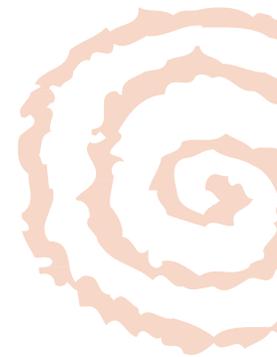




## Indian Health Focus

# Women



**1997**

**U.S. Department of Health and Human Services  
Indian Health Service**

**Office of Public Health**

**Division of Community and Environmental Health  
Program Statistics Team**



# Indian Health Focus

# Women

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# Table of Contents

<b>Introduction</b>	.....	<b>1</b>
<b>Summary of Data Shown</b>	.....	<b>2</b>
<b>Sources and Limitations of Data</b>	.....	<b>5</b>
Population Statistics	.....	5
Vital Event Statistics	.....	5
Patient Care Statistics	.....	6
<b>Sources of Additional Information</b>	.....	<b>7</b>
<b>Tables and Charts</b>	.....	<b>8</b>
<b>Chart 1</b>	Population by Age and Sex, 1990 Census	8
<b>Table 1</b>	Age and Sex Percent Distribution	8
<b>Chart 2</b>	Employment Status by Sex, American Indians and U.S. All Races, 1990 Census	9
<b>Table 2</b>	Selected Economic Profiles for the United States, 1990 Census	9
<b>Chart 3</b>	Births of Low Birthweight (Under 2,500 Grams) as a Percent of Total Live Births by Age of Mother	10
<b>Table 3</b>	Births of Low Birthweight (Under 2,500 Grams) by Age of Mother	10
<b>Chart 4</b>	Births of High Birthweight (4,000 Grams or More) as a Percent of Total Live Births by Age of Mother	11
<b>Table 4</b>	Births of High Birthweight (4,000 Grams or More) by Age of Mother	11
<b>Chart 5.1</b>	Birth Order by Age of Mother, Percent Within Birth Order, American Indians and Alaska Natives	12
<b>Chart 5.2</b>	Birth Order by Age of Mother, Percent Within Birth Order, U.S. All Races	12
<b>Chart 5.3</b>	Birth Order by Age of Mother, Percent Within Birth Order, U.S. Whites	13
<b>Table 5</b>	Number and Percent Distribution of Live Births by Age of Mother Within Birth Order	13
<b>Chart 6</b>	Family Planning Visit Rates, FY 1995	14
<b>Table 6</b>	Number and Rate of Family Planning Visits	14





**Chart 7** Live Births With Prenatal Care Beginning in First Trimester, CY 1992-94 .....15

**Table 7** Live Births With Prenatal Care Beginning in First Trimester, CY 1992-94 .....15

**Chart 8** Mothers Who Smoked During Pregnancy, CY 1992-94 .....16

**Table 8** Percent of Mothers Who Smoked During Pregnancy for All Births and Low Weight Births by Age of Mother, CY 1992-94 .....16

**Chart 9** Mothers Who Drank During Pregnancy, CY 1992-94 .....17

**Table 9** Percent of Mothers Who Drank During Pregnancy by Age of Mother, CY 1992-94 .....17

**Chart 10** Births Rates With Diabetic Mother, CY 1992-94 .....18

**Table 10** Rate of Live Births With Diabetic Mother by Age of Mother, CY 1992-94 .....18

**Chart 11.1** First Cesarean Delivery, CY 1992-94 .....19

**Chart 11.2** Vaginal Births After Previous Cesarean Delivery, CY 1992-94 .....19

**Table 11** Rates of First Cesarean Delivery and Vaginal Births After Previous Cesarean Delivery by Age of Mother, CY 1992-94 .....20

**Chart 12** Life Expectancy at Birth, Females, Calendar Years 1992-1994 .....20

**Chart 13** Deaths by Age and Sex .....21

**Table 13** Number and Percent Distribution of Deaths by Age and Sex .....21

**Chart 14** Death Rates for Leading Causes: Females .....22

**Table 14** Leading Causes of Death by Sex .....22

**Chart 15** Alcoholism Death Rates by Age and Sex .....23

**Table 15** Alcoholism Death Rates by Age and Sex .....23

**Chart 16** Drug-Related Death Rates by Age and Sex .....24

**Table 16** Drug-Related Death Rates by Age and Sex .....24

**Chart 17** Accident Death Rates by Age and Sex .....25

**Table 17** Accident Death Rates by Age and Sex .....25

**Chart 18** Suicide Death Rates by Age and Sex .....26

**Table 18** Suicide Death Rates by Age and Sex .....26





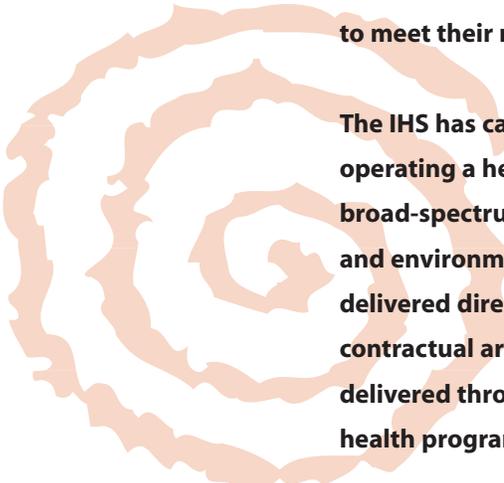
<b>Chart 19</b>	Homicide Death Rates by Age and Sex . . . . .	.27
<b>Table 19</b>	Homicide Death Rates by Age and Sex . . . . .	.27
<b>Chart 20</b>	Chronic Liver Disease and Cirrhosis Death Rates by Age and Sex . . . . .	.28
<b>Table 20</b>	Chronic Liver Disease and Cirrhosis Death Rates by Age and Sex . . . . .	.28
<b>Chart 21</b>	Diabetes Mellitus Death Rates by Age and Sex . . . . .	.29
<b>Table 21</b>	Diabetes Mellitus Death Rates by Age and Sex . . . . .	.29
<b>Chart 22</b>	Heart Disease Death Rates by Age and Sex . . . . .	.30
<b>Table 22</b>	Heart Disease Death Rates by Age and Sex . . . . .	.30
<b>Chart 23</b>	Cerebrovascular Diseases Death Rates by Age and Sex . . . . .	.31
<b>Table 23</b>	Cerebrovascular Diseases Death Rates by Age and Sex . . . . .	.31
<b>Chart 24</b>	Malignant Neoplasm Death Rates by Age and Sex . . . . .	.32
<b>Table 24</b>	Malignant Neoplasm Death Rates by Age and Sex . . . . .	.32
<b>Chart 25</b>	Death Rates, Leading Cancer Sites: Females . . . . .	.33
<b>Table 25</b>	Leading Sites for Cancer Deaths for Female Decedents . . . . .	.34
<b>Chart 26</b>	Age-Adjusted Breast Cancer Death Rates for Females, CY 1992-94 . . . . .	.35
<b>Table 26</b>	Age-Adjusted Breast Cancer Death Rates for Females, CY 1992-94 . . . . .	.35
<b>Chart 27</b>	Age-Adjusted Cervical Cancer Death Rates for Females, CY 1992-94 . . . . .	.36
<b>Table 27</b>	Age-Adjusted Cervical Cancer Death Rates for Females, CY 1992-94 . . . . .	.36
<b>Chart 28</b>	Leading Causes of Hospitalization for Females . . . . .	.37
<b>Table 28</b>	Ten Leading Causes of Hospitalization by Sex . . . . .	.37
<b>Chart 29</b>	Leading Causes of Ambulatory Medical Visits for Females . . . . .	.38
<b>Table 29</b>	Number of Ambulatory Medical Clinical Impressions for Leading Major Categories by Sex . . . . .	.38
<b>Glossary of ICD-9 Codes . . . . .</b>		<b>.39</b>
<b>Methods Used to Rank Leading Sites of Cancer Deaths . . . . .</b>		<b>.43</b>





# *Introduction*

The Indian Health Service (IHS) is an agency of the Department of Health and Human Services. The IHS goal is to raise the health status of American Indians and Alaska Natives to the highest possible level. The mission is to provide a comprehensive health services delivery system for American Indians and Alaska Natives with opportunity for maximum Tribal involvement in developing and managing programs to meet their needs.



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 of the Indian population that require special attention, such as infants, youth, women, and the elderly. This publication examines the health status of Indian women. It is based on data published in the 1997 *Trends in Indian Health* and *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 (on and near reservations). Approximately 60 percent of American Indians and Alaska Natives in the U.S. reside in the IHS service area. In 1998, there were 1.46 million Indians in the IHS service area compared to 2.41 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, 33.4 and 15.7. Indian women generally have a lower social and economic status than women in the general population. According to the 1990 census, 13.4 percent of Indian women age 16 and older are unemployed in contrast to 6.2 and 5.0 percent for the U.S. All Races and White populations, respectively.

Indian women on average give birth to children at younger ages than women in the general population. For Indian women, 45.2 percent are under age 20 when they have their first child. This compares to 24.2 percent for U.S. All Races mothers and 21.3 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 All Races and White populations.

For Indian women, 5.9 percent of reported live births are of low birthweight, just below the level for the White population (6.0 percent). The percentage for U.S. All Races population is considerably higher at 7.2. High birthweight births (4,000 grams or more) are a relatively greater problem for Indian women than low weight births. For Indian women, 11.5 percent of reported live births are of high birthweight, compared to 10.5 percent for U.S. All Races women. U.S. White women have the highest percentage of the three population groups, i.e., 11.8.

Family planning occurs at widely different rates among the IHS Areas. Indian women of child-bearing age (15 to 44 years) have family planning visits in the California Area at a rate of 338.4 visits per 1,000 women (15 to 44 years). This, the lowest rate, is in sharp contrast to the highest rate of 780.9 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 63.6 percent of Indian live births, whereas this percentage for the general population is 78.9. None of the IHS Areas reach the U.S. All Races rate, although Alaska is close at 77.6. The Navajo rate of 48.6, the lowest Area rate, is only 62 percent of the 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, 20.5 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., 15.8 percent. There appears to be a relationship between smoking and low birthweight births. Of all Indian low weight births, 28.4 percent are to women who report smoking during pregnancy. Alcohol consumption is another risky behavior more prevalent among Indian pregnant women. Indian women report that they drink during pregnancy at a rate 2.8 times the rate for women in the U.S. All Races population, i.e., 5.9 percent of Indian mothers compared to 2.1 percent for All Races mothers. Partially as a result of behaviors (e.g., dietary) prior to pregnancy, Indian women giving birth are more than twice as likely to be diabetic than All Races women giving birth.

Indian women tend to give birth using different methods of delivery than women in the U.S. All Races population. They have a 25 percent lower rate of primary cesarian deliveries (i.e., number of first cesarian deliveries per 100 live births to women who have not had a prior cesarian delivery) than All Races women.

Also, Indian women who have had a cesarian delivery are 48 percent more likely to have a subsequent vaginal delivery than women in the All Races population.

The life expectancy (adjusted for miscoding of Indian race on death certificates) for Indian females is 7.9 years greater than it is for Indian males, i.e., 75.1 compared to 67.2. Therefore, it follows that Indian females die at relatively older ages than Indian males. The percentage of deaths pertaining to ages under 45 is 24 percent for Indian females and 35 for males. However, for ages over 64, the female percentage is 52 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 are also the leading cause of death for Indian males, but accidents are the second leading cause. These Indian counts are adjusted for miscoding 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 females, it still takes a considerable death toll among Indian females. The Indian female

alcoholism death rate peaks at 87.6 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 9.9 for women 55 to 64 years old. The age-specific rate for U.S. White females also peaks for the 55 to 64 year age group (9.4). In contrast to alcoholism death rates, age-specific drug-related death rates for Indian females are closer to those for Indian males and exceed the male rates for age groups 5 through 24 and 55 to 64 years. However, some of these rates are based on small numbers and should be interpreted with caution. The highest female rate (7.7) occurs among the 25 to 34 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 miscoding 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 population. The age-specific death rate for accidents for Indian females is higher for all age groups except 85 years and older 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 5 to 14 and 75 to 84 years. It exceeds the rate for U.S. White females for all age groups except 75 to 84 years. These Indian rates are adjusted for miscoding of Indian race on death certificates.

Indian women die from diseases of the heart at lower rates than Indian men for all age groups and for chronic liver disease and cirrhosis for all age groups except under 35 years. The cerebrovascular diseases death rate is similar for Indian males and females among the various age groups. 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 All Races and White females in age groups under 75 years, but are less for age groups 75 years and over. These Indian rates are adjusted for miscoding 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 popula-

tion groups for all age groups over 24 years except one (45 to 54 years for All Races). 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 women, while the order is reversed for All Races and White women. The Indian female age-adjusted cervical cancer death rate (4.1 deaths per 100,000 population) is 1.6 times the rate for U.S. All Races females (2.5). In contrast, the Indian female age-adjusted breast cancer death rate (14.9 deaths per 100,000 population) is 69 percent of the rate for U.S. All Races females (21.5). These Indian counts and rates are adjusted for miscoding 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 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.

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.

The social and economic data contained in this publication are from the 1990 census. They reflect the characteristics of persons that self-identified as Indian during the census.

## Vital Event Statistics

American Indian and Alaska Native vital event statistics are derived from data furnished annually to the IHS by the National Center for Health Statistics (NCHS). Vital event statistics for the U.S. population were derived from data 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.

It is known that there is miscoding 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 miscoding, 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 years beyond 1988, 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 are used for the first time in this edition. 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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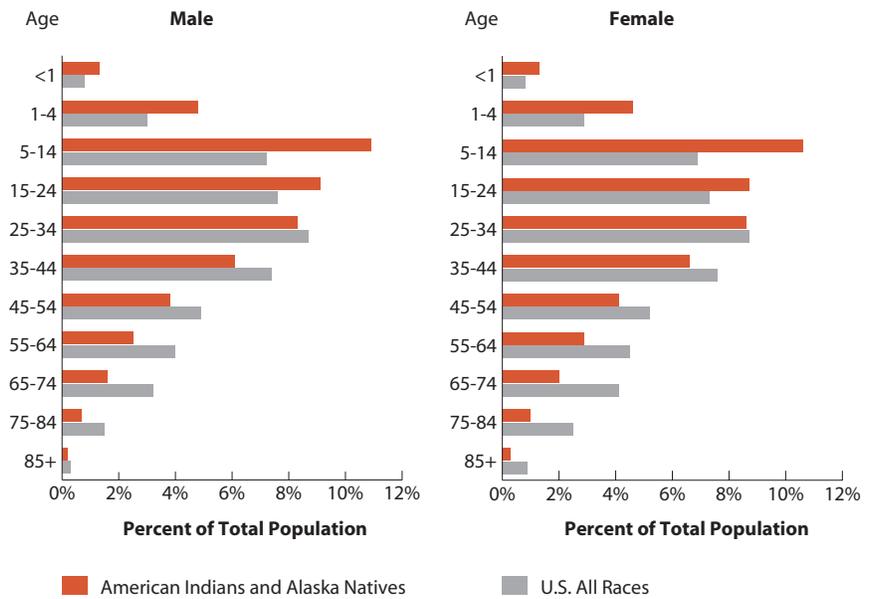
This publication, other IHS publications, and additional information  
about the IHS are available on the IHS Homepage on the  
World Wide Web.

The address is: <http://www.ihs.gov/>



**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 the 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 percent for the U.S. All Races and White populations, respectively.



**Table 1 Age and Sex Percent Distribution**

American Indians and Alaska Natives, IHS Service Area, and U.S. All Races and White Populations, 1990 Census Data

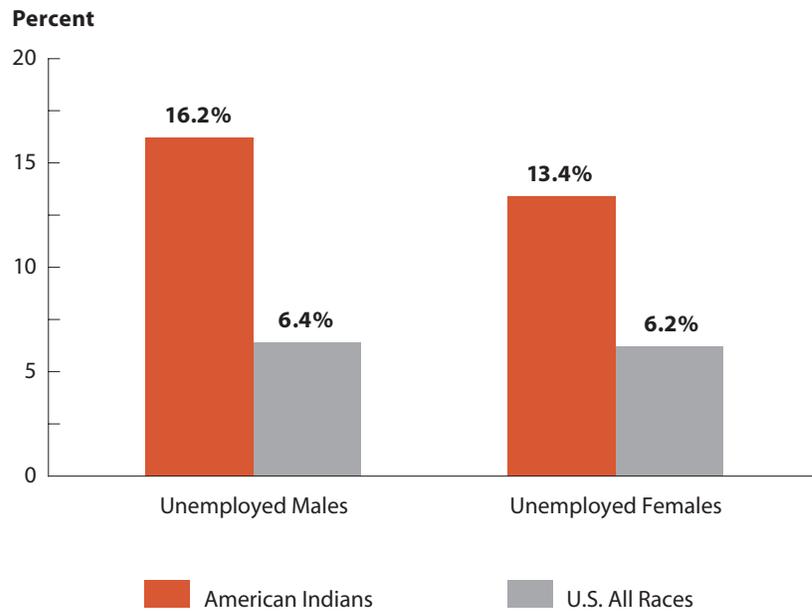
Age Group	American Indian & Alaska Native, IHS Service Area <sup>1</sup>		U.S. All Races		U.S. White	
	Male	Female	Male	Female	Male	Female
Percent of Both Sexes:						
All Ages	49.274	50.726	48.747	51.253	48.941	51.059
Under 1 year	1.322	1.294	0.812	0.775	0.768	0.730
1-4 years	4.774	4.616	3.048	2.907	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
Percent Within Each Sex:						
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 errors 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 women in the general population. According to the 1990 census, 13.4 percent of Indian women age 16 and older are unemployed in contrast to 6.2 and 5.0 percent for the U.S. All Races and White populations, respectively.



**Table 2 Selected Economic Profiles for the United States, 1990 Census**

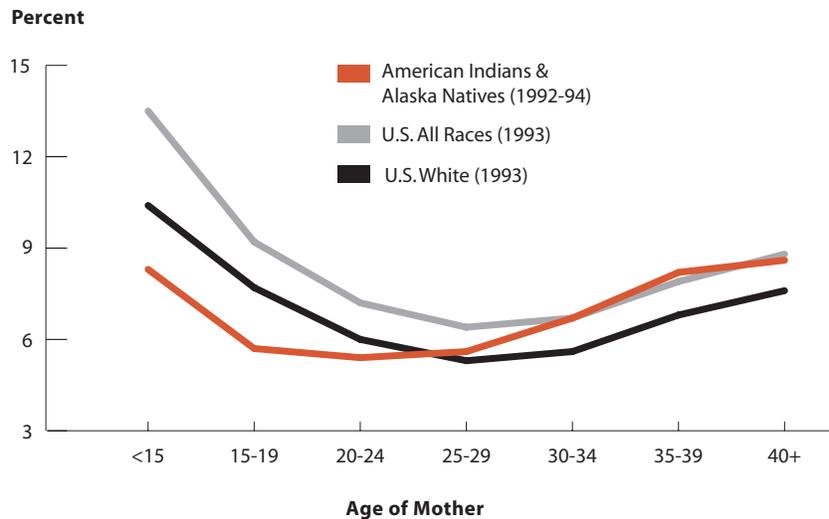
	American Indian and Alaska Native	All Races	White	Black	Asian and Pacific Islander	Hispanic
<b>Educational Attainment</b> (Persons 25 years and older):						
Percent less than 9th grade	14.1	10.4	8.9	13.8	12.9	30.7
Percent 9th to 12th grade, no diploma	20.6	14.4	13.1	23.2	9.5	19.5
Percent high school 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> (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 95, and unpublished data from the U.S. Bureau of the Census.



**Chart 3 Births of Low Birthweight (Under 2,500 Grams) as a 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 population. For Indian women, 5.9 percent of reported live births are of low birthweight, just below the level for the U.S. White population (6.0 percent). This compares to 7.2 percent for the U.S. All Races population. Indian women experience their highest rate of low weight births (8.6 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, in which the rates are 13.5 and 10.4 percent, respectively.



**Table 3 Births of Low Birthweight (Under 2,500 Grams) by Age of Mother**

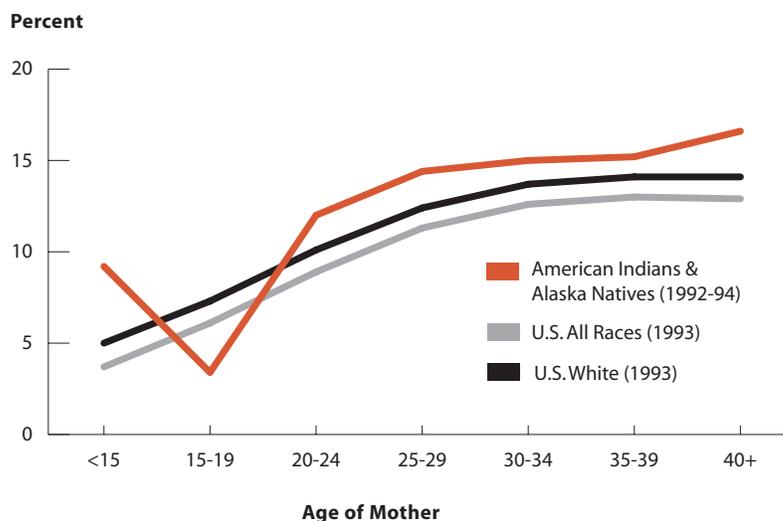
American Indians and Alaska Natives, IHS Service Area, 1992-94, and U.S. All Races and White Populations, 1993

Age of Mother	American Indian and Alaska Native			U.S. All Races			U.S. White		
	Total Live Births	Number Low Weight	Percent Low Weight	Total Live Births	Number Low Weight	Percent Low Weight	Total Live Births	Number Low Weight	Percent Low Weight
All Ages	100,016 <sup>1</sup>	5,919	5.9	3,995,448 <sup>1</sup>	288,482	7.2	3,146,378 <sup>1</sup>	188,249	6.0
Under 20 years	20,470	1,174	5.7	512,975	47,945	9.3	347,166	26,740	7.7
Under 15 years	422	35	8.3	12,526	1,686	13.5	5,741	599	10.4
15-19 years	20,048	1,139	5.7	500,449	46,259	9.2	341,425	26,141	7.7
20-24 years	32,992	1,779	5.4	1,036,950	74,804	7.2	789,384	47,049	6.0
25-29 years	24,139	1,347	5.6	1,127,637	71,859	6.4	919,846	48,715	5.3
30-34 years	14,950	1,004	6.7	900,025	60,233	6.7	748,557	42,264	5.6
35-39 years	6,239	509	8.2	356,556	28,243	7.9	292,302	19,748	6.8
40 years and over	1,226	106	8.6	61,305	5,398	8.8	49,123	3,733	7.6

<sup>1</sup> Excludes 183 American Indian and Alaska Native live births, 4,792 U.S. All Races live births, and 3,455 U.S. White live births with birthweight not stated.

**Chart 4 Births of High Birthweight (4,000 Grams or More) as a 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 low weight births. High birthweight infants are a complication of diabetic pregnancies and should be of concern. For Indian women, 11.5 percent of reported live births are of high birthweight compared to 5.9 percent for low weight births. The U.S. All Races population has a lower rate of high birthweight births, i.e., 10.5 percent, whereas the U.S. White population has a higher rate, 11.8 percent. 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 Indians and Alaska Natives, IHS Service Area, 1992-94, and U.S. All Races and White Populations, 1993

Age of Mother	American Indian and Alaska Native			U.S. All Races			U.S. White		
	Total Live Births	Number High Weight	Percent High Weight	Total Live Births	Number High Weight	Percent High Weight	Total Live Births	Number High Weight	Percent High Weight
All Ages	100,016 <sup>1</sup>	11,545	11.5	3,995,448 <sup>1</sup>	418,487	10.5	3,146,378 <sup>1</sup>	370,098	11.8
Under 20 years	20,470	724	3.5	512,975	31,079	6.1	347,166	25,153	7.2
Under 15 years	422	39	9.2	12,526	458	3.7	5,741	289	5.0
15-19 years	20,048	685	3.4	500,449	30,621	6.1	341,425	24,864	7.3
20-24 years	32,992	3,959	12.0	1,036,950	92,375	8.9	789,384	79,780	10.1
25-29 years	24,139	3,476	14.4	1,127,637	127,319	11.3	919,846	114,123	12.4
30-34 years	14,950	2,236	15.0	900,025	113,600	12.6	748,557	102,773	13.7
35-39 years	6,239	946	15.2	356,556	46,208	13.0	292,302	41,323	14.1
40 years and over	1,226	204	16.6	61,305	7,906	12.9	49,123	6,946	14.1

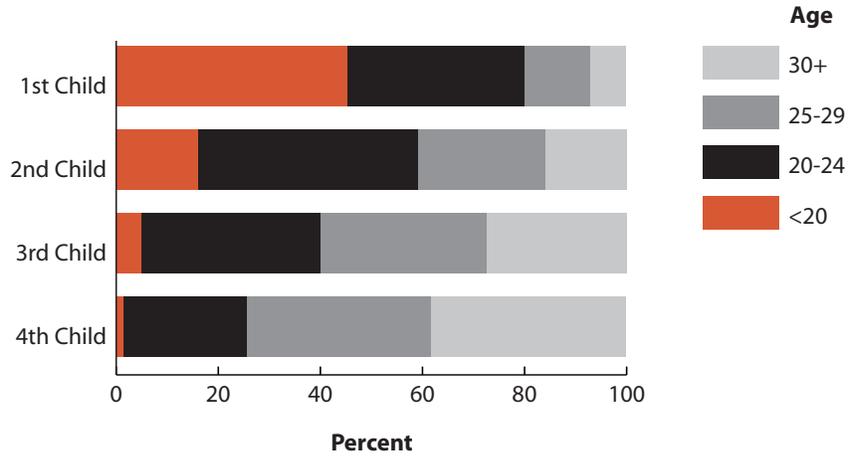
<sup>1</sup> Excludes 183 American Indian and Alaska Native live births, 4,792 U.S. All Races live births, and 3,455 U.S. White live births with birthweight not stated.





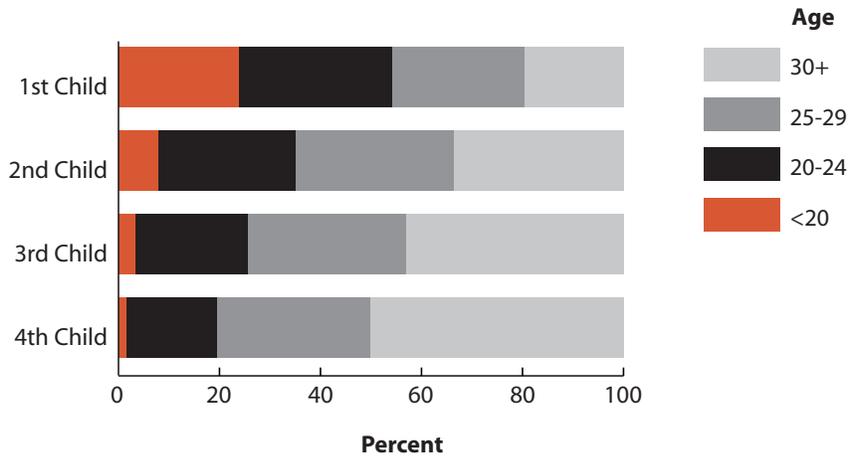
**Chart 5.1 Birth Order by Age of Mother, Percent Within Birth Order, American Indians and Alaska Natives**

Indian women on average give birth to children at younger ages than women in the general population. For Indian women, 45.2 percent are under age 20 when they have their first child. Only 1.8 percent are older than 34 at the time of their first born.



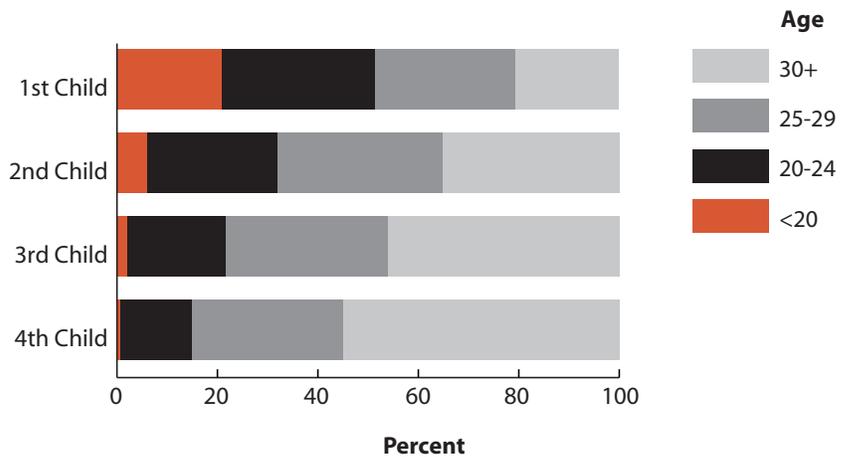
**Chart 5.2 Birth Order by Age of Mother, Percent Within Birth Order, U.S. All Races**

Women in the U.S. All Races population tend to wait longer for their first child than Indian women. For the All Races population, 24.2 percent of women are under age 20 and 5.5 percent are older than 34 when they have their first child.



**Chart 5.3 Birth Order by Age of Mother, Percent Within Birth Order, U.S. Whites**

The U.S. White population is similar to the general population in terms of mother's age at birth of first child. For the White population, 21.3 percent of women are under age 20 and 5.8 percent are older than 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	Total Live Births	Live Birth Order					
		1st Child	2nd Child	3rd Child	4th Child	5th Child	6th+ Child
<b>American Indian and Alaska Native, IHS Service Area, 1992-94</b>							
All Ages	100,199 <sup>1</sup>	33,581	26,307	18,016	10,555	5,779	5,606
All Ages	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Under 20 years	20.5	45.2	16.0	4.9	1.3	0.3	—
20-24 years	33.0	34.6	42.9	35.0	24.2	14.6	5.1
25-29 years	24.1	13.0	25.0	32.7	36.3	34.8	25.5
30-34 years	15.0	5.4	11.8	19.1	25.8	31.2	37.1
35-39 years	6.2	1.5	3.7	7.2	10.5	16.1	25.1
40-49 years	1.2	0.3	0.6	1.1	1.9	3.0	7.2
<b>U.S. All Races, 1993</b>							
All Ages	3,982,169 <sup>2</sup>	1,619,840	1,289,326	645,596	253,619	96,154	77,634
All Ages	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Under 20 years	12.8	24.2	7.5	3.0	1.3	0.5	0.1
20-24 years	26.0	29.9	26.8	21.7	17.6	13.4	5.9
25-29 years	28.3	25.5	30.7	30.6	29.3	27.5	21.2
30-34 years	22.5	14.9	25.1	30.0	32.0	33.2	33.4
35-39 years	8.9	4.7	8.7	12.8	16.7	20.6	28.5
40-49 years	1.5	0.8	1.2	1.9	3.1	4.8	10.8
<b>U.S. White, 1993</b>							
All Ages	3,135,975 <sup>3</sup>	1,294,431	1,038,865	503,392	186,085	65,184	48,018
All Ages	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Under 20 years	11.0	21.3	5.7	1.9	0.6	0.2	0.1
20-24 years	25.1	30.2	25.7	19.1	13.7	8.9	3.4
25-29 years	29.2	27.0	31.9	31.2	29.2	25.8	16.8
30-34 years	23.8	15.7	26.5	32.2	34.9	36.3	34.2
35-39 years	9.3	5.0	9.0	13.6	18.3	23.4	32.8
40-49 years	1.6	0.8	1.2	2.0	3.3	5.4	12.7

<sup>1</sup> Excludes 387 American Indian and Alaska Native births (0.4 percent) with birth order not reported.

<sup>2</sup> Excludes 18,071 U.S. All Races births (0.5 percent) with birth order not reported.

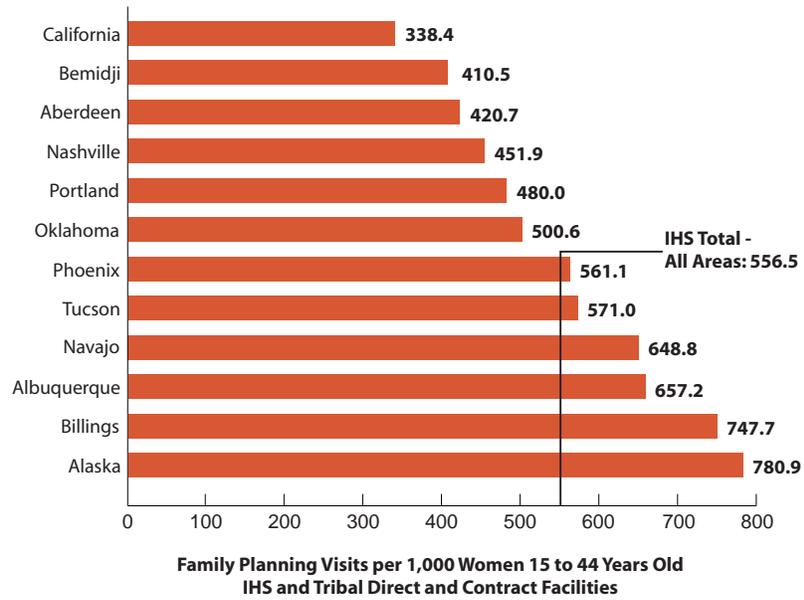
<sup>3</sup> Excludes 13,858 U.S. White births (0.4 percent) with birth order not reported.

NOTE: Where needed, percents were adjusted to sum to 100.0 due to rounding. Adjustments were made in the largest age category within a birth order group and did not exceed 0.1 percent for any age category shown.



**Chart 6 Family Planning Visit Rates, FY 1995**

Indian women of childbearing age (15 to 44 years) have family planning visits to IHS and Tribal direct and contract facilities at a rate of 556.5 visits per 1,000 women (15 to 44 years). The rate varies considerably by IHS Area, ranging from 338.4 in California to 780.9 in Alaska.



**Table 6 Number and Rate of Family Planning Visits**

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

	Total Visit Rate <sup>1</sup>	Total Visits	Direct Visits	Contract Visits	Women 15 to 44 Years
All IHS Areas	556.5	173,262	170,976	2,286	311,368
Aberdeen	420.7	11,031	11,000	31	26,218
Alaska	780.9	19,229	19,222	7	24,624
Albuquerque	657.2	14,026	13,962	64	21,343
Bemidji	410.5	7,124	6,939	185	17,354
Billings	747.7	11,296	11,114	182	15,108
California	338.4	5,472	5,440	32	16,169
Nashville	451.9	4,134	4,058	76	9,148
Navajo	648.8	36,195	34,913	1,282	55,785
Oklahoma	500.6	34,592	34,574	18	69,098
Phoenix	561.1	17,336	17,288	48	30,894
Portland	480.0	9,523	9,168	355	19,841
Tucson	571.0	3,304	3,298	6	5,786

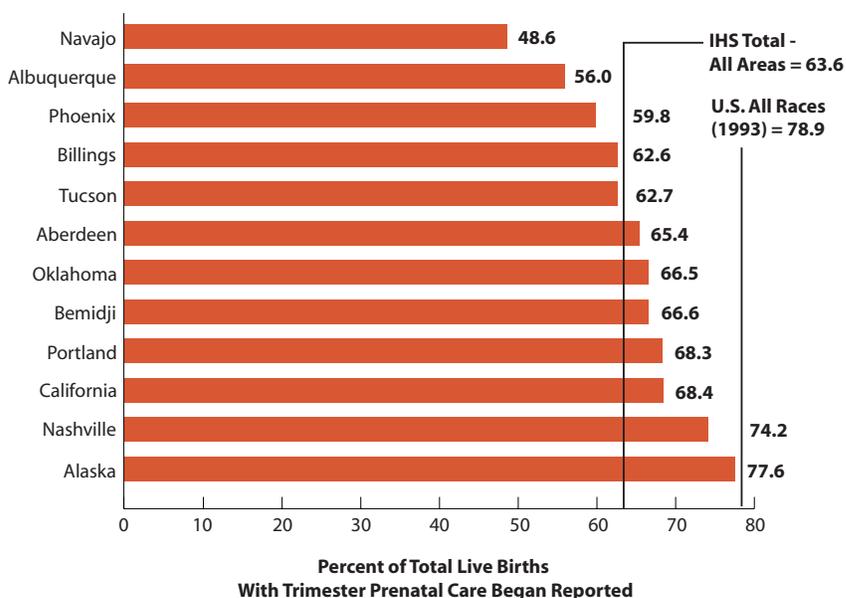
<sup>1</sup> Number of family planning visits per 1,000 women of childbearing age (15-44 years) in the IHS user population.

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



**Chart 7 Live Births With Prenatal Care Beginning in First Trimester, CY 1992-94**

Indian women generally begin prenatal care later than women in the U.S. All Races population. Prenatal care begins in the first trimester for 63.6 percent of Indian live births, whereas this percentage for the general population is 78.9. None of the IHS Areas reach the U.S. All Races rate, although Alaska is close at 77.6. The Navajo rate of 48.6, the lowest Area rate, is only 62 percent of the All Races rate.



**Table 7 Live Births With Prenatal Care Beginning in First Trimester, CY 1992-94**

	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 (1993)	4,000,240	3,911,209	3,085,850	78.9
All IHS Areas	100,199	97,891	62,247	63.6
Aberdeen	8,252	8,158	5,337	65.4
Alaska	8,321	8,218	6,376	77.6
Albuquerque	5,670	5,433	3,043	56.0
Bemidji	5,286	5,195	3,459	66.6
Billings	4,292	4,266	2,672	62.6
California	8,007	7,923	5,422	68.4
Nashville	3,778	3,711	2,755	74.2
Navajo	16,103	15,822	7,690	48.6
Oklahoma	18,737	18,039	12,002	66.5
Phoenix	10,145	9,859	5,895	59.8
Portland	9,834	9,500	6,488	68.3
Tucson	1,774	1,767	1,108	62.7

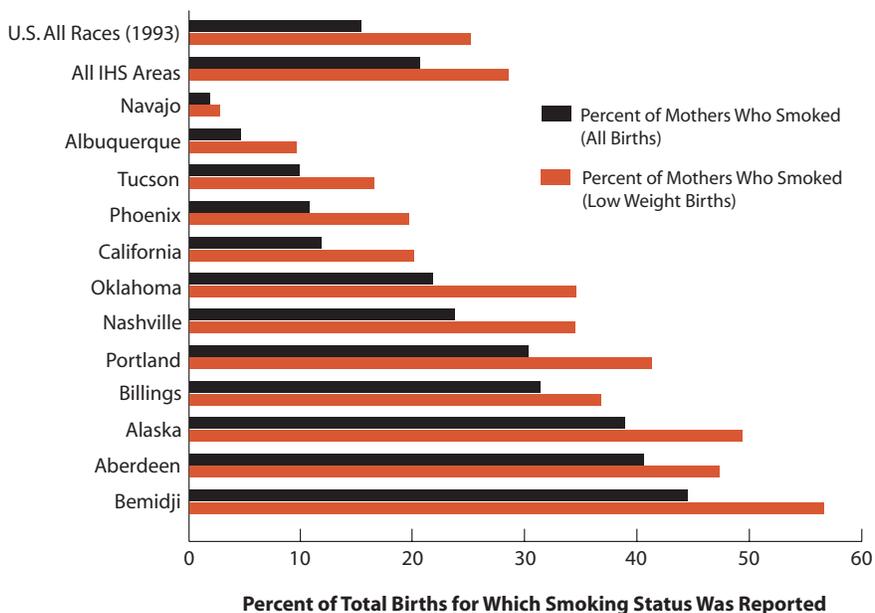
<sup>1</sup> Includes 89,031 U.S. All Races live births and 2,308 American Indian/Alaska Native live births for which trimester of pregnancy that prenatal care began was not reported on the State birth certificate.

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



**Chart 8 Mothers Who Smoked During Pregnancy, CY 1992-94**

In the Indian population, 20.5 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., 15.8 percent. There appears to be a relationship between smoking and low birthweight births. Of all Indian low weight births, 28.4 percent are to women who report smoking during pregnancy. There are considerable variations among the IHS Areas and age groups in terms of these two rates.



**Table 8 Percent of Mothers Who Smoked During Pregnancy for All Births and Low Weight Births by Age of Mother, CY 1992-94**

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

	Percent of Live Births <sup>1</sup> for Which the Mother Reported Smoking					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	All Ages	Under 15 Years	15-19 Years	20-34 Years	35-49 Years
U.S. All Races (1993)	15.8	7.0	17.5	15.9	12.6	25.2	7.4	19.8	26.7	25.2
All IHS Areas	20.5	12.7	21.3	20.6	18.1	28.4	16.7	24.9	29.7	36.4
Aberdeen	40.4	27.8*	37.9	41.4	39.8	47.1	100.0*	40.0	47.9	55.0
Alaska	38.7	24.1	43.4	38.0	37.3	49.2	—*	39.1	52.1	46.8
Albuquerque	4.6	—*	4.1	4.8	4.0	9.5	—*	5.5	10.3	11.6
Bemidji	44.3	42.9	46.1	44.0	42.5	56.4	100.0*	46.6	58.2	64.3
Billings	31.2	13.0	26.8	32.4	34.5	36.6	—*	33.3	12.0	38.1
California	11.7	100.0*	15.4*	11.1	—*	20.0*	—*	—*	20.0*	—*
Nashville	23.6	—*	19.7	24.9	25.3	34.3	—*	14.3	41.5	18.2
Navajo	1.8	—	2.2	1.8	1.0	2.7	—*	2.1	3.0	1.6
Oklahoma	21.6	10.8	19.0	22.2	25.5	34.4	—*	32.6	35.0	35.3
Phoenix	10.7	5.3	10.6	10.8	10.6	19.5	—*	18.4	17.5	24.2
Portland	30.1	16.3	34.2	29.1	28.4	41.1	66.7*	37.6	41.0	47.0
Tucson	9.8	7.7*	9.7	10.0	7.9	16.4	—*	5.0	20.3	15.4*

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

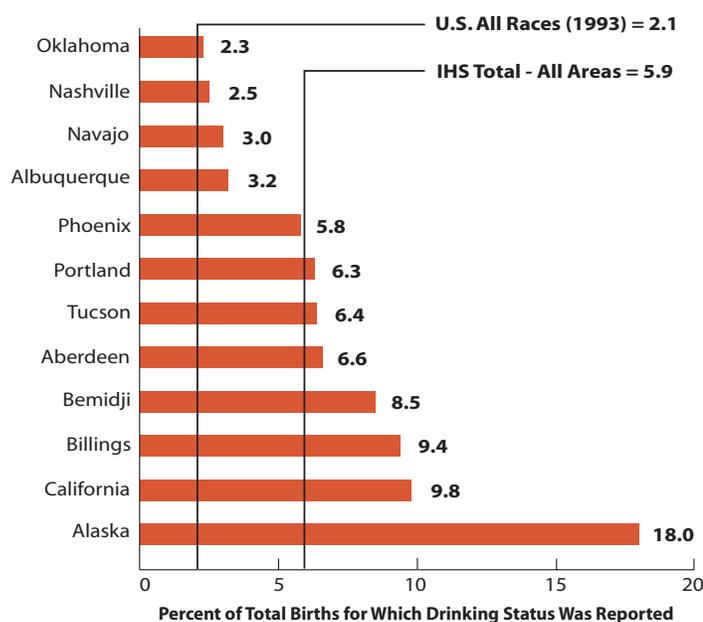
<sup>1</sup> Based on the number of live births with smoking status of the mother reported.

NOTE: The States of California, Indiana, New York, 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, CY 1992-94**

Indian women report that they consume alcohol during pregnancy at a rate 2.8 times the rate for women in the U.S. All Races population. That is, 5.9 percent of Indian mothers are reported on the birth certificate to have drunk compared to 2.1 percent for All Races mothers. The highest rate among the IHS Areas occurs in Alaska, where 18.0 percent of mothers report drinking during pregnancy. This is almost double the rate for the next highest Area (California at 9.8 percent) and nearly 8 times the lowest Area rate (2.3 percent in Oklahoma, which is close to the U.S. rate).



**Table 9 Percent of Mothers Who Drank During Pregnancy <sup>1</sup> By Age of Mother, CY1992-94**

(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 (1993)	2.1	0.6	1.2	1.7	2.1	2.7	5.5
All IHS Areas	5.9	4.8	4.3	5.6	6.6	6.9	7.1
Aberdeen	6.6	6.1	4.4	6.4	8.1	7.1	6.4
Alaska	18.0	16.6	15.0	16.0	19.3	19.7	21.6
Albuquerque	3.2	2.5	2.2	3.0	3.8	4.3	2.6
Bemidji	8.5	4.7	7.1	8.5	10.4	9.2	7.0
Billings	9.4	7.9	4.9	8.9	11.1	12.3	11.6
California	9.8	33.3 *	— *	14.3 *	12.5 *	— *	— *
Nashville	2.5	1.6	2.6	1.9	3.0	2.6	4.3
Navajo	3.0	3.0	2.5	3.1	2.8	3.3	2.8
Oklahoma	2.3	1.4	1.4	2.3	2.3	3.0	4.1
Phoenix	5.8	4.9	4.7	5.5	5.8	7.4	6.3
Portland	6.3	5.3	4.2	6.3	7.1	6.0	9.4
Tucson	6.4	5.3	3.4	6.3	8.0	7.5	6.6

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

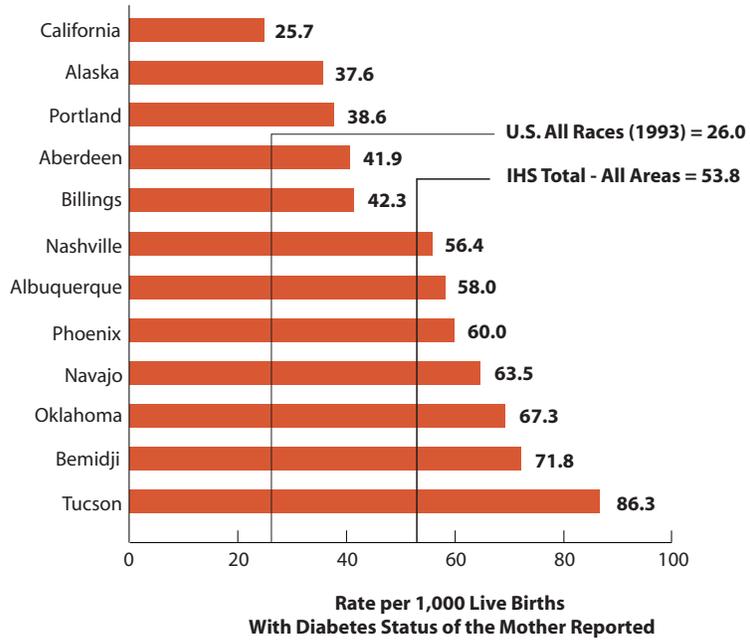
<sup>1</sup> Based on the number of live births with drinking status of the mother reported.

NOTE: The States of California, New York, 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 3 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 Birth Rates With Diabetic Mother, CY 1992-94**

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 53.8 births with a diabetic mother per 1,000 live births. This is over two times the All Races rate of 26.0. The Tucson Area rate (86.3) is extremely high. Other high rates (at least 60.0) occur in Bemidji, Oklahoma, Navajo, and Phoenix Areas. The lowest rates (under 40.0) occur in California, Alaska, and Portland Areas.



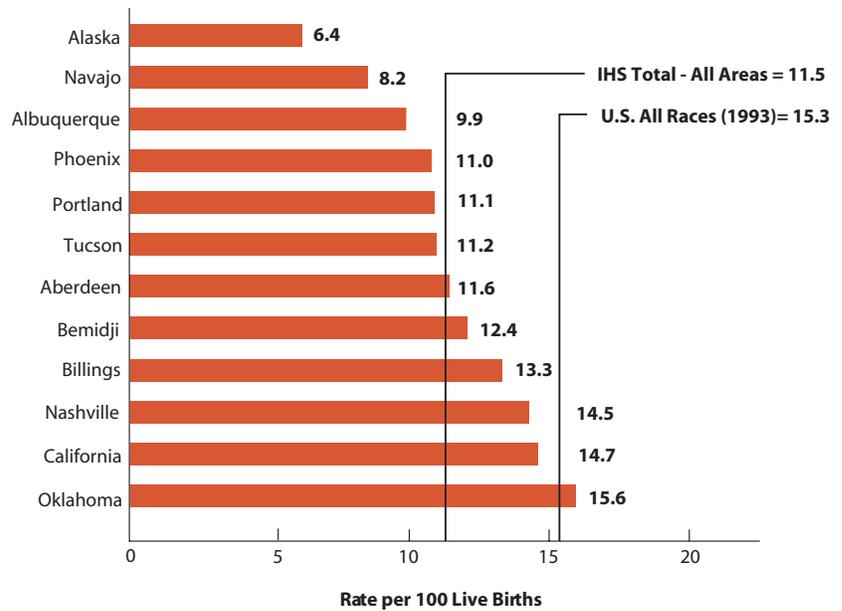
**Table 10 Rate<sup>1</sup> of Live Births With Diabetic Mother by Age of Mother, CY 1992-94**

	All Ages	Under 20 Years	20-24 Years	25-29 Years	30-34 Years	35-39 Years	40-49 Years
U.S. All Races (1993)	26.0	8.5	16.5	25.8	34.8	49.8	69.6
All IHS Areas	53.8	13.5	26.6	177.8	77.2	114.8	164.8
Aberdeen	41.9	13.2	16.2	199.1	67.6	98.2	150.5
Alaska	37.6	8.8	21.0	88.7	54.1	66.6	88.0
Albuquerque	58.0	9.6	24.8	134.3	92.7	142.5	126.4
Bemidji	71.8	13.7	44.0	290.5	95.0	189.2	170.7
Billings	42.3	8.9	18.3	161.5	79.0	80.2	219.5
California	25.7	9.1	11.8	100.5	30.3	53.8	81.6
Nashville	56.4	11.2	32.3	273.1	75.0	81.9	235.3
Navajo	63.5	13.0	22.1	139.0	92.0	128.9	207.8
Oklahoma	67.3	21.7	38.3	297.5	96.1	160.4	227.6
Phoenix	60.0	14.2	29.0	193.6	87.0	131.7	174.3
Portland	38.6	11.1	22.8	146.9	53.5	70.9	73.8
Tucson	86.3	27.2	44.7	115.4	149.4	209.3	260.9

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

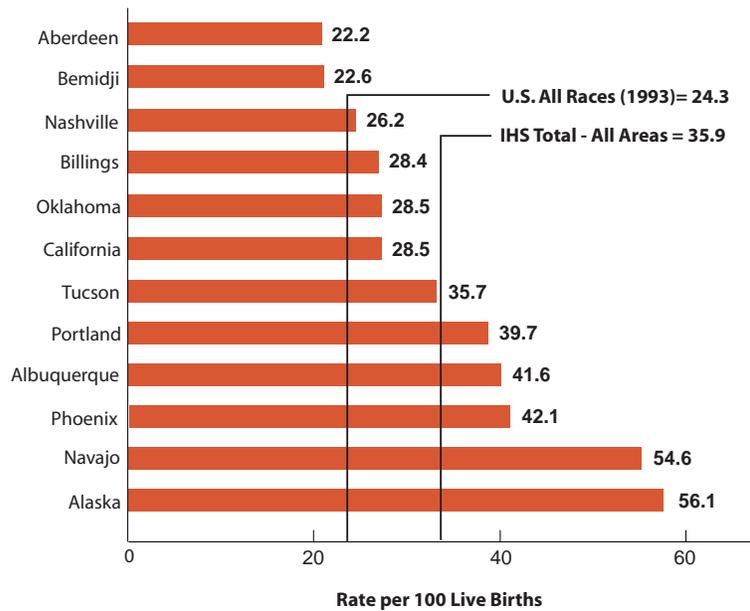
**Chart 11.1 First Cesarean Delivery, CY 1992-94**

Indian women on average have a lower rate of cesarian deliveries than women in the U.S. All Races population. The Indian rate of primary cesarian deliveries (11.5 first cesarian deliveries per 100 live births to women who have not had a prior cesarian delivery) is 25 percent less than the All Races rate, 15.3. Only one IHS Area exceeds the All Races rate, Oklahoma (15.6). The two lowest rates occur in the Alaska (6.4) and Navajo (8.2) Areas.



**Chart 11.2 Vaginal Births After Previous Cesarean Delivery, CY 1992-94**

Indian women who have had a cesarian delivery are 48 percent more likely to have a subsequent vaginal delivery than women in the U.S. All Races population. The Indian rate is 35.9 vaginal births per 100 live births to women with a prior cesarian delivery compared to an All Races rate of 24.3. In the Alaska (56.1) and Navajo (54.6) IHS Areas, the rate is more than twice the U.S. rate. It is lower than the U.S. rate in the Aberdeen (22.2) and Bemidji (22.6) Areas.



**Table 11 Rates of First Cesarean Delivery and Vaginal Birth After Previous Cesarean Delivery by Age of Mother, C Y 1992-94**

(Rates per 100 live births)

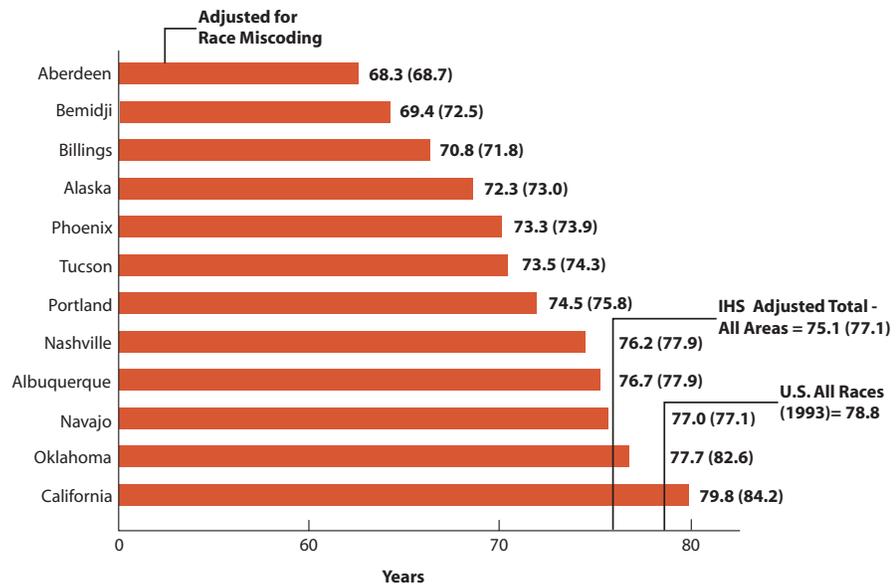
	Rate of First Cesarean Delivery				Rate of Vaginal Births After Previous Cesarean Delivery			
	All Ages	Under 25 Years	25-34 Years	35-49 Years	All Ages	Under 25 Years	25-34 Years	35-49 Years
U.S. All Races (1993)	15.3	14.0	15.5	19.1	24.3	26.4	24.4	21.1
All IHS Areas	11.5	11.5	11.0	14.4	35.9	31.7	31.5	28.8
Aberdeen	11.6	11.4	11.9	13.0	22.2	17.4	16.4	10.4
Alaska	6.4	6.3	6.3	7.5	56.1	57.9	58.9	59.7
Albuquerque	9.9	9.2	11.3	12.4	41.6	39.5	35.7	23.4
Bemidji	12.4	11.9	12.5	17.8	22.6	25.7	24.8	22.0
Billings	13.3	12.4	13.9	18.2	28.4	25.7	23.4	26.2
California	14.7	14.2	15.2	16.4	28.5	19.5	21.1	20.0
Nashville	14.5	14.6	13.7	18.9	26.2	24.2	19.9	12.5
Navajo	8.2	8.5	7.1	11.0	54.6	55.1	54.7	46.4
Oklahoma	15.6	15.0	15.9	20.4	28.5	24.2	23.6	20.9
Phoenix	11.0	11.2	9.8	16.6	42.1	40.7	35.1	21.4
Portland	11.1	10.7	10.5	17.1	39.7	42.2	31.8	27.4
Tucson	11.2	10.8	9.9	19.0	35.7	29.1	24.7	19.2

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 cesarean, vaginal birth after previous cesarean, or method not stated.

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

**Chart 12 Life Expectancy at Birth, Females, CY 1992-94**

The life expectancy for Indian females is 7.9 years greater than it is for Indian males, i.e., 75.1 compared to 67.2. Indian females are within 3.7 years of the life expectancy of U.S. All Races females, which is 78.8. The Aberdeen Area has the lowest female life expectancy (68.3) among the IHS Areas. These Indian life expectancies have been adjusted for miscoding of Indian race on death certificates.

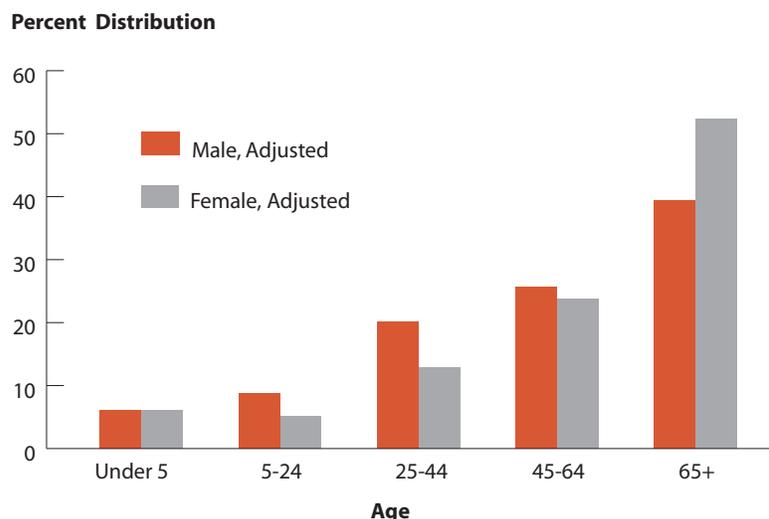


NOTE: Actual life expectancies (i.e., not adjusted for miscoding of Indian race) are shown in parentheses.



**Chart 13 Deaths by Age and Sex, American Indians and Alaska Natives (1992-94)**

Indian females die at relatively older ages than Indian males. The percentage of deaths pertaining to ages under 45 is 24 percent for Indian females and 35 for males. However, for ages over 64, the female percentage is 52 compared to the male percentage of 39. These Indian counts are adjusted for miscoding 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, 1992-94, and Selected U.S. Populations, 1993

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	20,893	23,917	100.0	100.0	12,071	13,778	100.0	100.0	8,822	10,139	100.0	100.0
Under 1	872	1,096	4.2	4.6	486	634	4.0	4.6	386	462	4.4	4.6
1 to 4	304	357	1.5	1.5	170	200	1.4	1.5	134	157	1.5	1.5
5 to 14	298	331	1.4	1.4	187	206	1.5	1.5	111	125	1.3	1.2
15 to 24	1,180	1,406	5.6	5.9	878	1,005	7.3	7.3	302	401	3.4	4.0
25 to 34	1,681	1,951	8.0	8.2	1,208	1,360	10.0	9.9	473	591	5.4	5.8
35 to 44	1,854	2,128	8.9	8.9	1,269	1,422	10.5	10.3	585	706	6.6	7.0
45 to 54	2,148	2,471	10.3	10.3	1,360	1,537	11.3	11.2	788	934	8.9	9.2
55 to 64	2,995	3,450	14.3	14.4	1,726	1,980	14.3	14.4	1,269	1,470	14.4	14.5
65 to 74	3,799	4,363	18.2	18.2	2,072	2,383	17.2	17.3	1,727	1,980	19.6	19.5
75 to 84	3,511	4,022	16.8	16.8	1,786	2,069	14.8	15.0	1,725	1,953	19.6	19.3
85 and over	2,233	2,324	10.7	9.7	916	969	7.6	7.0	1,317	1,355	14.9	13.4
Age Not Stated	18	18	0.1	0.1	13	13	0.1	0.1	5	5	0.1	0.1
<b>United States</b>												
Age Group	All Races	White	Black	Age Group	All Races	White	Black					
Number of Deaths, All Ages	2,268,553	1,951,437	282,151									
Percent Distribution, All Ages	100.0	100.0	100.0									
Under 1	1.5	1.1	3.9	45 to 54	5.8	5.2	9.5					
1 to 4	0.3	0.2	0.7	55 to 64	10.6	10.2	13.7					
5 to 14	0.4	0.3	0.7	65 to 74	21.5	21.7	20.5					
15 to 24	1.6	1.3	3.4	75 to 84	28.1	29.4	19.9					
25 to 34	2.6	2.2	5.7	85 and over	23.3	24.9	13.1					
35 to 44	4.2	3.5	8.8	Age Not Stated	0.0	0.0	0.0					

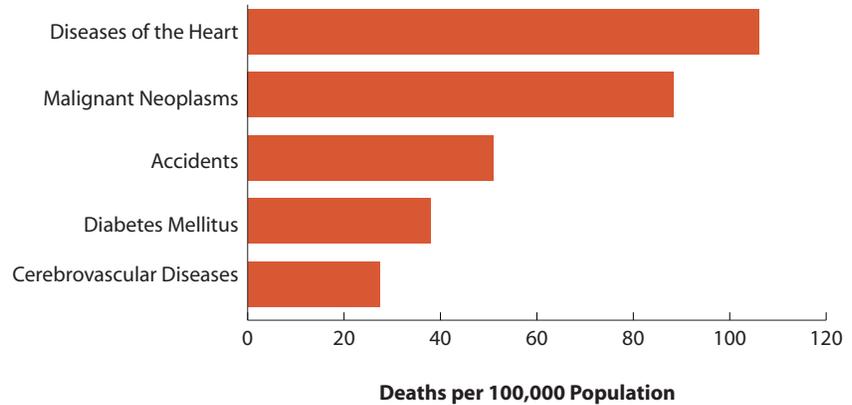
<sup>1</sup> Adjusted to compensate for miscoding of Indian race on death certificates.

NOTE: 0.0 Rounds to zero.



**Chart 14 Death Rates for Leading Causes: Females, American Indians and Alaska Natives (1992-94)**

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 are also the leading cause of death for Indian males, but accidents are the second leading cause and malignant neoplasms are third. For Indian females, accidents are third. These Indian counts are adjusted for miscoding of Indian race on death certificates.



**Table 14 Leading Causes of Death by Sex**

American Indians and Alaska Natives, IHS Service Area, 1992-94 (Rate per 100,000 population)

Cause of Death	Male				Female			
	Number		Rate		Number		Rate	
	Actual	Adj <sup>1</sup>						
All Causes	12,071	13,778	627.6	716.3	8,822	10,139	445.0	511.5
Diseases of the heart	2,684	3,196	139.5	166.2	1,839	2,101	92.8	106.0
Accidents	2,166	2,458	112.6	127.8	840	1,009	42.4	50.9
Motor vehicle	1,122	1,290	58.3	67.1	536	664	27.0	33.5
Other accidents	1,044	1,168	54.3	60.7	304	345	15.3	17.4
Malignant neoplasms	1,578	1,792	82.0	93.2	636	751	32.1	37.9
Chronic liver disease and cirrhosis	530	595	27.6	30.9	489	544	24.7	27.4
Suicide	526	576	27.3	29.9	410	476	20.7	24.0
Diabetes mellitus	441	501	22.9	26.0	367	389	18.5	19.6
Pneumonia and influenza	436	474	22.7	24.6	244	273	12.3	13.8
Homicide and legal intervention	402	449	20.9	23.3	143	164	7.2	8.3
Cerebrovascular diseases	409	448	21.3	23.3	149	161	7.5	8.1
Chronic obstructive pulmonary diseases and allied conditions	288	314	15.0	16.3				
All other causes	2,611	2,975			2,186	2,519		

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

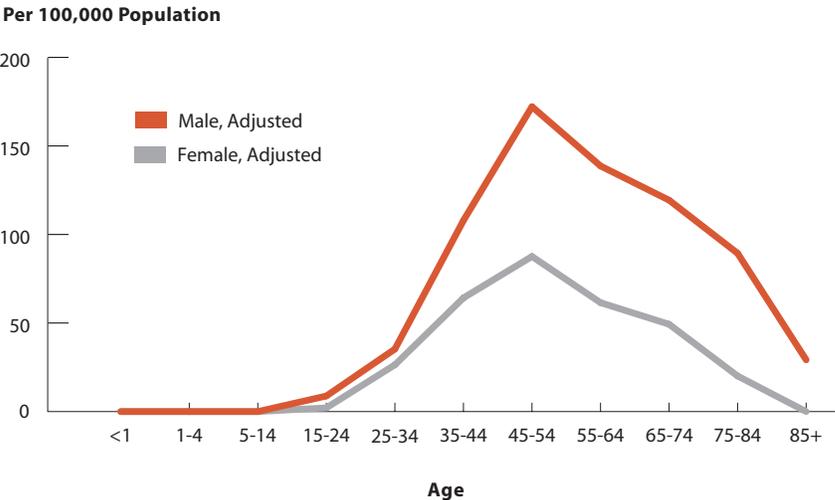
NOTE: Causes of death are listed based upon the order of adjusted number of deaths.





**Chart 15 Alcoholism Death Rates by Age and Sex, American Indians and Alaska Natives (1992-94)**

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 49.3 to 87.6 deaths per 100,000 population. For U.S. All Races and White females, the highest age-specific rates are 9.9 and 9.4, respectively. These Indian rates have been adjusted for miscoding of Indian race on death certificates.



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

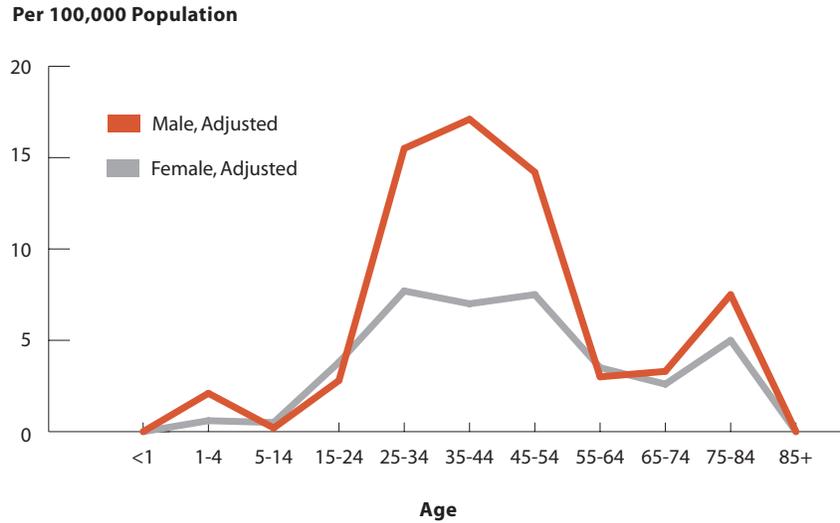
American Indians and Alaska Natives, IHS Service Area, 1992-94, and U.S. All Races and White Populations, 1993 (Rate per 100,000 population)

Age Group	American Indian and Alaska Native						U.S. All Races			U.S. White		
	Both Sexes		Male		Female		Both Sexes	Male	Female	Both Sexes	Male	Female
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>						
Under 1 year	—	—	—	—	—	—	0.0	0.0	—	0.0	0.1	—
1-4 years	—	—	—	—	—	—	0.0	0.0	—	—	—	—
5-14 years	—	—	—	—	—	—	0.0	—	0.0	—	—	—
15-24 years	5.2	5.5	8.8	8.8	1.5	2.1	0.3	0.5	0.1	0.3	0.5	0.1
25-34 years	27.3	30.7	32.8	35.3	21.9	26.4	2.4	3.5	1.4	2.2	3.2	1.1
35-44 years	73.8	85.3	96.6	107.9	52.4	64.2	10.1	15.3	4.9	8.7	13.3	3.9
45-54 years	108.3	128.1	149.2	172.2	70.8	87.6	16.9	23.7	6.3	14.7	23.6	6.0
55-64 years	85.6	97.4	123.5	138.7	52.7	61.5	22.2	35.8	9.9	20.7	32.9	9.4
65-74 years	71.6	80.3	106.4	119.4	44.1	49.3	18.8	32.1	8.3	17.9	30.3	8.0
75-84 years	39.0	48.0	70.8	89.4	17.6	20.1	11.1	21.1	4.9	10.8	20.4	4.8
85 years+	10.7	10.7	29.2	29.2	—	—	4.6	12.3	1.6	4.1	11.0	1.6

<sup>1</sup> Adjusted to compensate for miscoding 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 (1992-94)**

Age-specific drug-related death rates for Indian females are similar to those for Indian males except for age groups 25 through 54 years, where the male rate is about double the female rate. However, some of these rates are based on small numbers and should be interpreted with caution. The highest female rate (7.7) occurs among the 25 to 34 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 miscoding of Indian race on death certificates.



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

American Indians and Alaska Natives, IHS Service Area, 1992-94, and U.S. All Races and White Populations, 1993 (Rate per 100,000 population)

Age Group	American Indian and Alaska Native						U.S. All Races			U.S. White		
	Both Sexes		Male		Female		Both Sexes	Male	Female	Both Sexes	Male	Female
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>						
Under 1 year	—	—	—	—	—	—	1.2	0.5	0.9	0.7	0.9	0.5
1-4 years	0.8	1.4	1.1	2.1	0.6	0.6	0.2	0.2	0.2	0.2	0.2	0.2
5-14 years	0.4	0.4	0.2	0.2	0.5	0.5	0.1	0.2	0.1	0.1	0.1	0.2
15-24 years	2.9	3.3	2.5	2.8	3.2	3.8	3.0	1.7	2.4	2.3	2.9	1.7
25-34 years	9.5	11.5	13.3	15.5	5.9	7.7	12.1	4.3	8.2	7.9	11.8	3.9
35-44 years	10.1	11.9	14.6	17.1	5.9	7.0	19.5	6.7	13.1	11.8	17.4	6.1
45-54 years	10.1	10.7	12.9	14.2	7.5	7.5	7.7	4.0	6.6	5.9	7.4	4.5
55-64 years	3.3	3.3	3.0	3.0	3.5	3.5	3.5	3.2	3.3	3.3	3.2	3.4
65-74 years	2.9	2.9	3.3	3.3	2.6	2.6	2.5	2.5	2.5	2.5	2.5	2.6
75-84 years	4.5	6.0	3.7	7.5	5.0	5.0	3.0	2.9	2.9	3.0	3.0	3.0
85 years+	—	—	—	—	—	—	6.4	5.1	5.4	5.3	6.2	4.9

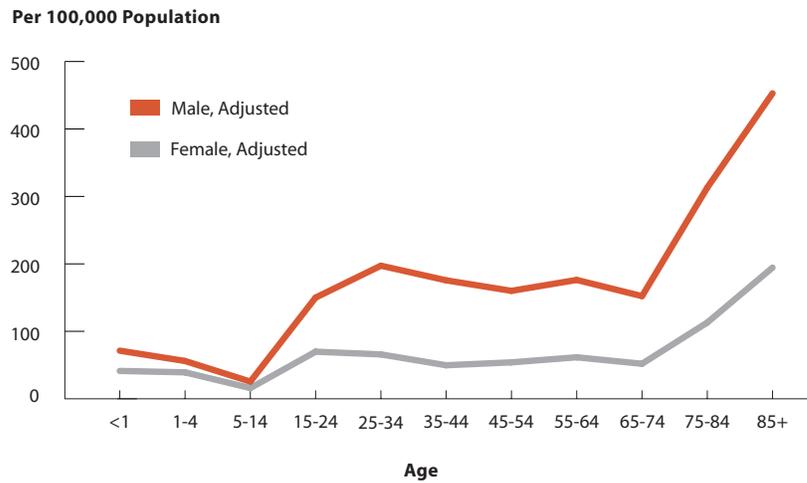
<sup>1</sup> Adjusted to compensate for miscoding of Indian race on death certificates.

NOTE: — Represents zero.



**Chart 17 Accident Death Rates by Age and Sex, American Indians and Alaska Natives (1992-94)**

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 except 85 years and older. The Indian female rate exceeds 39 deaths per 100,000 population for all age groups except 5 to 14 years. These Indian rates have been adjusted for miscoding of Indian race on death certificates.



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

American Indians and Alaska Natives, IHS Service Area, 1992-94, and U.S. All Races and White Populations, 1993 (Rate per 100,000 population)

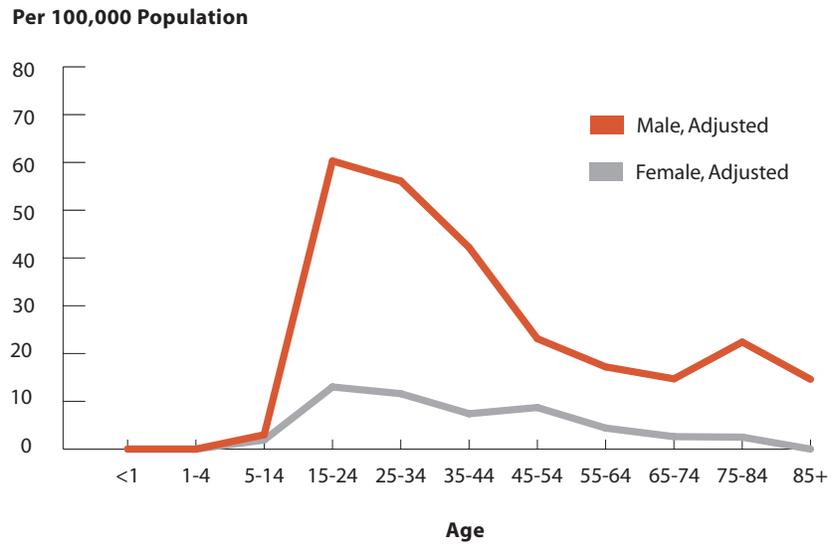
Age Group	American Indian and Alaska Native						U.S. All Races			U.S. White		
	Both Sexes		Male		Female		Both Sexes	Male	Female	Both Sexes	Male	Female
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>						
Under 1 year	47.7	56.4	57.8	71.3	37.3	41.3	22.9	25.1	20.6	19.4	21.1	17.6
1-4 years	41.0	47.7	48.0	56.0	33.7	39.2	16.4	19.1	13.6	14.6	17.1	11.9
5-14 years	18.1	20.8	22.4	25.5	13.5	15.9	9.4	11.8	6.7	8.6	11.0	6.0
15-24 years	89.6	110.7	127.4	150.0	50.4	69.8	38.8	57.6	19.1	40.0	58.9	20.1
25-34 years	110.7	130.1	171.6	197.3	52.5	65.8	33.5	51.9	15.0	33.3	51.7	14.6
35-44 years	96.8	110.6	154.7	175.6	42.6	49.7	32.5	50.5	14.9	30.8	47.4	14.1
45-54 years	94.7	104.7	146.4	160.0	47.2	54.0	28.0	36.9	12.7	26.3	38.8	14.0
55-64 years	108.7	114.8	166.0	176.2	58.9	61.5	30.6	43.9	18.6	29.0	40.8	18.0
65-74 years	91.9	96.2	144.0	152.2	50.6	51.9	43.6	59.0	31.4	42.0	56.0	30.7
75-84 years	175.5	193.5	279.5	313.0	105.5	113.0	99.5	133.5	78.6	99.2	131.9	78.5
85 years+	289.2	289.2	452.9	452.9	194.5	194.5	263.5	366.9	223.8	266.8	369.6	227.9

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



**Chart 18 Suicide Death Rates by Age and Sex, American Indians and Alaska Natives (1992-94)**

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 miscoding of Indian race on death certificates.



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

American Indians and Alaska Natives, IHS Service Area, 1992-94, and U.S. All Races and White Populations, 1993 (Rate per 100,000 population)

Age Group	American Indian and Alaska Native						U.S. All Races			U.S. White		
	Both Sexes		Male		Female		Both Sexes	Male	Female	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	2.5	2.5	3.0	3.0	1.9	1.9	0.9	1.2	0.5	0.9	1.2	0.5
15-24 years	32.9	37.1	54.4	60.3	10.6	13.0	13.5	22.4	4.1	14.0	23.1	4.3
25-34 years	29.8	33.3	50.8	56.1	9.8	11.6	15.1	24.9	5.2	15.8	25.9	5.5
35-44 years	21.8	24.3	38.5	42.2	6.3	7.4	15.1	24.0	6.5	16.4	25.5	7.1
45-54 years	14.6	15.6	22.4	23.1	7.5	8.7	14.5	19.6	6.2	15.7	23.9	7.8
55-64 years	9.9	10.4	16.2	17.2	4.4	4.4	14.6	23.9	6.3	15.9	25.7	6.8
65-74 years	7.2	8.0	13.1	14.7	2.6	2.6	16.3	29.4	5.9	17.4	31.4	6.2
75-84 years	10.5	10.5	22.4	22.4	2.5	2.5	22.3	49.0	5.8	23.7	51.8	6.1
85 years+	5.4	5.4	14.6	14.6	—	—	22.8	68.3	5.4	24.2	73.6	5.5

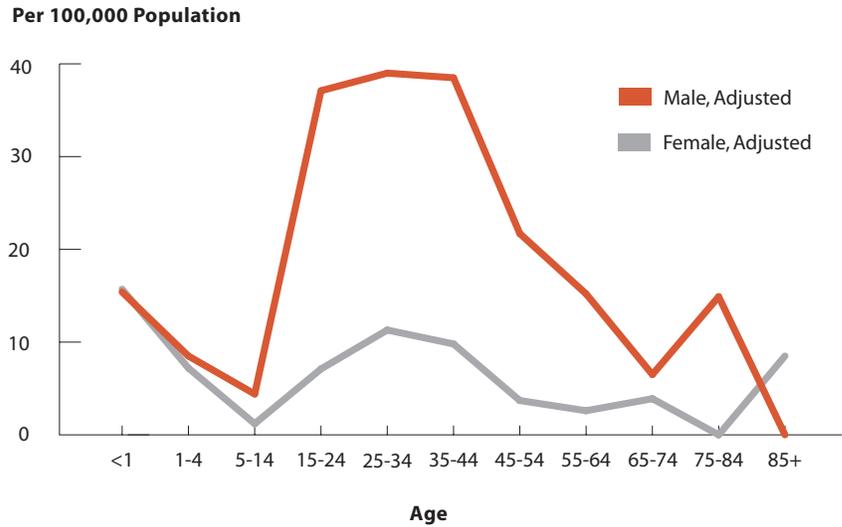
<sup>1</sup> Adjusted to compensate for miscoding of Indian race on death certificates.

NOTE: — Represents zero.



**Chart 19 Homicide Death Rates by Age and Sex, American Indians and Alaska Natives (1992-94)**

The age-specific homicide death rate for Indian females is lower for all age groups except under 1 and 85 years and older 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 5 to 14 and 75 to 84 years. It exceeds the rate for U.S. White females for all age groups except 75 to 84 years. These Indian rates have been adjusted for miscoding of Indian race on death certificates.



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

American Indians and Alaska Natives, IHS Service Area, 1992-94, and U.S. All Races and White Populations, 1993 (Rate per 100,000 population)

Age Group	American Indian and Alaska Native						U.S. All Races			U.S. White		
	Both Sexes		Male		Female		Both Sexes	Male	Female	Both Sexes	Male	Female
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>						
Under 1 year	14.6	15.6	15.4	15.4	13.8	15.7	8.8	9.6	7.9	6.4	7.0	5.9
1-4 years	7.1	7.9	7.5	8.5	6.6	7.2	2.9	3.4	2.5	1.8	2.2	1.4
5-14 years	2.6	2.9	4.2	4.4	1.0	1.2	1.8	2.2	1.4	1.2	1.3	1.0
15-24 years	19.5	22.4	32.8	37.1	5.6	7.1	23.4	39.2	6.9	10.9	17.3	4.2
25-34 years	22.6	24.8	35.6	39.0	10.1	11.3	17.4	27.2	7.6	9.7	14.5	4.7
35-44 years	20.0	23.6	32.6	38.5	8.2	9.8	11.1	17.2	5.2	6.9	10.2	3.7
45-54 years	11.0	12.3	19.7	21.7	3.1	3.7	7.2	10.0	2.7	5.1	7.8	2.5
55-64 years	8.0	8.5	14.2	15.2	2.6	2.6	4.7	7.4	2.2	3.5	5.2	1.9
65-74 years	5.1	5.1	6.5	6.5	3.9	3.9	3.7	5.3	2.5	2.8	5.0	2.1
75-84 years	6.0	6.0	14.9	14.9	—	—	3.5	4.5	3.0	2.7	3.1	2.4
85 years+	5.4	5.4	—	—	8.5	8.5	4.1	5.7	3.4	3.1	4.0	2.8

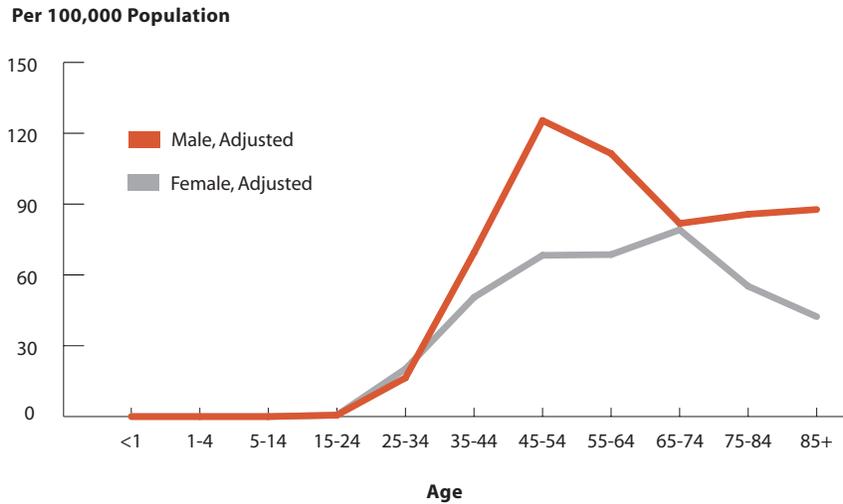
<sup>1</sup> Adjusted to compensate for miscoding of Indian race on death certificates.

NOTE: — Represents zero.



**Chart 20 Chronic Liver Disease and Cirrhosis Death Rates by Age and Sex, American Indians and Alaska Natives (1992-94)**

Indian males are more likely to die from chronic liver disease and cirrhosis than Indian females for all age groups over 34 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 (79.1 deaths per 100,000 population for women ages 65 to 74 years) is 3.0 and 2.9 times the peak rates (26.3 and 26.9 for women 75 to 84 years old) for All Races and White females, respectively. These Indian rates have been adjusted for miscoding 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, 1992-94, and U.S. All Races and White Populations, 1993 (Rate per 100,000 population)

Age Group	American Indian and Alaska Native						U.S. All Races			U.S. White		
	Both Sexes		Male		Female		Both Sexes	Male	Female	Both Sexes	Male	Female
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>						
Under 1 year	—	—	—	—	—	—	0.5	0.7	0.2	0.5	0.6	0.3
1-4 years	—	—	—	—	—	—	0.1	0.1	0.1	0.1	0.1	0.0
5-14 years	—	—	—	—	—	—	0.0	0.0	0.0	0.0	—	0.0
15-24 years	0.6	0.6	0.6	0.6	0.6	0.6	0.1	0.1	0.1	0.1	0.1	0.1
25-34 years	16.5	18.3	15.5	16.4	17.5	20.2	1.7	2.3	1.2	1.6	2.1	1.0
35-44 years	51.5	59.6	61.5	69.4	42.2	50.5	9.2	13.5	5.0	8.2	12.3	4.1
45-54 years	81.0	95.6	107.8	125.4	56.5	68.3	16.4	21.6	7.5	15.2	22.9	7.6
55-64 years	79.1	88.9	99.2	111.4	61.5	68.6	26.8	38.2	16.5	26.4	37.5	16.2
65-74 years	73.8	80.3	76.9	81.8	71.4	79.1	32.7	44.8	23.1	33.0	44.9	23.4
75-84 years	61.5	67.5	78.2	85.7	50.2	55.2	32.6	42.7	26.3	33.4	43.7	26.9
85 years+	58.9	58.9	87.7	87.7	42.3	42.3	21.7	34.2	16.9	22.5	35.7	17.3

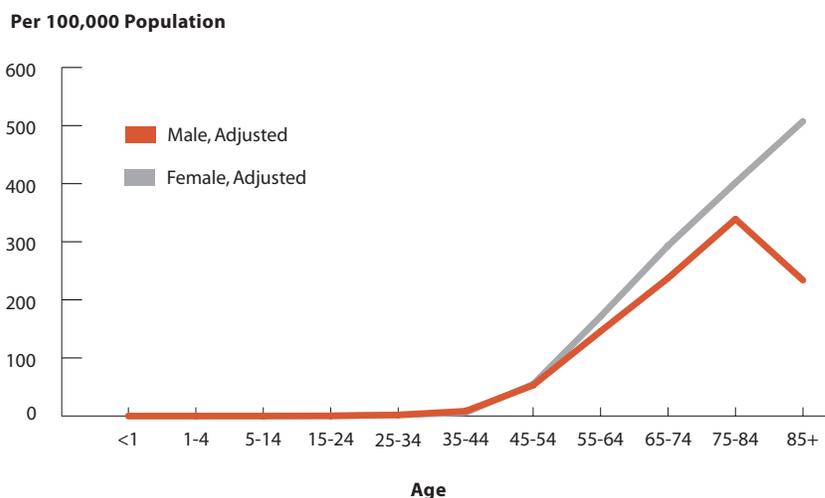
<sup>1</sup> Adjusted to compensate for miscoding of Indian race on death certificates.

NOTE: — Represents zero. 0.0 Rounds to zero.



**Chart 21 Diabetes Mellitus Death Rates by Age and Sex, American Indians and Alaska Natives (1992-94)**

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 54.7 deaths per 100,000 population to 507.4, while the All Races female rate ranges from 9.2 to 264.5 and the White female rate ranges from 8.3 to 251.3. These Indian rates have been adjusted for miscoding of Indian race on death certificates.



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

American Indians and Alaska Natives, IHS Service Area, 1992-94, and U.S. All Races and White Populations, 1993 (Rate per 100,000 population)

Age Group	American Indian and Alaska Native						U.S. All Races			U.S. White		
	Both Sexes		Male		Female		Both Sexes	Male	Female	Both Sexes	Male	Female
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>						
Under 1 year	—	—	—	—	—	—	0.0	0.1	—	0.0	0.1	—
1-4 years	—	—	—	—	—	—	0.1	0.1	0.1	0.1	0.0	0.1
5-14 years	—	—	—	—	—	—	0.1	0.1	0.1	0.1	0.1	0.1
15-24 years	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.2
25-34 years	1.4	1.8	1.5	1.9	1.2	1.8	1.4	1.5	1.3	1.3	1.3	1.2
35-44 years	6.5	7.1	8.4	8.4	4.7	5.9	4.2	5.0	3.3	3.6	4.4	2.8
45-54 years	45.4	53.8	47.5	52.9	43.5	54.7	12.0	12.0	9.2	10.0	11.8	8.3
55-64 years	133.6	159.5	126.6	145.8	139.8	171.4	35.7	38.1	33.6	30.3	33.4	27.4
65-74 years	228.7	268.5	206.2	237.3	246.5	293.2	80.4	85.1	76.6	71.7	78.7	66.2
75-84 years	328.5	376.5	290.6	339.1	354.0	401.7	152.3	161.9	146.5	141.8	154.5	133.4
85 years+	401.7	407.1	233.7	233.8	498.9	507.4	269.4	282.2	264.5	257.4	273.4	251.3

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

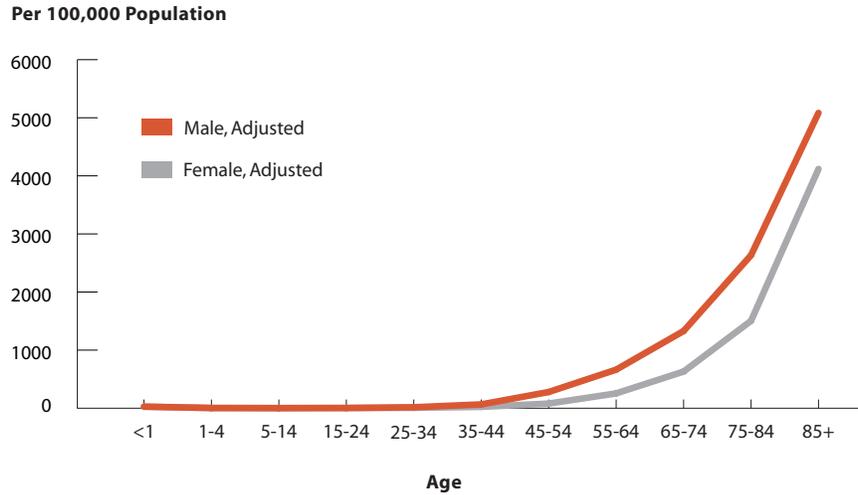
NOTE: — Represents zero. 0.0 Rounds to zero.





**Chart 22 Heart Disease Death Rates by Age and Sex, American Indians and Alaska Natives (1992-94)**

Indian men are more apt to die from diseases of the heart than Indian women for every age group. For Indian adult age groups, the ratio of the male death rate to the female rate ranges from 1.2 to 1 to 3.5 to 1. The Indian female death rate for diseases of the heart tends to be greater than the rates for All Races and White females in age groups under 75 years, but is less for age groups 75 years and over. These Indian rates have been adjusted for miscoding of Indian race on death certificates.



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

American Indians and Alaska Natives, IHS Service Area, 1992-94, and U.S. All Races and White Populations, 1993 (Rate per 100,000 population)

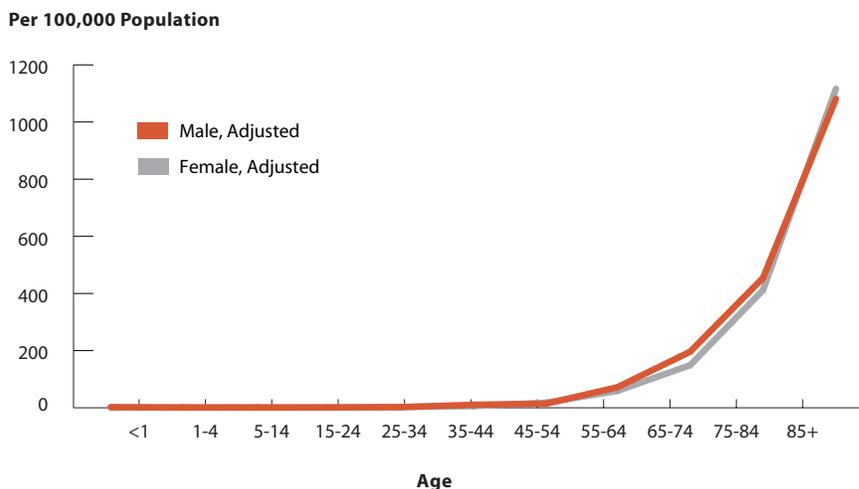
Age Group	American Indian and Alaska Native						U.S. All Races			U.S. White		
	Both Sexes		Male		Female		Both Sexes	Male	Female	Both Sexes	Male	Female
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>						
Under 1 year	22.4	26.3	23.1	27.0	21.6	25.5	16.9	18.3	15.5	14.0	15.9	12.1
1-4 years	2.4	3.8	3.7	5.9	1.1	1.7	1.9	2.0	1.7	1.5	1.3	1.3
5-14 years	1.0	1.1	1.6	1.9	0.2	0.2	0.8	0.8	0.9	0.7	0.7	0.8
15-24 years	3.2	3.9	4.8	5.7	1.5	2.1	2.7	3.4	2.0	2.2	2.8	1.6
25-34 years	9.8	12.0	14.2	16.1	5.6	8.0	8.5	11.3	5.6	6.9	9.3	4.5
35-44 years	37.0	43.7	55.6	65.7	19.6	23.1	32.2	47.4	17.2	27.5	41.9	12.9
45-54 years	146.2	174.7	231.9	278.7	67.7	79.5	114.0	151.2	51.0	102.9	159.9	47.5
55-64 years	373.1	444.7	548.7	663.2	220.7	254.9	344.3	499.1	204.5	322.6	475.6	181.7
65-74 years	790.2	939.3	1,107.7	1,328.6	538.4	630.6	848.2	1,175.3	589.3	823.0	1,154.6	557.4
75-84 years	1,642.5	1,959.0	2,164.8	2,634.3	1,290.5	1,503.9	2,182.9	2,795.5	1,808.2	2,169.4	2,780.3	1,780.8
85 years +	4,177.8	4,472.4	4,660.3	5,084.0	3,898.5	4,118.4	6,668.9	7,331.9	6,414.6	6,761.9	7,466.9	6,495.0

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



**Chart 23 Cerebrovascular Diseases Death Rates by Age and Sex, American Indians and Alaska Natives (1992-94)**

The cerebrovascular diseases death rates are similar for Indian males and females among the various age groups. 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. The Indian female rate, however, is less than the rates for females in these populations for age groups 75 years and over. These Indian rates have been adjusted for miscoding of Indian race on death certificates.



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

American Indians and Alaska Natives, IHS Service Area, 1992-94, and U.S. All Races and White Populations, 1993 (Rate per 100,000 population)

Age Group	American Indian and Alaska Native						U.S. All Races			U.S. White		
	Both Sexes		Male		Female		Both Sexes	Male	Female	Both Sexes	Male	Female
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>						
Under 1 year	1.9	2.9	1.9	3.9	2.0	2.0	5.5	5.9	5.0	5.0	5.3	4.7
1-4 years	0.3	0.3	—	—	0.6	0.6	0.3	0.3	0.3	0.3	0.3	0.2
5-14 years	0.2	0.2	0.5	0.5	—	—	0.2	0.3	0.2	0.2	0.2	0.2
15-24 years	1.0	1.2	1.1	1.1	0.9	1.2	0.6	0.5	0.6	0.6	0.5	0.6
25-34 years	2.6	3.2	2.2	2.2	3.0	4.1	1.9	2.0	1.8	1.6	1.8	1.4
35-44 years	7.9	8.5	10.0	10.5	5.9	6.7	6.2	6.8	5.6	4.7	5.2	4.2
45-54 years	14.9	16.2	14.2	14.2	15.5	18.0	17.6	17.1	13.9	13.7	14.9	12.6
55-64 years	59.3	64.9	66.8	71.9	52.7	58.9	46.0	52.5	40.1	38.9	44.1	34.1
65-74 years	150.5	170.1	176.7	196.3	129.7	149.2	135.8	157.4	118.7	125.1	145.8	108.5
75-84 years	379.5	429.0	395.0	454.6	369.1	411.8	479.1	524.9	451.6	468.6	508.5	442.1
85 years +	1,055.2	1,103.4	1,022.6	1,081.1	1,074.0	1,116.3	1,607.7	1,541.9	1,632.9	1,627.3	1,562.0	1,652.0

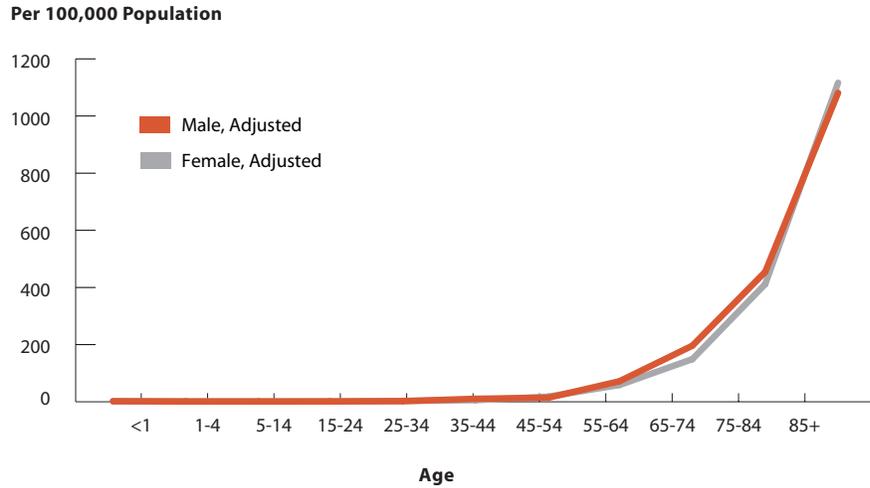
<sup>1</sup> Adjusted to compensate for miscoding of Indian race on death certificates.

NOTE: — Represents zero.



**Chart 24 Malignant Neoplasm Death Rates by Age and Sex, American Indians and Alaska Natives (1992-94)**

Indian female age-specific malignant neoplasm death rates are similar to Indian male rates for the younger age groups, but less for all groups over 54 years. However 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 24 years except for one group (45 to 54 years for All Races). These Indian rates have been adjusted for miscoding of Indian race on death certificates.



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

American Indians and Alaska Natives, IHS Service Area, 1992-94, and U.S. All Races and White Populations, 1993 (Rate per 100,000 population)

Age Group	American Indian and Alaska Native						U.S. All Races			U.S. White		
	Both Sexes		Male		Female		Both Sexes	Male	Female	Both Sexes	Male	Female
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>						
Under 1 year	2.9	2.9	3.9	3.9	2.0	2.0	2.2	2.8	1.7	2.2	2.7	1.8
1-4 years	2.7	2.7	2.7	2.7	2.8	2.8	3.3	3.7	2.9	3.4	3.9	2.9
5-14 years	2.5	3.1	2.6	3.3	2.4	2.9	2.9	3.3	2.6	3.1	3.4	2.7
15-24 years	3.8	4.2	3.7	3.7	3.8	4.7	4.8	5.5	4.1	4.8	5.5	3.5
25-34 years	8.3	10.4	8.4	9.6	8.3	11.3	12.1	11.9	12.3	11.7	11.6	11.9
35-44 years	29.5	35.0	26.8	28.9	32.1	40.7	41.1	38.0	44.1	39.0	36.0	41.9
45-54 years	111.2	127.7	109.8	123.4	112.4	131.7	147.9	131.9	127.7	139.8	139.3	140.4
55-64 years	305.4	356.2	349.3	404.0	267.3	314.7	433.4	507.3	366.7	422.6	486.5	363.8
65-74 years	654.2	756.9	772.3	896.6	560.5	646.1	876.1	1,113.3	688.4	863.7	1,084.9	686.6
75-84 years	1,009.5	1,143.0	1,311.6	1,483.0	805.9	913.9	1,366.9	1,890.0	1,046.1	1,353.9	1,841.3	1,045.1
85 years+	1,419.4	1,462.2	1,811.5	1,899.2	1,192.4	1,209.3	1,807.7	2,830.7	1,415.3	1,793.2	2,795.3	1,413.7

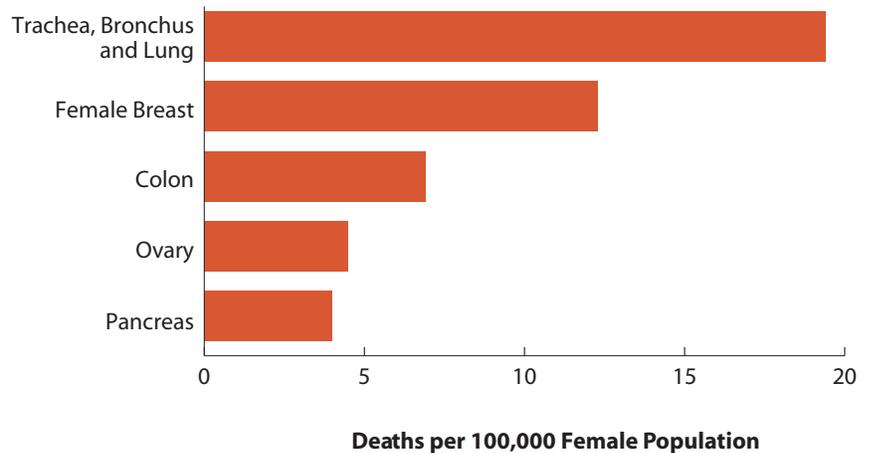
<sup>1</sup> Adjusted to compensate for miscoding of Indian race on death certificates.





**Chart 25 Death Rates, Leading Cancer Sites: Females, American Indians and Alaska Natives (1992-94)**

The leading site for cancer deaths among Indian women is trachea, bronchus, and lung. Fifty-eight percent more Indian women die of this type of cancer than the next leading site, breast. In turn, 79 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 cervix uteri) 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, pancreas and ovary, are in the reverse order for Indian women. However, their sixth leading site, leukemia, is number eleven for Indian women. The sixth site for Indian women, cervix uteri, is number ten for All Races women and number twelve for White women. These Indian counts are adjusted for miscoding of Indian race on death certificates.



**Table 25** Leading Sites for Cancer Deaths for Female Decedents

American Indians and Alaska Natives, IHS Service Area, 1992-94 (Rate per 100,000 population)

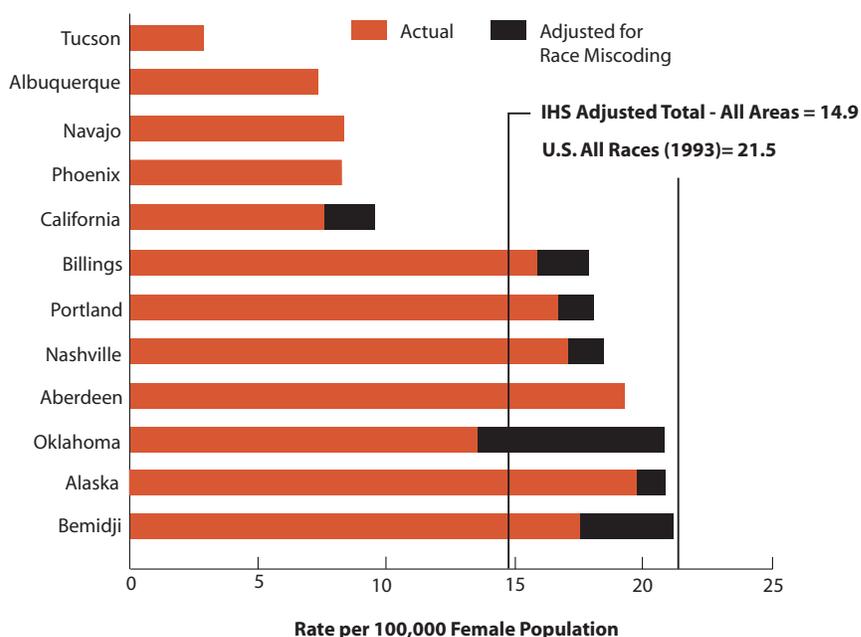
Site of Cancer Death	Number		Female Rate	
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>
All Sites	1,519	1,752	76.6	88.4
Trachea, bronchus and lung	321	384	16.2	19.4
Female breast	204	243	10.3	12.3
Colon	116	136	5.9	6.9
Ovary	78	90	3.9	4.5
Pancreas	67	80	3.4	4.0
Cervix uteri	60	71	3.0	3.6
Stomach	52	62	2.6	3.1
Liver	51	55	2.6	2.8
Gallbladder	50	51	2.5	2.6
Kidney	48	50	2.4	2.5
Leukemia	46	50	2.3	2.5
Rectum, rectosigmoid junction and anus	25	31	1.3	1.6
Multiple myeloma	25	25	1.3	1.3
Connective and other soft tissue	16	23	0.8	1.2
Brain	21	22	1.1	1.1
Bladder	14	18	0.7	0.9
Melanoma of skin	10	13	0.5	0.7
Pharynx	10	11	0.5	0.6
Esophagus	7	8	0.4	0.4
Tongue	6	6	0.3	0.3
Thyroid gland	6	6	0.3	0.3
Bone and articular cartilage	5	6	0.3	0.3
Larynx	5	5	0.3	0.3
All other causes	276	306		

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

NOTE: See appendix titled "Methods 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, CY 1992-94**

The Indian female age-adjusted breast cancer death rate (14.9 deaths per 100,000 population) is 69 percent of the rate for U.S. All Races females (21.5). The rate varies considerably by IHS Area, ranging from 2.5 in Tucson to 21.3 in Bemidji, which is nearly equal to the U.S. All Races rate. These Indian rates have been adjusted for miscoding of Indian race on death certificates.



**Table 26 Age-Adjusted Breast Cancer Death Rates for Females, CY 1992-94**

	Deaths		Rate <sup>1</sup>	
	Actual	Adj <sup>2</sup>	Actual	Adj <sup>2</sup>
U.S. All Races (1993)	43,555		21.5	
All IHS Areas	204	243	12.4	14.9
Aberdeen	19	19	19.3	19.3
Alaska	20	21	19.6	20.7
Albuquerque	6	6	6.2	6.2
Bemidji	13	16	17.5	21.3
Billings	9	10	15.9	17.9
California	11	14	7.2	9.2
Nashville	14	15	17.0	18.4
Navajo	17	17	7.8	7.8
Oklahoma	57	85	13.4	20.6
Phoenix	11	11	7.8	7.8
Portland	26	28	16.6	18.0
Tucson	1	1	2.5	2.5

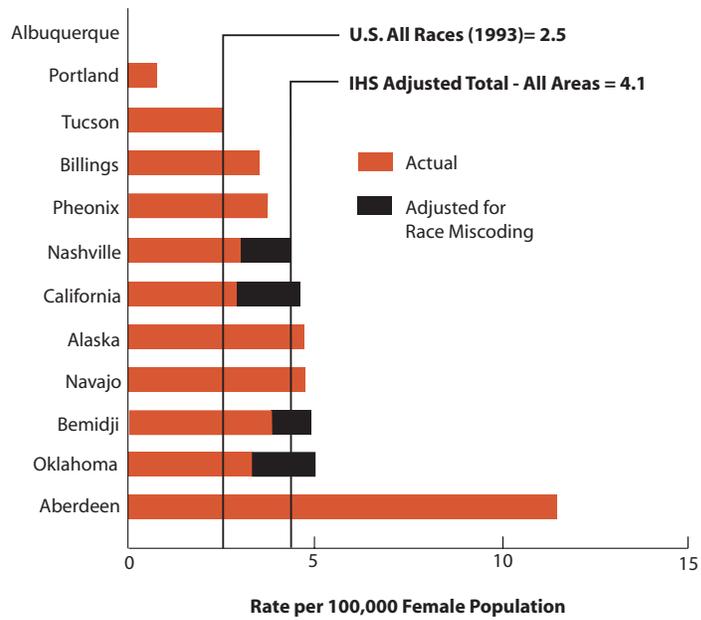
<sup>1</sup> Age-adjusted rate per 100,000 female population. Rates based on a small number of deaths should be interpreted with caution.

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



**Chart 27 Age-Adjusted Cervical Cancer Death Rates for Females, CY 1992-94**

The Indian female age-adjusted cervical cancer death rate (4.1 deaths per 100,000 population) is 1.6 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 Albuquerque to 11.3 in Aberdeen, which is over 4.5 times the U.S. All Races rate. These Indian rates have been adjusted for miscoding of Indian race on death certificates.



**Table 27 Age-Adjusted Cervical Cancer Death Rates for Females, Calendar Years 1992-94**

	Deaths		Rate <sup>1</sup>	
	Actual	Adj <sup>2</sup>	Actual	Adj <sup>2</sup>
U.S. All Races (1993)	4,588		2.5	
All IHS Areas	60	71	3.5	4.1
Aberdeen	11	11	11.3	11.3
Alaska	5	5	4.6	4.6
Albuquerque	—	—	—	—
Bemidji	3	4	3.6	4.7
Billings	2	2	3.5	3.5
California	4	7	2.7	4.5
Nashville	2	3	2.8	4.2
Navajo	12	12	4.6	4.6
Oklahoma	13	19	3.3	4.9
Phoenix	6	6	3.8	3.8
Portland	1	1	0.6	0.6
Tucson	1	1	2.5	2.5

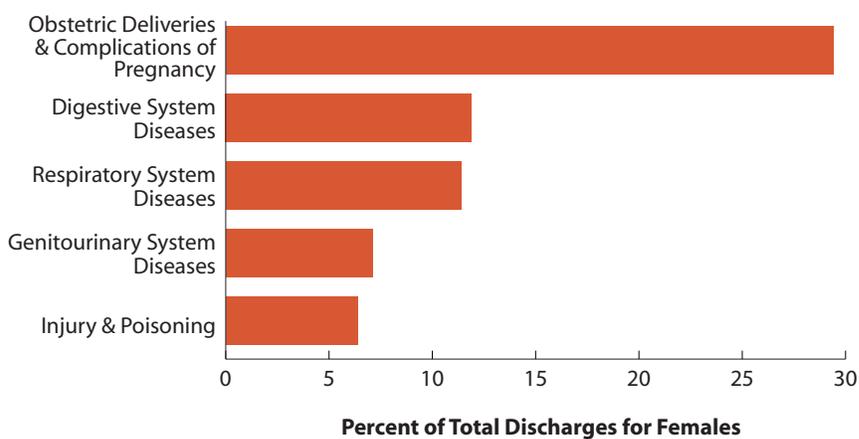
<sup>1</sup> Age-adjusted rate per 100,000 female population. Rates based on a small number of deaths should be interpreted with caution.

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



**Chart 28** Leading Causes of Hospitalization for Females, IHS and Tribal Direct and Contract General Hospitals, FY 1995

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 digestive system diseases (11.9 percent) and respiratory system diseases (11.4 percent). For Indian males, the top three causes are respiratory system diseases, injury and poisoning, and digestive system diseases.



**Table 28** Ten Leading Causes of Hospitalization by Sex

Indian Health Service and Tribal Direct and Contract General Hospitals, FY 1995

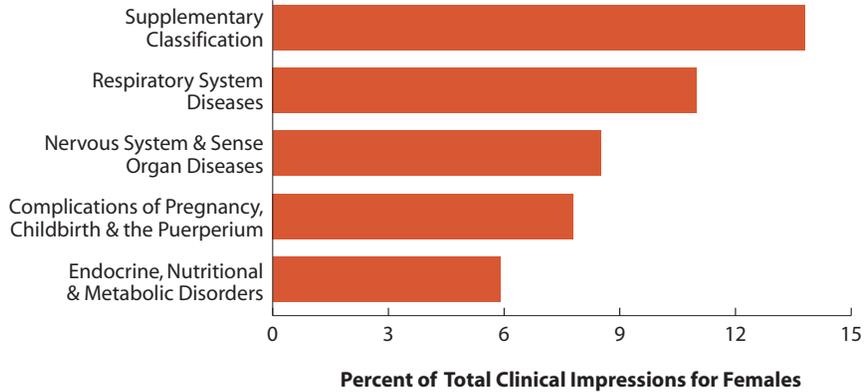
Male			Female		
Diagnostic Category	Number of Discharges	Percent of Total	Diagnostic Category	Number of Discharges	Percent of Total
All categories	32,255	100.0	All categories	48,125	100.0
Respiratory system diseases	5,502	17.1	Obstetric deliveries and complications of pregnancy & puerperium	14,168	29.4
Injury & poisoning	4,664	14.5	Digestive system diseases	5,738	11.9
Digestive system diseases	4,502	14.0	Respiratory system diseases	5,491	11.4
Circulatory system diseases	3,253	10.1	Genitourinary system diseases	3,436	7.1
Symptoms, signs, & ill-defined conditions	2,403	7.5	Injury & poisoning	3,058	6.4
Mental disorders	2,290	7.1	Circulatory system diseases	2,894	6.0
Skin and subcutaneous tissue diseases	1,782	5.5	Symptoms, signs, & ill-defined conditions	2,580	5.4
Endocrine, nutritional, & metabolic disorders	1,672	5.2	Endocrine, nutritional, & metabolic disorders	1,856	3.9
Genitourinary system diseases	1,096	3.4	Mental disorders	1,401	2.9
Musculoskeletal system and connective tissue diseases	1,054	3.3	Skin and subcutaneous tissue diseases	1,373	2.9
All other	4,037	12.5	All other	6,130	12.7

SOURCE: IHS and Tribal Direct: On-Request Report 21  
IHS and Tribal Contract: On-Request Report 19



**Chart 29** Leading Causes of Ambulatory Medical Visits for Females, IHS and Tribal Direct and Contract Facilities, FY 1995

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 29** Number of Ambulatory Medical Clinical Impressions for Leading Major Categories by Sex

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

Male		Female	
Category	Number of Clinical Impressions	Category	Number of Clinical Impressions
All categories	3,348,192	All categories	5,470,637
Supplementary classification	465,540	Supplementary classification	760,230
Respiratory system diseases	411,920	Respiratory system diseases	604,621
Nervous system & sense organ diseases	364,953	Nervous system & sense organ diseases	469,367
Injury & poisoning	220,929	Complications of pregnancy, childbirth, & the puerperium	428,859
Circulatory system diseases	190,155	Endocrine, nutritional, & metabolic disorders	325,964
Endocrine, nutritional, & metabolic disorders	186,714	Musculoskeletal system diseases	276,775
Skin and subcutaneous tissue diseases	180,799	Symptoms, signs, & ill-defined conditions	271,190
Symptoms, signs, & ill-defined conditions	159,824	Genitourinary system diseases	265,750
Mental disorders	158,578	Skin and subcutaneous tissue diseases	239,823
Musculoskeletal system diseases	153,796	Circulatory system diseases	221,146
All other	854,984	All other	1,606,912

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



# Glossary of ICD-9 Codes

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

<b>Cause of death</b>	<b>ICD-9 Codes</b>
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



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

Cause of death	ICD-9 Codes
Hypertension with or without renal disease . . . . .	401, 403
Cerebrovascular diseases . . . . .	430-438
Intracerebral and other intracranial hemorrhage . . . . .	431-432
Cerebral thrombosis and unspecified occlusion of cerebral arteries . . . . .	434.0, 434.9
Cerebral embolism . . . . .	434.1
All other and late effects of cerebrovascular diseases . . . . .	430, 433, 435-438
Atherosclerosis . . . . .	440
Other diseases of arteries, arterioles, and capillaries . . . . .	441-448
Acute bronchitis and bronchiolitis . . . . .	466
Pneumonia and influenza . . . . .	480-487
Pneumonia . . . . .	480-486
Influenza . . . . .	487
Chronic obstructive pulmonary diseases and allied conditions . . . . .	490-496
Bronchitis, chronic and unspecified . . . . .	490-491
Emphysema . . . . .	492
Asthma . . . . .	493
Other chronic obstructive pulmonary diseases and allied conditions . . . . .	494-496
Ulcer of stomach and duodenum . . . . .	531-533
Appendicitis . . . . .	540-543
Hernia of abdominal cavity and intestinal obstruction without mention of hernia . . . . .	550-553, 560
Chronic liver disease and cirrhosis . . . . .	571
Cholelithiasis and other disorders of gallbladder . . . . .	574-575
Nephritis, nephrotic syndrome, and nephrosis . . . . .	580-589
Acute glomerulonephritis and nephrotic syndrome . . . . .	580-581
Chronic glomerulonephritis, nephritis and nephropathy, not specified as acute or chronic, and renal sclerosis, unspecified . . . . .	582-583, 587
Renal failure, disorders resulting from impaired renal function, and small kidney of unknown cause . . . . .	584-586, 588-589
Infections of kidney . . . . .	590
Hyperplasia of prostate . . . . .	600
Complications of pregnancy, childbirth, and the puerperium . . . . .	630-676
Pregnancy with abortive outcome . . . . .	630-638
Other complications of pregnancy, childbirth, and the puerperium . . . . .	640-676
Congenital anomalies . . . . .	740-759
Certain conditions originating in the perinatal period . . . . .	760-779
Birth trauma, intrauterine hypoxia, birth asphyxia, and respiratory distress syndrome . . . . .	767-769
Other conditions originating in the perinatal period . . . . .	760-766, 770-779
Symptoms, signs, and ill-defined conditions . . . . .	780-799
All other diseases . . . . .	Residual
Accidents and adverse effects . . . . .	E800-E949
Motor vehicle accidents . . . . .	E810-E825
All other accidents and adverse effects . . . . .	E800-E807, E826-E949
Suicide . . . . .	E950-E959
Homicide and legal intervention . . . . .	E960-E978
All other external causes . . . . .	E980-E999





### ***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.)*

<b>Cause of death</b>	<b>ICD-9 Codes</b>
Alcoholism deaths . . . . .	291, 303, 305.0, 357.5, 425.5, 535.3, 571.0-571.3, 790.3, E860
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-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-CM Codes Used in Patient Care Charts and Tables***

<b>Cause of death</b>	<b>ICD-9 Codes</b>
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 . . . . .	800-999
Supplementary classification (classification of factors influencing health status and contact with health service) . . . . .	E01-E99



# Methods 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





## 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 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
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





**U.S. Department of Health and Human Services  
Indian Health Service**

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