 28**

**Pneumonia and Influenza  
Death Rates by Age  
and Sex (1994-1996)**

	Deaths		Rate <sup>1</sup>	
	Actual	Adj <sup>2</sup>	Actual	Adj <sup>2</sup>
U.S. All Races (1995)	82,923		12.9	
All IHS Areas	840	912	20.2	22.0
Aberdeen	81	81	36.7	36.7
Alaska	44	44	18.1	18.1
Albuquerque	47	49	19.2	20.9
Bemidji	54	63	26.4	30.3
Billings	37	38	29.8	30.6
California	41	59	12.0	17.1
Nashville	33	34	14.6	14.9
Navajo	192	192	28.3	28.3
Oklahoma	121	157	10.5	14.2
Phoenix	94	97	29.5	30.4
Portland	70	71	20.3	20.6
Tucson	26	27	36.4	38.3

<sup>1</sup> Age-adjusted rate per 100,000 population.

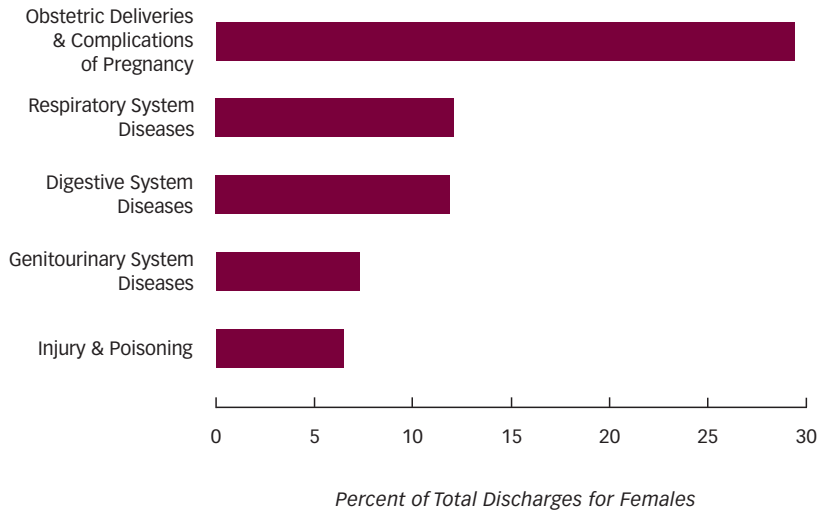
<sup>2</sup> Adjusted to compensate for misreporting of Indian race on death certificates.



**CHART 29**

**Leading Causes of Hospitalization for Females, IHS and Tribal Direct and Contract Hospitals, FY 1997**

For Indian females, 29.4 percent of all discharges from IHS and Tribal direct and contract general hospitals pertain to obstetric deliveries and complications of pregnancy and the puerperium. This is followed by respiratory system diseases (12.1 percent) and digestive system diseases (11.9 percent). For Indian males, the top three causes are respiratory system diseases, digestive system diseases, and injury and poisoning.





**TABLE 29****Ten Leading Causes of Hospitalization by Sex**

Indian Health Service and Tribal Direct and Contract General Hospitals, FY 1997

MALE			FEMALE		
Diagnostic Category	Number of Discharges	Percent of Total	Diagnostic Category	Number of Discharges	Percent of Total
All Categories	30,747	100.0	All Categories	48,916	100.0
Respiratory system diseases	5,523	18.0	Obstetric deliveries & complications of pregnancy & puerperium	14,365	29.4
Digestive system diseases	4,349	14.1	Respiratory system diseases	5,900	12.1
Injury & poisoning	4,155	13.5	Digestive system diseases	5,805	11.9
Circulatory system diseases	2,955	9.6	Genitourinary system diseases	3,563	7.3
Symptoms, signs & ill-defined conditions	2,656	8.6	Injury & poisoning	3,203	6.5
Mental disorders	2,254	7.3	Circulatory system diseases	3,090	6.3
Endocrine, nutritional & metabolic disorders	1,761	5.7	Symptoms, signs & ill-defined conditions	3,065	6.3
Skin & subcutaneous tissue diseases	1,700	5.5	Endocrine, nutritional & metabolic disorders	1,972	4.0
Genitourinary system diseases	998	3.2	Skin & subcutaneous tissue diseases	1,447	3.0
Musculoskeletal system & connective tissue diseases	989	3.2	Mental disorders	1,310	2.7
All other	3,407	11.1	All other	5,196	10.6

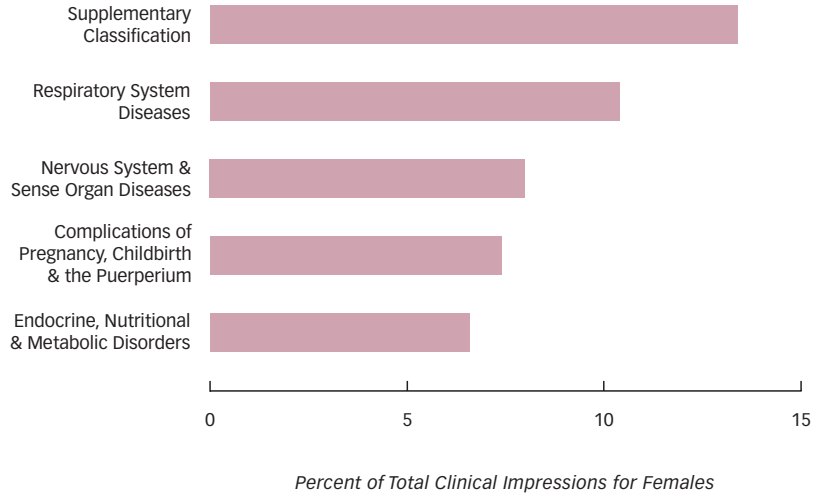
**Sources:** IHS and Tribal Direct: On-request Report 21

IHS and Tribal Contract: On-request Report 19

### CHART 30

#### Leading Causes of Female Ambulatory Medical Visits, IHS and Tribal Direct and Contract Facilities, FY 1997

For Indian females and males, the three leading causes of ambulatory medical visits in IHS and Tribal direct and contract facilities are supplementary classification conditions, respiratory system diseases, and nervous system and sense organ diseases. The sexes differ on the fourth leading cause—for females it is complications of pregnancy, childbirth, and the puerperium and for males it is injury and poisoning.





**TABLE 30**

**Number of Ambulatory Medical Clinical Impressions for Leading Major Categories by Sex, FY 1997**

Indian Health Service and Tribal Direct and Contract Facilities, FY 1997

MALE		FEMALE	
Category	Number of Clinical Impressions	Category	Number of Clinical Impressions
All Categories	2,969,025	All Categories	4,866,985
Supplementary classification	399,166	Supplementary classification	653,948
Respiratory system diseases	339,977	Respiratory system diseases	504,873
Nervous system & sense organ diseases	293,700	Nervous system & sense organ diseases	387,623
Injury & poisoning	184,578	Complication of pregnancy, childbirth & the puerperium	358,277
Endocrine, nutritional & metabolic disorders	183,020	Endocrine, nutritional & metabolic disorders	319,313
Circulatory system diseases	180,046	Symptoms, signs & ill-defined conditions	255,847
Skin & subcutaneous tissue diseases	149,514	Musculoskeletal system diseases	247,755
Symptoms, signs & ill-defined conditions	148,229	Genitourinary system diseases	221,253
Musculoskeletal system diseases	136,275	Circulatory system diseases	208,876
Mental disorders	133,870	Skin & subcutaneous tissue diseases	201,186
All other	820,650	All other	1,508,034

Sources: Direct: Annual Report 1C  
 Contract: Annual Report 3A

# Glossary of ICD-9 Codes

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

Cause of Death	ICD-9 Codes
Shigellosis and amebiasis . . . . .	004, 006
Certain other intestinal infections . . . . .	007-009
Tuberculosis . . . . .	010-018
Tuberculosis of respiratory system . . . . .	010-012
Other tuberculosis . . . . .	013-018
Whooping cough . . . . .	033
Streptococcal sore throat, scarlatina, and erysipelas . . . . .	034-035
Meningococcal infection . . . . .	036
Septicemia . . . . .	038
Acute poliomyelitis . . . . .	045
Measles . . . . .	055
Viral hepatitis . . . . .	070
Syphilis . . . . .	090-097
All other infectious and parasitic diseases . . . . .	001-003, 005, 020-032, 037, 039-041, 042-044, 046-054, 056-066, 071-088, 098-139
Malignant neoplasms, including neoplasms of lymphatic and hematopoietic tissues . . . . .	140-208
Malignant neoplasms of lip, oral cavity, and pharynx . . . . .	140-149
Malignant neoplasms of digestive organs and peritoneum . . . . .	150-159
Malignant neoplasms of respiratory and intrathoracic organs . . . . .	160-165
Malignant neoplasm of breast . . . . .	174-175
Malignant neoplasms of genital organs . . . . .	179-187
Malignant neoplasms of urinary organs . . . . .	188-189
Malignant neoplasms of all other and unspecified sites . . . . .	170-173, 190-199
Leukemia . . . . .	204-208
Other malignant neoplasms of lymphatic and hematopoietic tissues . . . . .	200-203
Benign neoplasms, carcinoma in situ, and neoplasms of uncertain behavior and of unspecified nature . . . . .	210-239
Diabetes mellitus . . . . .	250
Nutritional deficiencies . . . . .	260-269
Anemias . . . . .	280-285
Meningitis . . . . .	320-322
Major cardiovascular diseases . . . . .	390-448
Diseases of heart . . . . .	390-398, 402, 404-429
Rheumatic fever and rheumatic heart disease . . . . .	390-398
Hypertensive heart disease . . . . .	402
Hypertensive heart and renal disease . . . . .	404
Ischemic heart disease . . . . .	410-414
Acute myocardial infarction . . . . .	410
Other acute and subacute forms of ischemic heart disease . . . . .	411
Angina pectoris . . . . .	413
Old myocardial infarction and other forms of chronic ischemic heart disease . . . . .	412, 414
Other diseases of endocardium . . . . .	424
All other forms of heart disease . . . . .	415-423, 425-429
Hypertension with or without renal disease . . . . .	401, 403
Cerebrovascular diseases . . . . .	430-438
Intracerebral and other intracranial hemorrhage . . . . .	431-432
Cerebral thrombosis and unspecified occlusion of cerebral arteries . . . . .	434.0, 434.9
Cerebral embolism . . . . .	434.1
All other and late effects of cerebrovascular diseases . . . . .	430, 433, 435-438



Cause of Death	ICD-9 Codes
Atherosclerosis	440
Other diseases of arteries, arterioles, and capillaries	441-448
Acute bronchitis and bronchiolitis	466
Pneumonia and influenza	480-487
Pneumonia	480-486
Influenza	487
Chronic obstructive pulmonary diseases and allied conditions	490-496
Bronchitis, chronic and unspecified	490-491
Emphysema	492
Asthma	493
Other chronic obstructive pulmonary diseases and allied conditions	494-496
Ulcer of stomach and duodenum	531-533
Appendicitis	540-543
Hernia of abdominal cavity and intestinal obstruction without mention of hernia	550-553, 560
Chronic liver disease and cirrhosis	571
Cholelithiasis and other disorders of gallbladder	574-575
Nephritis, nephrotic syndrome, and nephrosis	580-589
Acute glomerulonephritis and nephrotic syndrome	580-581
Chronic glomerulonephritis, nephritis and nephropathy, not specified as acute or chronic, and renal sclerosis, unspecified	582-583, 587
Renal failure, disorders resulting from impaired renal function, and small kidney of unknown cause	584-586, 588-589
Infections of kidney	590
Hyperplasia of prostate	600
Complications of pregnancy, childbirth, and the puerperium	630-676
Pregnancy with abortive outcome	630-638
Other complications of pregnancy, childbirth, and the puerperium	640-676
Congenital anomalies	740-759
Certain conditions originating in the perinatal period	760-779
Birth trauma, intrauterine hypoxia, birth asphyxia, and respiratory distress syndrome	767-769
Other conditions originating in the perinatal period	760-766, 770-779
Symptoms, signs, and ill-defined conditions	780-799
All other diseases	Residual
Accidents and adverse effects	E800-E949
Motor vehicle accidents	E810-E825
All other accidents and adverse effects	E800-E807, E826-E949
Suicide	E950-E959
Homicide and legal intervention	E960-E978
All other external causes	E980-E999

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

Certain intestinal infections	008-009
Whooping cough	033
Meningococcal infection	036
Septicemia	038
Viral diseases	045-079
Congenital syphilis	090
Remainder of infectious and parasitic diseases	001-007, 010-032, 034-035, 037, 039-041, 042-044, 080-088, 091-139
Malignant neoplasms, including neoplasms of lymphatic and hematopoietic tissues	140-208
Benign neoplasms, carcinoma in situ, and neoplasms of uncertain behavior and of unspecified nature	210-239
Diseases of thymus gland	254
Cystic fibrosis	277.0
Diseases of blood and blood-forming organs	280-289
Meningitis	320-322



Cause of Death	ICD-9 Codes
Other diseases of nervous system and sense organs	323-389
Acute upper respiratory infections	460-465
Bronchitis and bronchiolitis	466, 490-491
Pneumonia and influenza	480-487
Pneumonia	480-486
Influenza	487
Remainder of diseases of respiratory system	470-478, 492-519
Hernia of abdominal cavity and intestinal obstruction without mention of hernia	550-553, 560
Gastritis, duodenitis, and noninfective enteritis and colitis	535, 555-558
Remainder of diseases of digestive system	520-534, 536-543, 562-579
Congenital anomalies	740-759
Anencephalus and similar anomalies	740
Spina bifida	741
Congenital hydrocephalus	742.3
Other congenital anomalies of central nervous system and eye	742.0-742.2, 742.4-742.9, 743
Congenital anomalies of heart	745-746
Other congenital anomalies of circulatory system	747
Congenital anomalies of respiratory system	748
Congenital anomalies of digestive system	749-751
Congenital anomalies of genitourinary system	752-753
Congenital anomalies of musculoskeletal system	754-756
Down's syndrome	758.0
Other chromosomal anomalies	758.1-758.9
All other and unspecified congenital anomalies	744, 757, 759
Certain conditions originating in the perinatal period	760-779
Newborn affected by maternal conditions which may be unrelated to present pregnancy	760
Newborn affected by maternal complications of pregnancy	761
Newborn affected by complications of placenta, cord, and membranes	762
Newborn affected by other complications of labor and delivery	763
Slow fetal growth and fetal malnutrition	764
Disorders relating to short gestation and unspecified low birthweight	765
Disorders relating to long gestation and high birthweight	766
Birth trauma	767
Intrauterine hypoxia and birth asphyxia	768
Fetal distress in liveborn infant	768.2-768.4
Birth asphyxia	768.5-768.9
Respiratory distress syndrome	769
Other respiratory conditions of newborn	770
Infections specific to the perinatal period	771
Neonatal hemorrhage	772
Hemolytic disease of newborn, due to isoimmunization, and other perinatal jaundice	773-774
Syndrome of "infant of a diabetic mother" and neonatal diabetes mellitus	775.0-775.1
Hemorrhagic disease of newborn	776.0
All other and ill-defined conditions originating in the perinatal period	775.2-775.9, 776.1-779
Symptoms, signs, and ill-defined conditions	780-799
Sudden infant death syndrome	798.0
Symptoms, signs, and all other ill-defined conditions	780-797, 798.1-799
Accidents and adverse effects	E800-E949
Inhalation and ingestion of food or other object causing obstruction of respiratory tract or suffocation	E911-E912
Accidental mechanical suffocation	E913
Other accidental causes and adverse effects	E800-E910, E914-E949
Homicide	E960-E969
Child battering and other maltreatment	E967
Other homicide	E960-E966, E968-E969
All other causes	Residual



### Additional Causes of Death and Their Corresponding ICD-9 Codes Which May Be Found in This Publication

*(These categories are not included as part of the 72 cause of death or 61 cause of infant death lists. They are independent of these two lists but are valid cause of death codes to use for the causes indicated)*

Cause of Death	ICD-9 Codes
Alcoholism deaths	291, 303, 305.0, 357.5, 425.5, 535.3, 571.0-571.3, 790.3, E860
Alzheimer's disease deaths	331.0
Breast cancer (females)	174
Cervical cancer	180
Colon-rectal cancer	153.0-154.3, 154.8, 159.0
Drug related deaths	292, 304, 305.2-305.9, E850-E858, E950.0-E950.5, E962.0, E980.0-E980.5
Gastroenteric deaths	004, 006-009, 535, 555-556, 558, 562
Human immunodeficiency virus (HIV) infection	042-044
Injury by firearms	E922, E955.0-E955.4, E965.0-E965.4, E970, E985.0-E985.4
Injury and poisoning	E800-E807, E810-E825, E826-E949, E950-E959, E960-E978, E980-E989, E990-E999
Other injuries	E980-E989, E990-E999
Lung cancer	162.2-162.9
Maternal deaths	630-676
Prostate cancer	185

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

Diagnostic Category	ICD-9 Codes
Infectious and parasitic diseases	001-139
Neoplasms	140-239
Endocrine, nutritional, and metabolic diseases and immunity disorders	240-279
Diseases of the blood and blood-forming organs	280-289
Mental disorders	290-319
Diseases of the nervous system and sense organs	320-389
Diseases of the circulatory system	390-459
Diseases of the respiratory system	460-519
Diseases of the digestive system	520-579
Diseases of the genitourinary system	580-629
Complications of pregnancy, childbirth, and the puerperium	630-676
Diseases of the skin and subcutaneous tissue	680-709
Diseases of the musculoskeletal system and connective tissue	710-739
Congenital anomalies	740-759
Certain conditions originating in the perinatal period	760-779
Symptoms, signs, and ill-defined conditions	780-799
Injury and poisoning	E800-999
Supplementary classification (classification of factors influencing health status and contact with health service)	V01-V99

# Method Used to Rank Leading Sites of Cancer Deaths

## Site of Cancer Death

## ICD-9 Codes

*The causes designated by the symbol # were ranked to designate the leading sites of cancer deaths*

Malignant neoplasms, including neoplasms of lymphatic and hematopoietic tissues	140-208
Malignant neoplasms of lip, oral cavity, and pharynx	140-149
# of lip	140
# of tongue	141
# of pharynx	146-149.0
of other and ill-defined sites within the lip, oral cavity, and pharynx	142-145, 149.1-149.9
Malignant neoplasms of digestive organs and peritoneum	150-159
# of esophagus	150
# of stomach	151
# of small intestine, including duodenum	152
# of colon	153
Hepatic and splenic flexures and transverse colon	153.0-153.1, 153.7
Descending colon	153.2
Sigmoid colon	153.3
# Cecum, appendix, and ascending colon	153.4-153.6
Other and colon, unspecified	153.8-153.9
# of rectum, rectosigmoid junction, and anus	154
# of liver and intrahepatic bile ducts	155
Liver, primary	155.0
Intrahepatic bile ducts	155.1
Liver, not specified as primary or secondary	155.2
# of gallbladder and extrahepatic bile ducts	156
# of pancreas	157
of retroperitoneum, peritoneum, and other and ill-defined sites	
within the digestive organs and peritoneum	158-159
Malignant neoplasms of respiratory and intrathoracic organs	160-165
# of larynx	161
# of trachea, bronchus, and lung	162
of all other and ill-defined sites within the respiratory system and	
intrathoracic organs	160, 163-165
Malignant neoplasms of bone, connective tissue, skin, and breast	170-175
# of bone and articular cartilage	170
# of connective and other soft tissue	171
# Melanoma of skin	172
Other malignant neoplasms of skin	173
# of female breast	174
# of male breast	175
Malignant neoplasms of genital organs	179-187
# of cervix uteri	180
of other parts of uterus	179, 181-182
# of ovary and other uterine adnexa	183
of other and unspecified female genital organs	184
# of prostate	185
# of testis	186
# of penis and other male genital organs	187





**Site of Cancer Death**

**ICD-9 Codes**

*The causes designated by the symbol # were ranked to designate the leading sites of cancer deaths*

Malignant neoplasms of urinary organs .....	188-189
# of bladder .....	188
# of kidney and other and unspecified urinary organs .....	189
Malignant neoplasms of other and unspecified sites .....	190-199
# of eye .....	190
# of brain .....	191
of other and unspecified parts of nervous system .....	192
# of thyroid gland and other endocrine glands and related structures .....	193-194
of all other and unspecified sites .....	195-199
Malignant neoplasms of lymphatic and hematopoietic tissues .....	200-208
# Lymphosarcoma and reticulosarcoma .....	200
# Hodgkin's disease .....	201
Other malignant neoplasms of lymphoid and histiocytic tissue .....	202
# Multiple myeloma and immunoproliferative neoplasms .....	203
# Leukemia .....	204-208
Lymphoid leukemia .....	204
Myeloid leukemia .....	205
Monocytic leukemia .....	206
Other and unspecified leukemia .....	207-208