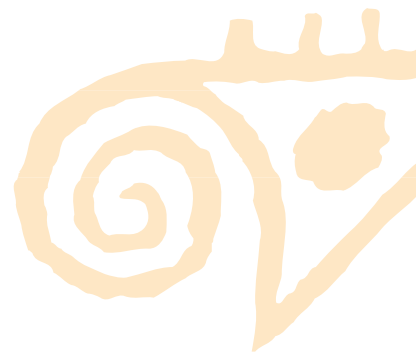




## Indian Health Focus

# Elders



**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

# Elders

### **Indian Health Service**

Michael H. Trujillo, M.D., M.P.H., M.S.

*Director*

### **Office of Public Health**

Gary J. Hartz, P.E.

*Acting Director*

### **Division of Community and Environmental Health**

Mary Beth Skupien, Ph.D., M.S.

*Director*

### **Program Statistics Team**

Anthony J. D'Angelo

*Team Leader*

# 1997



# 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	.....	6
Patient Care Statistics	.....	7
<b>Sources of Additional Information</b>	.....	<b>8</b>
<b>Tables and Charts</b>	.....	<b>9</b>
<b>Chart 1</b>	Population by Age, 1990	9
<b>Table 1</b>	Percent Age Distribution	9
<b>Chart 2</b>	Trend in Number of Elders in IHS Service Population	10
<b>Table 2</b>	Trend in Number of Elders in IHS Service Population	10
<b>Chart 3</b>	Income Status in 1989, American Indians and U.S. All Races, 1990 Census	11
<b>Table 3</b>	Selected Economic Profiles for the United States, 1990 Census	11
<b>Chart 4.1</b>	Deaths by Age, American Indians and U.S. All Races	12
<b>Chart 4.2</b>	Deaths by Age and Sex, American Indians and Alaska Natives (1992-94)	12
<b>Table 4</b>	Number and Percent Distribution of Deaths by Age and Sex	13
<b>Chart 5</b>	Age-Specific Death Rates, Ratio of American Indians to U.S. All Races	14
<b>Table 5</b>	Age-Specific Death Rates	14
<b>Chart 6</b>	Life Expectancy at Birth	15
<b>Table 6</b>	Overall Measures of Indian Health	15
<b>Chart 7</b>	Death Rates, Leading Causes: Ages 55 to 64 Years	16
<b>Table 7</b>	Ten Leading Causes of Death for Decedents 55 to 64 Years of Age	16
<b>Chart 8</b>	Death Rates, Leading Causes: Ages 65+ Years	17
<b>Table 8</b>	Ten Leading Causes of Death for Decedents 65 Years Old and Older	17



**Chart 9** Alcoholism Death Rates by Age and Sex .....18  
**Table 9** Alcoholism Death Rates by Age and Sex .....19

**Chart 10** Drug-Related Death Rates by Age and Sex .....20  
**Table 10** Drug-Related Death Rates by Age and Sex .....20

**Chart 11** Accident Death Rates by Age and Sex .....21  
**Table 11** Accident Death Rates by Age and Sex .....21

**Chart 12** Suicide Death Rates by Age and Sex .....22  
**Table 12** Suicide Death Rates by Age and Sex .....22

**Chart 13** Homicide Death Rates by Age and Sex .....23  
**Table 13** Homicide Death Rates by Age and Sex .....23

**Chart 14** Chronic Liver Disease and Cirrhosis Death Rates by Age and Sex .....24  
**Table 14** Chronic Liver Disease and Cirrhosis Death Rates by Age and Sex .....24

**Chart 15** Diabetes Mellitus Death Rates by Age and Sex .....25  
**Table 15** Diabetes Mellitus Death Rates by Age and Sex .....25

**Chart 16** Heart Disease Death Rates by Age and Sex .....26  
**Table 16** Heart Disease Death Rates by Age and Sex .....26

**Chart 17** Cerebrovascular Diseases Death Rates by Age and Sex .....27  
**Table 17** Cerebrovascular Diseases Death Rates by Age and Sex .....27

**Chart 18** Malignant Neoplasm Death Rates by Age and Sex .....28  
**Table 18** Malignant Neoplasm Death Rates by Age and Sex .....28

**Chart 19** Death Rates, Leading Cancer Sites: Ages 55+ Years .....29  
**Table 19** Leading Sites for Cancer Deaths for Decedents 55 Years Old and Older .....30

**Chart 20** Age-Specific Prostate Cancer Death Rates .....31  
**Table 20** Age-Specific Prostate Cancer Death Rates .....31

**Chart 21** Hospital Discharge Rates by Age .....32  
**Table 21** Comparison of IHS and U.S. Hospital Discharge Rates by Age .....32

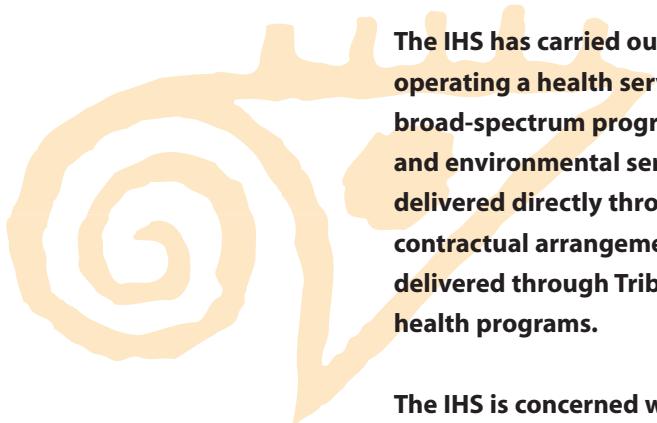


<b>Chart 22</b>	Percent Distribution for Population and Patient Care Workloads, FY 1995 .....	33
<b>Table 22</b>	Percent Distribution for Estimated User Population, Ambulatory Medical Clinical Impressions, and Inpatient Discharges and Days .....	33
<b>Chart 23</b>	Leading Causes of Hospitalization: Ages 55 to 64 Years .....	34
<b>Table 23</b>	Ten Leading Causes of Hospitalization for GM&S Patients 55 to 64 Years of Age .....	34
<b>Chart 24</b>	Leading Causes of Hospitalization: Ages 65+ Years .....	35
<b>Table 24</b>	Ten Leading Causes of Hospitalization for GM&S Patients 65 Years Old and Older .....	35
<b>Chart 25</b>	Leading Causes of Ambulatory Medical Visits: Ages 55 to 64 Years .....	36
<b>Table 25</b>	Ten Leading Causes of Ambulatory Medical Clinical Impressions for Patients 55 to 64 Years of Age .....	36
<b>Chart 26</b>	Leading Causes of Ambulatory Medical Visits: Ages 65+ Years .....	37
<b>Table 26</b>	Ten Leading Causes of Ambulatory Medical Clinical Impressions for Patients 65 Years Old and Older .....	37
<b>Glossary of ICD-9 Codes .....</b>		<b>39</b>
<b>Method Used to Rank Leading Sites of Cancer Deaths .....</b>		<b>42</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 Indian 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 elders. It is based on data published in the 1997 *Trends in Indian Health*.

The population of interest for this publication is American Indian and Alaska Native elders residing in the IHS service area. Different age groups are associated with the term "elder" (e.g., 50 years plus, 55 years plus, 65 years plus) depending upon the organization and purpose involved. For this publication, elders are defined as persons who are 55 years old and older to correspond with the target population for the IHS and Tribal Elder Care Initiative. 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


Elders, defined for this publication as persons 55 years and over, comprise a smaller proportion of the American Indian and Alaska Native population than they do of the general U.S. population. According to the 1990 census, the elderly comprise 11 percent of the Indian population, but 21 percent of the U.S. All Races population and 23 percent of the U.S. White population. In FY 1990, there were about 135,000 elders in the IHS service population, compared to about 163,000 today. By the year 2000, the number of elders is expected to exceed 169,000. The largest age group within the elder population is for persons 55 to 59 years of age, currently about 43,200 individuals.

Indian elders also have a lower economic status than elders in the general population. The 1990 census indicates that 31.6 percent of Indians of all ages live below the poverty level in contrast to 13.1 and 9.8 percent for the U.S. All Races and White populations, respectively. For 65- to 74-year old persons, the corresponding percentages are 26.9, 10.4, and 8.4. For 75 years and older, the corresponding percentages are 33.3, 16.5, and 14.6.

Indians die at relatively younger ages than the general population,

i.e., the Indian population has proportionately less deaths in the older age groups. Fifty-nine percent of Indian deaths pertain to ages 55 and over compared to 84 and 86 percent for the U.S. All Races and White populations, respectively. Indian males die at relatively younger ages than Indian females. The percentage of Indian male deaths pertaining to ages 55 and over is 54 in contrast to 67 for females. These Indian counts have been adjusted for miscoding of Indian race on death certificates.

Although there are relatively fewer elders currently in the Indian population as compared to the general population, Indian life expectancy has shown dramatic increases since the early 1970's. Indian life expectancy at birth has increased 15 percent between 1972-74 and 1992-94, i.e., from 63.5 years to 73.2 years. However when the 1992-94 life expectancy is adjusted for miscoding of Indian race on death certificates, it decreases to 71.1. This is 4.4 years less than the U.S. All Races life expectancy of 75.5 for 1993 and 5.2 years less than that for U.S. Whites (76.3, 1993). If all the past Indian life expectancies were similarly adjusted for miscoding, the actual/unadjusted trend line would rise in value, but the rate



of change would probably remain the same.

The leading causes of death for elders in the age group 55 to 64 years vary considerably between the Indian population and the general population. For Indians, the top two causes are diseases of the heart and malignant neoplasms; the order is reversed for U.S. All Races and Whites. The third and fourth leading causes for Indians are diabetes mellitus and accidents, while for All Races and Whites, they are chronic obstructive pulmonary diseases and cerebrovascular diseases. In contrast, Indian elders ages 65 and over tend to die of the same causes, although at different rates, as their counterparts in the general population. The top three leading causes of death are the same for Indians, U.S. All Races, and U.S. Whites 65 years and older—diseases of the heart, malignant neoplasms, and cerebrovascular diseases. These Indian counts have been adjusted for miscoding of Indian race on death certificates.

Alcohol abuse is a serious problem among Indian elders. The second highest alcoholism age-specific death rate for Indian males (138.7 deaths per 100,000 population) occurs for the 55- to 64-year-old age group. This is 3.9 times the peak U.S. All

Races male rate (35.8) and 4.2 times the peak U.S. White male rate (32.9), which both occur for the 55 to 64 age group. The rate for Indian females in this age group (61.5) is less than half the Indian male rate, but is more than 6 times the highest rates for U.S. All Races (9.9) and White females (9.4) (both for ages 55 to 64). Even for persons exceeding 64 years of age, the Indian rates are relatively high. These Indian rates have been adjusted for miscoding of Indian race on death certificates.

Drug abuse is less of a problem for Indian elders than that of alcohol abuse. The age-specific drug-related death rates are similar for Indian elder males and females. The age-specific drug-related death rates for Indian elders are also similar to those for U.S. All Races and White elders. These Indian rates have been adjusted for miscoding of Indian race on death certificates.


Accident and homicide deaths are more likely and suicide deaths are less likely among Indian elders compared to elders in the U.S. general population. For these causes, Indian male elders are at greater risk than Indian female elders. For example, Indian male elders have a greater chance of dying from accidents than Indian female

elders; the male death rates range from 2.3 to 2.9 times as great as the female rates. In comparison to U.S. All Races and White male elders, the Indian male death rates are still higher but the gaps are less than the Indian male-female gaps, except for the 55 to 64 age group. Indian elders aged 55 to 64 years have a homicide death rate around double that for U.S. All Races and White elders in this age group. Within the Indian population, males ages 55 to 64 years are nearly 6 times as likely to die from homicide than the corresponding group of females. Suicide deaths are relatively low for Indian females in age groups 55 and over. U.S. All Races and White females have higher suicide death rates for these age groups than Indian females, but their rates are considerably less than the corresponding rates for males in the Indian, All Races, and White populations. Indian male elders, though, are less likely to die from suicide than U.S. All Races and White male elders. These Indian rates have been adjusted for miscoding of Indian race on death certificates.

The likelihood of dying from diabetes mellitus, diseases of the heart, or cerebrovascular diseases for the most part increases with age for the elder population. Indian elders die from diabetes







mellitus at greater rates than elders in the All Races and White populations; however, the gaps decrease with age. Indian elders have a higher death rate for diseases of the heart than elders in the All Races and White populations for age groups 55 through 74 years. The Indian rate is less, however, for the other elder age groups in comparison to these two populations. Indian elders die from cerebrovascular diseases at higher rates than elders in the All Races and White populations for age groups 55 to 74 years. For older age groups, All Races and White elders are more likely to die from this cause than Indian elders. These Indian rates have been adjusted for miscoding of Indian race on death certificates.

Malignant neoplasms are a cause of death more prevalent among elders than any other age group. However, Indian elders are less likely to die from malignant neoplasms than elders in the U.S. All Races and White populations. Within the Indian population, male elders have a greater chance of dying from malignant neoplasms than female elders. These Indian rates have been adjusted for miscoding of Indian race on death certificates. The top five leading sites for cancer deaths among Indian

elders are trachea, bronchus, and lung; colon; prostate; female breast; and stomach. Elders in the U.S. All Races and White populations have the same top four leading sites in the same order, except that the order for prostate and female breast cancer deaths is reversed for U.S. White elders. The fifth leading site for the All Races and White populations is pancreas. However, elders in the All Races and White populations have much higher cancer death rates for these sites than Indian elders, except for stomach. The next sites, orders 6 through 10, vary greatly between Indian elders and All Races/ White elders. In contrast to the first five sites, Indian elders' cancer death rates for Indian sites 7 through 9 (liver, kidney, and gallbladder) exceed the corresponding All Races and White rates. These Indian counts and rates are adjusted for miscoding of Indian race on death certificates.

The likelihood of a man dying from prostate cancer increases with age. The Indian rate is somewhat higher than the rates in the U.S. All Races and White populations for the age group 55 to 64 years. However for the older age groups, the Indian rate

ranges from 6 percent to 29 percent less than the comparable rates in these two populations. These Indian rates have been adjusted for miscoding of Indian race on death certificates.

Indian elders, as is true for elders in the general population, are relatively high users of health resources. For example, Indians over 64 years of age comprise 5.7 percent of the IHS user population but consume considerably higher percentages of IHS health services, i.e., 11.2 percent of the ambulatory medical clinical impressions, 15.1 percent of the inpatient discharges, and 22.1 percent of the inpatient days. However, Indian elders receive health services at lower rates than their counterparts in the general population. Again looking at persons over 64 years of age, the IHS hospital discharge rate (171.4 discharges per 1,000 population) is half the U.S. rate (344.6).

Circulatory system diseases are the leading cause of hospitalization for elders in IHS and Tribal direct and contract general hospitals. The second leading cause of hospitalization is digestive system diseases for those 55 to 64 years of age, whereas it is respiratory system diseases for patients 65 years old and older.





## 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 deter-

mine 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:*

### **General Information**

Anthony J. D'Angelo, Team Leader, Program Statistics Team  
Priscilla Sandoval, Program Analyst

### **Demographic Statistics**

Aaron O. Handler, Team Leader, Demographic Statistics Team  
Linda J. Querec, Statistician  
JoAnn N. Pappalardo, Computer Systems Analyst  
Barbara A. Moore, Statistical Assistant

### **Patient Care Statistics**

Stephen F. Kaufman, Team Leader, Patient Care Statistics Team  
Bonnie M. Matheson, Computer Assistant

Copies of this and other statistical publications may be obtained from Donna Y. Anderson, Secretary.

The address and phone number are as follows:

Indian Health Service  
Office of Public Health  
Division of Community and Environmental Health  
Program Statistics Team  
Twinbrook Metro Plaza  
12300 Twinbrook Parkway, Suite 450  
Rockville, Maryland 20852

Phone: 301-443-1180  
Fax: 301-443-1522  
E-mail: [adangelo@hqe.ihs.gov](mailto:adangelo@hqe.ihs.gov)

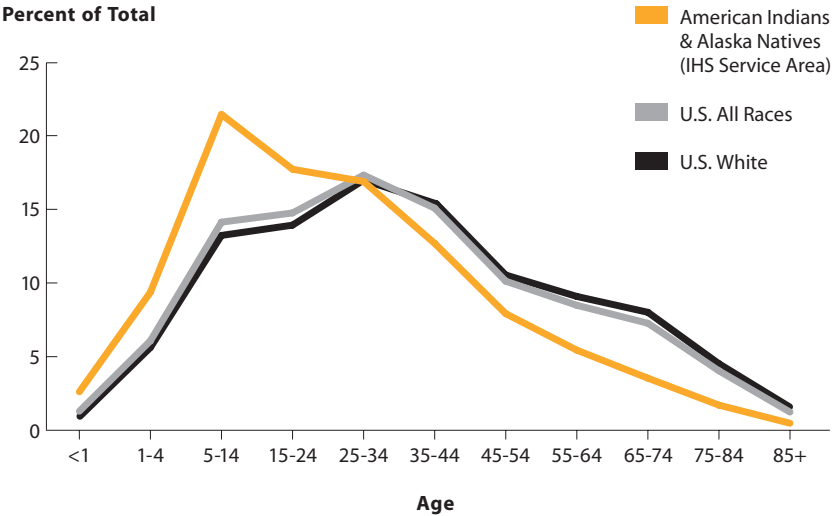
This publication, other IHS publications, and additional information about the IHS are available on the IHS Homepage on the World Wide Web.

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



**Chart 1 Population by Age, 1990**

The proportion of elders (i.e., age 55 and over) in the Indian population is considerably smaller than the corresponding proportion in the general population. According to the 1990 census, the elderly comprise 11 percent of the Indian population, but 21 percent of the U.S. All Races population and 23 percent of the U.S. White population. The age group 75 years and over is 2 percent of the Indian population and 5 and 6 percent of the U.S. All Races and White populations, respectively.



**Table 1 Percent Age Distribution**

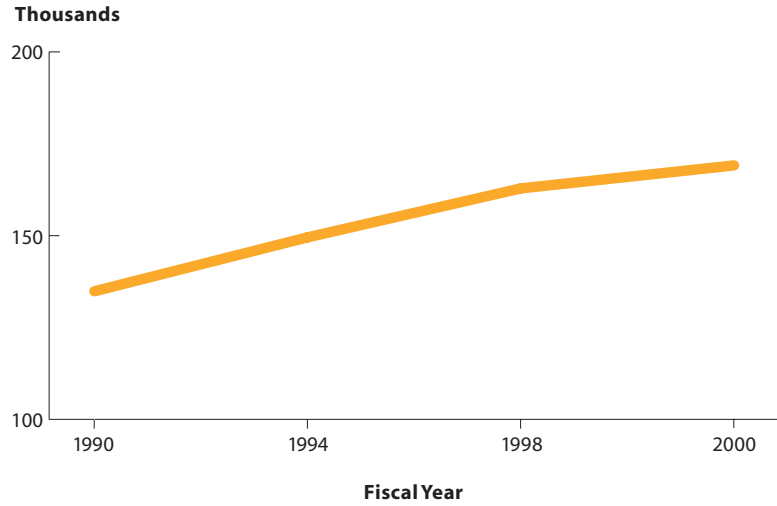
American Indians and Alaska Natives, IHS Service Area, and U.S. All Races and White Populations, 1990 Census Data

Age Group	American Indian and Alaska Native <sup>1</sup>	U.S. All Races	U.S. White
All Ages	100.000	100.000	100.000
Under 1 year	2.616	1.294	1.204
1-4 years	9.390	6.086	5.631
5-9 years	11.239	7.277	6.819
10-14 years	10.251	6.881	6.437
15-19 years	9.470	7.138	6.682
20-24 years	8.286	7.647	7.273
25-29 years	8.729	8.569	8.332
30-34 years	8.198	8.791	8.690
35-39 years	6.971	8.027	8.053
40-44 years	5.740	7.083	7.265
45-49 years	4.353	5.578	5.802
50-54 years	3.577	4.564	4.760
55-59 years	2.965	4.235	4.491
60-64 years	2.485	4.268	4.613
65-69 years	2.077	4.066	4.457
70-74 years	1.466	3.215	3.569
75-79 years	1.090	2.461	2.747
80-84 years	0.619	1.582	1.779
85 years & over	0.478	1.238	1.396
Median Age	24.2 yrs.	32.9 yrs.	34.4 yrs.

<sup>1</sup> Based upon data from the 1990 Census modified age, race, and sex file and current IHS service area boundaries. Percentage point distribution was 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 Trend in Number of Elders in IHS Service Population**

In FY 1990, there were about 135,000 elders in the IHS service population. That number has risen to about 163,000 in FY 1998. By the year 2000, the number of elders is expected to exceed 169,000. The largest age group within the elder population is for persons 55 to 59 years of age. They currently consist of about 43,200 individuals.

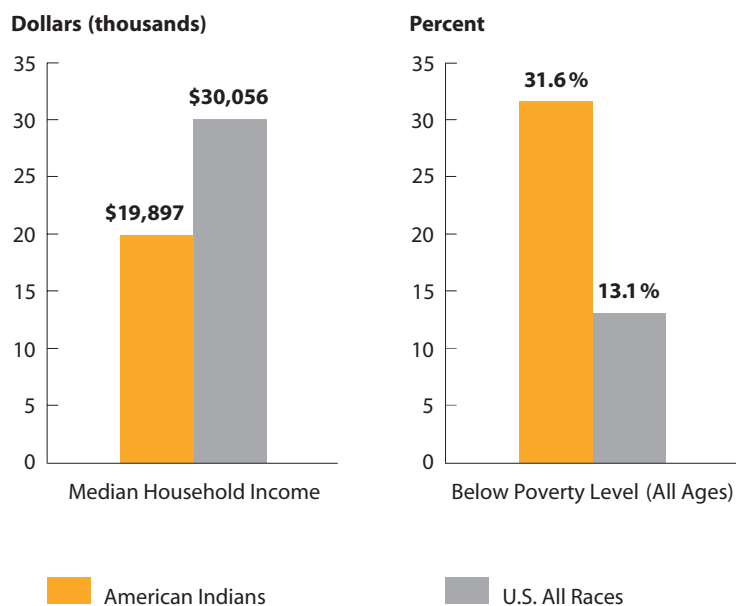


**Table 2 Trend in Number of Elders in IHS Service Population**

Age Group	1990	1994	1998	2000
All Ages	1,207,236	1,338,500	1,457,621	1,513,618
All Elder	134,969	149,644	162,962	169,222
55-59	35,795	39,687	43,218	44,879
60-64	30,000	33,262	36,222	37,613
65-69	25,074	27,801	30,275	31,438
70-74	17,698	19,622	21,369	22,190
75-79	13,159	14,590	15,888	16,498
80-84	7,473	8,285	9,023	9,369
85+	5,771	6,398	6,967	7,235

**Chart 3 Income Status in 1989, American Indians and U.S. All Races, 1990 Census**

Indian elders have a lower economic status than elders in the general population. According to the 1990 census, the median household income for Indians is \$19,897, for U.S. All Races it is \$30,056, and for U.S. Whites it is \$31,435. During this same period, 31.6 percent of Indians of all ages lived below the poverty level in contrast to 13.1 and 9.8 percent for the U.S. All Races and White populations, respectively. For persons 65 to 74 years old the corresponding percentages are 26.9, 10.4, and 8.4. For 75 years and older, the corresponding percentages are 33.3, 16.5, and 14.6.



**Table 3 Selected Economic Profiles for the United States, 1990 Census**

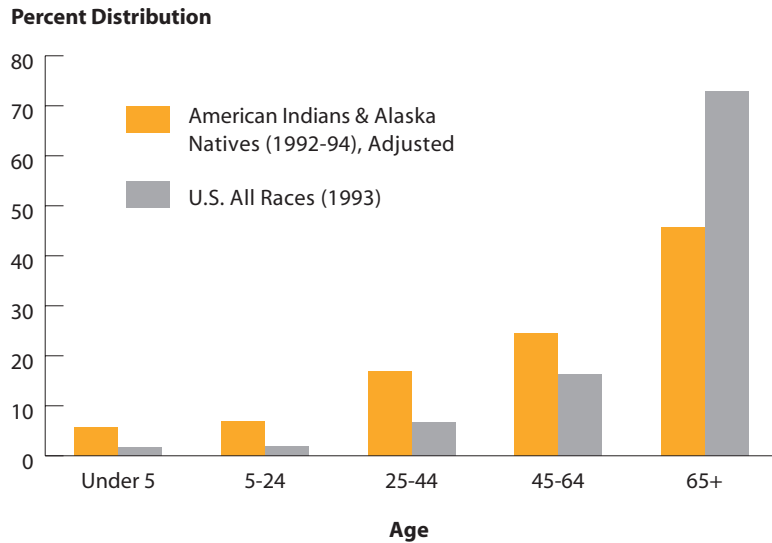
	American Indian and Alaska Native	All Races	White	Black	Asian and Pacific Islander	Hispanic
<b>Educational Attainment (Persons 25 years and older):</b>						
Percent less than 9th grade	14.1	10.4	8.9	13.8	12.9	30.7
Percent 9th to 12th grade, no diploma	20.6	14.4	13.1	23.2	9.5	19.5
Percent high school 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 (Persons 16 years and older):</b>						
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.



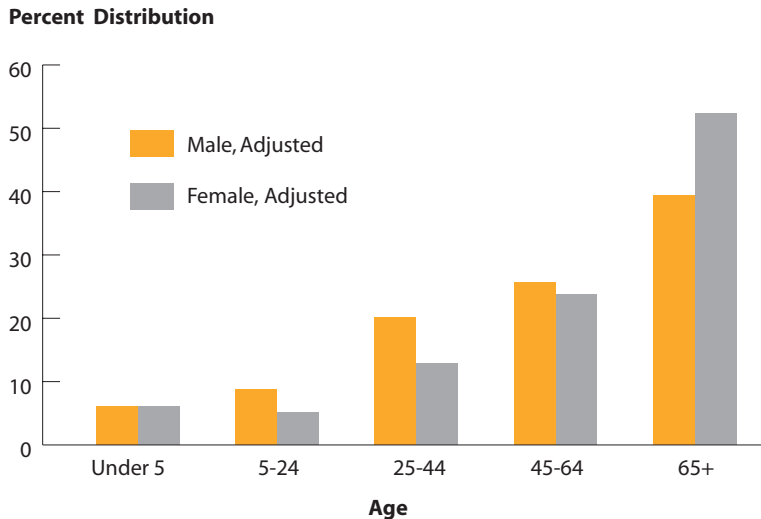
**Chart 4.1 Deaths by Age, American Indians and U.S. All Races**

Indians die at relatively younger ages than the general population, i.e., the Indian population has proportionately less deaths in the older age groups. Thirty-three percent of Indian deaths pertain to ages 55 to 74, 17 percent to ages 75 to 84, and 10 percent to ages 85 and over. For the U.S. All Races population, these percentages are 32, 28, and 23 and for U.S. Whites, they are 32, 29, and 25. These Indian counts have been adjusted for miscoding of Indian race on death certificates.



**Chart 4.2 Deaths by Age and Sex, American Indians and Alaska Natives (1992-94)**

Indian males die at relatively younger ages than Indian females. Thirty-two percent of Indian male deaths pertain to ages 55 to 74 compared to 34 percent for Indian females. The percentage of deaths pertaining to ages 75 to 84 is 15 for Indian males and 19 for Indian females. For the age group 85 and over, the corresponding percentages are 7 and 13. These Indian counts have been adjusted for miscoding of Indian race on death certificates.



**Table 4 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

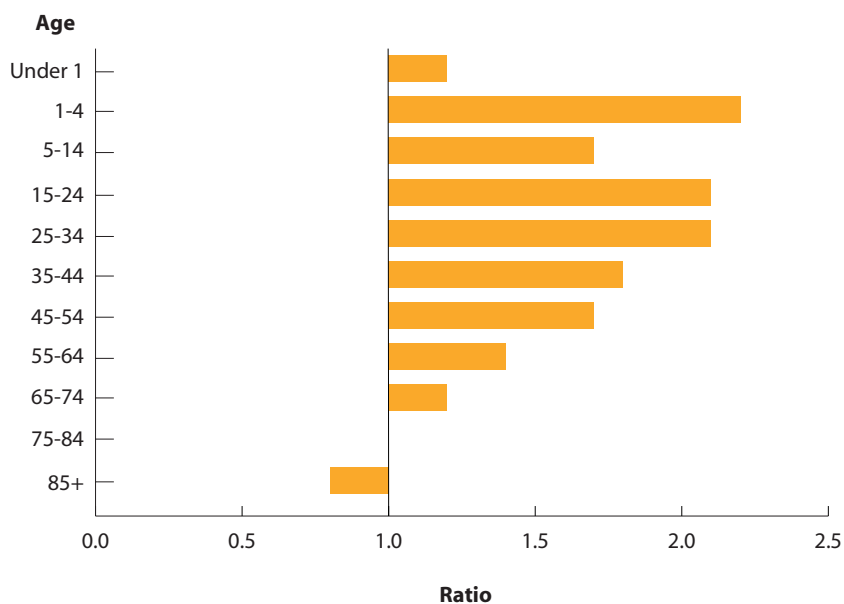
Age Group	United States		
	All Races	White	Black
Number of Deaths, All Ages	2,268,553	1,951,437	282,151
Percent Distribution, All Ages	100.0	100.0	100.0
Under 1	1.5	1.1	3.9
1 to 4	0.3	0.2	0.7
5 to 14	0.4	0.3	0.7
15 to 24	1.6	1.3	3.4
25 to 34	2.6	2.2	5.7
35 to 44	4.2	3.5	8.8
45 to 54	5.8	5.2	9.5
55 to 64	10.6	10.2	13.7
65 to 74	21.5	21.7	20.5
75 to 84	28.1	29.4	19.9
85 and over	23.3	24.9	13.1
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 5 Age-Specific Death Rates, Ratio of American Indians (1992-94) to U.S. All Races (1993)**

Indian age-specific death rates are greater than those for the U.S. All Races and White populations for all age groups except 85 years and over. For the 55 to 64 year age group, the Indian rate is 1.4 times the All Races rate and 1.5 times the White rate. The Indian rate is 1.2 times the All Races and White rates for persons 65 to 74 years old. The rates for the three populations approximate each other for the 75 to 84 years group. The Indian rate is 0.8 times the rates of the other populations for 85 years and older. These Indian rates are adjusted for miscoding of Indian race on death certificates.



**Table 5 Age-Specific Death Rates**

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

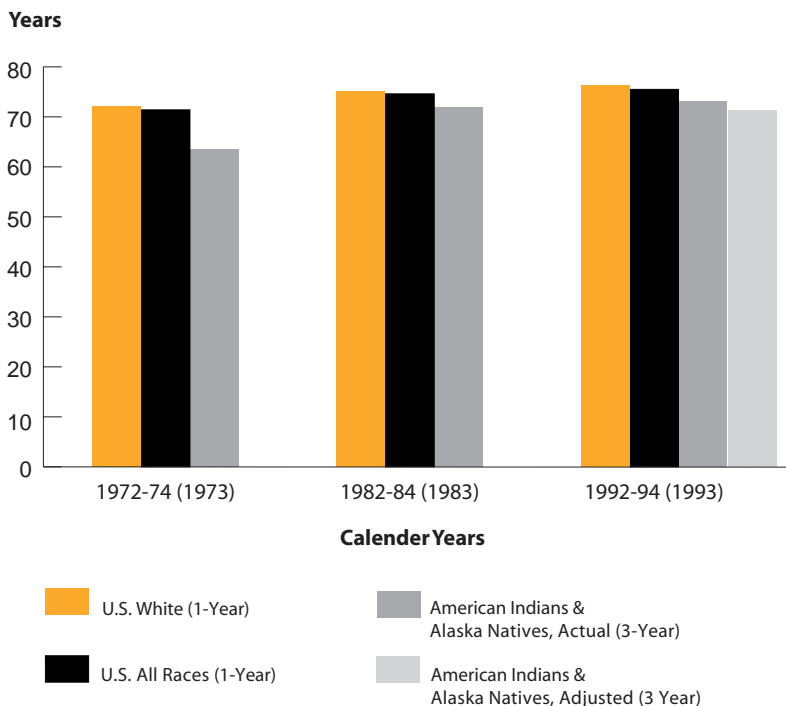
Age Group	American Indian and Alaska Native				U.S. Rate			Ratio <sup>1</sup> of American Indian and Alaska Native to:	
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>	All Races	White	Black	All Races	U.S. White
Under 1	872	1,096	848.2	1,066.1	854.4	697.3	1,735.6	1.2	1.5
1-4	304	357	82.5	96.8	44.8	38.3	79.1	2.2	2.5
5-14	298	331	35.4	39.3	23.4	21.4	35.0	1.7	1.8
15-24	1,180	1,406	170.3	202.9	98.5	84.7	181.2	2.1	2.4
25-34	1,681	1,951	254.6	295.5	142.4	122.2	290.0	2.1	2.4
35-44	1,854	2,128	374.7	430.1	235.5	202.2	489.3	1.8	2.1
45-54	2,148	2,471	696.3	801.1	460.0	413.8	919.4	1.7	1.9
55-64	2,995	3,450	1,409.3	1,623.5	1,154.7	1,090.9	1,867.1	1.4	1.5
65-74	3,799	4,363	2,749.1	3,157.2	2,617.1	2,546.7	3,659.0	1.2	1.2
75-84	3,511	4,022	5,266.2	6,032.6	5,951.6	5,899.1	7,010.8	1.0	1.0
85+	2,233	2,324	11,960.4	12,447.8	15,481.7	15,625.4	14,418.1	0.8	0.8

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

SOURCE: U.S. Data by Age: NCHS, DHHS, Advance Report of Final Mortality Statistics, 1993, Vol. 44, No. 7, Supplement, February 29, 1996, Tables 7 and 8.

## Chart 6 Life Expectancy at Birth

Although Indians do not live on average as long as persons in the general population, Indian life expectancy has shown dramatic increases since the early 1970's. Indian life expectancy at birth increased 15 percent between 1972-74 and 1992-94, i.e., from 63.5 years to 73.2 years. However when the 1992-94 life expectancy is adjusted for miscoding of Indian race on death certificates, it decreases to 71.1. This is 4.4 years less than the U.S. All Races life expectancy of 75.5 for 1993 and 5.2 less than that for U.S. Whites (76.3, 1993). If all the past Indian life expectancies were similarly adjusted for miscoding, the actual/unadjusted trend line would rise in value, but the rate of change would probably remain the same.



## Table 6 Overall Measures of Indian Health

IHS Service Area Population Compared with the U.S. All Races and U.S. White Populations

	Life Expectancy At Birth (Years)		Years of Potential Life Lost (Rate per 1,000 Population <sup>1</sup> )		Age-Adjusted Death Rate (per 100,000 Population)	
IHS Service Area:						
1992-1994	73.2	71.1 (adj)	80.3	94.6 (adj)	601.3	690.4 (adj)
1982-1984	72.0		100.5		638.0	
1972-1974	63.5		188.3		1,007.4	
U.S. All Races:						
1993	75.5		54.8		513.3	
1983	74.6		58.5		550.5	
1973	71.4		78.9		692.9	
U.S. White:						
1993	76.3		49.0		485.1	
1983	75.2		54.8		528.0	
1973	72.2		70.8		659.3	
Ratio: IHS to U.S. All Races:						
1992-1994 (1993)	0.97	0.94 (adj)	1.49	1.73 (adj)	1.17	1.35 (adj)
1982-1984 (1983)	0.96		1.72		1.16	
1972-1974 (1973)	0.85		2.39		1.45	
Ratio: IHS to U.S. White:						
1992-1994 (1993)	0.96	0.93 (adj)	1.67	1.93 (adj)	1.24	1.42 (adj)
1982-1984 (1983)	0.96		1.83		1.21	
1972-1974 (1973)	0.84		2.66		1.53	

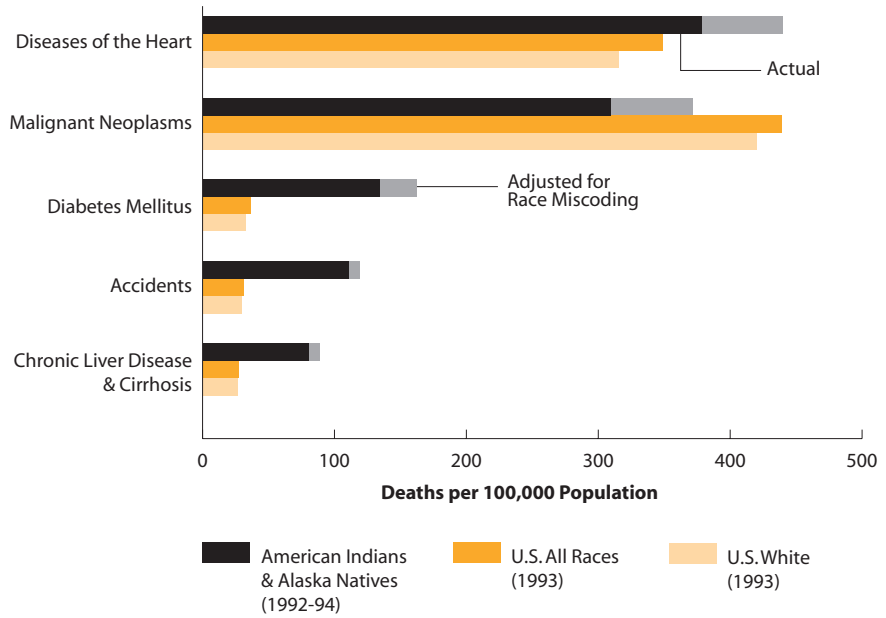
Adj—Specifies a number, rate, or ratio of rates adjusted to compensate for miscoding of Indian race on death certificates.

<sup>1</sup> Sum of years below age 65 that decedents died divided by the total resident population younger than 65 years of age.



**Chart 7 Death Rates, Leading Causes: Ages 55 to 64 Years**

The leading causes of death for the age group 55 to 64 years vary considerably between the Indian population and the general population. For Indians, the top two causes are diseases of the heart and malignant neoplasms; the order is reversed for U.S. All Races and Whites. The third and fourth leading causes for Indians are diabetes mellitus and accidents, while for All Races and Whites, they are chronic obstructive pulmonary diseases and cerebrovascular diseases. These Indian counts have been adjusted for miscoding of Indian race on death certificates.



**Table 7 Ten Leading Causes of Death for Decedents 55 to 64 Years of Age**

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

Cause of Death	American Indian & Alaska Native		U.S. All Races		U.S. White		Ratio <sup>1</sup> of American Indian and Alaska Native to:	
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>	Rate	Rate	U.S. All Races	U.S. White
All Causes	2,995	3,450	1,409.3	1,623.4	1,154.7	1,069.4	1.4	1.5
Diseases of the heart	793	945	373.1	444.7	344.3	311.7	1.3	1.4
Malignant neoplasms	649	757	305.4	356.2	433.4	414.1	0.8	0.9
Diabetes mellitus	284	339	133.6	159.5	35.7	31.7	4.5	5.0
Accidents	231	244	108.7	114.8	30.6	28.7	3.8	4.0
Motor vehicles	114	121	53.6	56.9	13.9	13.4	4.1	4.2
Other accidents	117	123	55.1	57.9	16.7	15.3	3.5	3.8
Chronic liver disease and cirrhosis	168	189	79.1	88.9	26.8	25.8	3.3	3.4
Cerebrovascular diseases	126	138	59.3	64.9	46.0	38.8	1.4	1.7
Chronic obstructive pulmonary diseases and allied conditions	73	83	34.4	39.1	51.0	50.8	0.8	0.8
Pneumonia and influenza	70	76	32.9	35.8	17.7	15.3	2.0	2.3
Nephritis, nephrotic syndrome, and nephrosis	45	47	21.2	22.1	8.9	6.2	2.5	3.6
Septicemia	29	34	13.6	16.0	7.7	6.8	2.1	2.4
All other causes	527	598						

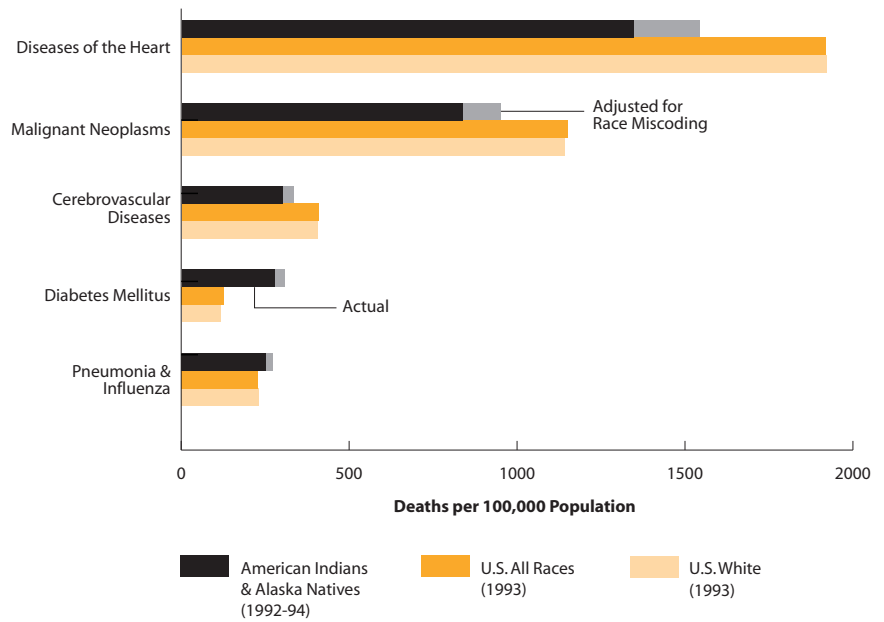
<sup>1</sup> Adjusted to compensate for miscoding of Indian race on death certificates.

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



**Chart 8 Death Rates, Leading Causes: Ages 65+ Years**

Indians ages 65 and over tend to die of the same causes, although at different rates, as this age group in the general population. The top three leading causes of death are the same for Indians, U.S. All Races, and U.S. Whites 65 years and older—diseases of the heart, malignant neoplasms, and cerebrovascular diseases. The fourth leading cause differs among these groups. For Indians, it is diabetes mellitus. For the U.S. All Races and White populations, it is chronic obstructive pulmonary diseases and allied conditions. These Indian counts have been adjusted for miscoding of Indian race on death certificates.



**Table 8 Ten Leading Causes of Death for Decedents 65 Years Old and Older**

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

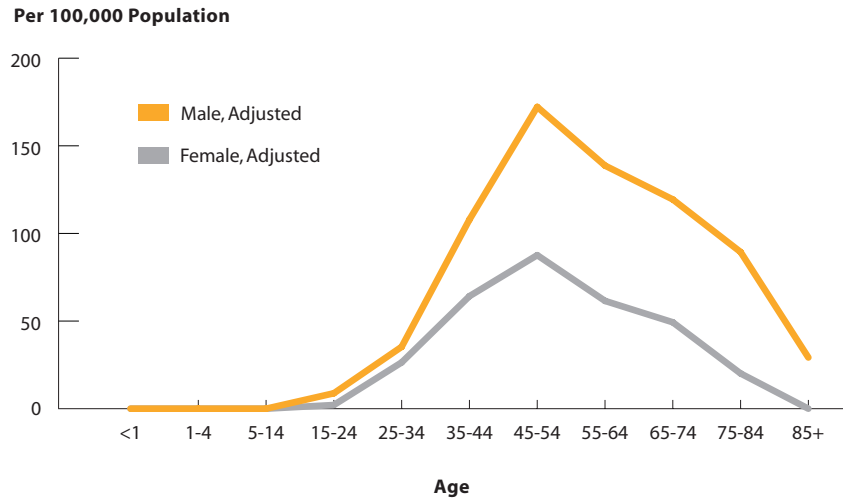
Cause of Death	American Indian & Alaska Native		U.S. All Races		U.S. White		Ratio <sup>1</sup> of American Indian and Alaska Native to:	
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>	Rate	Rate	U.S. All Races	U.S. White
All Causes	9,543	10,709	4,269.2	4,790.8	5,047.7	5,036.6	0.9	1.0
Diseases of the heart	2,967	3,439	1,327.3	1,538.5	1,891.0	1,895.6	0.8	0.8
Malignant neoplasms	1,842	2,081	824.1	931.0	1,133.7	1,123.4	0.8	0.8
Cerebrovascular diseases	658	727	294.4	325.2	401.4	397.4	0.8	0.8
Diabetes mellitus	610	698	272.9	312.3	123.6	114.5	2.5	2.7
Pneumonia and influenza	556	592	248.7	264.8	225.3	228.4	1.2	1.2
Chronic obstructive pulmonary diseases and allied conditions	413	454	184.8	203.1	263.7	275.6	0.8	0.7
Accidents	298	316	133.3	141.4	84.8	84.7	1.7	1.7
Motor vehicle	94	97	42.1	43.4	22.3	22.3	1.9	1.9
Other accidents	204	219	91.3	98.0	62.4	62.3	1.6	1.6
Nephritis, nephrotic syndrome, and nephrosis	206	225	92.2	100.7	60.2	56.2	1.7	1.8
Chronic liver disease and cirrhosis	154	167	68.9	74.7	31.5	32.0	2.4	2.3
Septicemia	122	130	54.6	58.2	51.4	48.0	1.1	1.2
All other causes	1,717	1,880						

<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 9 Alcoholism Death Rates by Age and Sex, American Indians and Alaska Natives (1992-94)**

Alcohol abuse is a serious problem in many Indian communities. The second highest alcoholism age-specific death rate for Indian males is 138.7 deaths per 100,000 population for the 55- to 64-year-old age group. This is 3.9 times the peak U.S. All Races male rate (35.8) and 4.2 times the peak U.S. White male rate (32.9), both of which occur in the 55 to 64 age group. The rate for Indian females for the age group 55 to 64 years (61.5) is 6.2 and 6.5 times the highest rates for U.S. All Races (9.9 for ages 55 to 64) and White females (9.4 for ages 55 to 64), respectively. Even for persons exceeding 64 years of age, the Indian rates are relatively high. For age groups 65 years and over, the Indian male rates (119.4, 89.4, and 29.2) range from 2.4 to 4.4 times the corresponding U.S. All Races and White rates. For age groups 65 to 84, the Indian female rates (49.3 and 20.1) range from 4.1 to 6.2 times the rates for these U.S. groups. The Indian female rate is zero for ages 85 and over. These Indian rates are adjusted for miscoding of Indian race on death certificates.





**Table 9 Alcoholism Death Rates by Age and Sex**

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

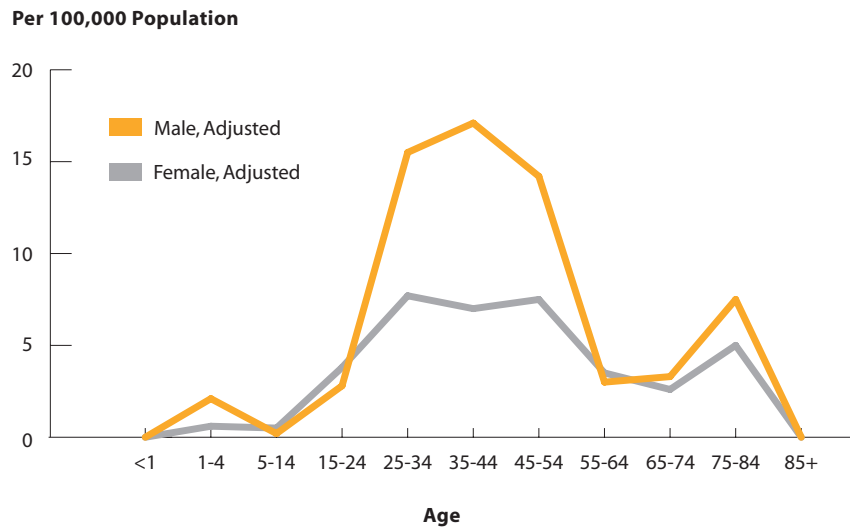
NOTE: — Represents zero. 0.0 Rounds to zero.





**Chart 10 Drug-Related Death Rates by Age and Sex, American Indians and Alaska Natives (1992-94)**

Drug abuse is less of a problem for Indian elders than that of alcohol abuse. The age-specific drug-related death rates are similar for Indian elder males and females. The age- and sex-specific drug-related death rates for Indian elders are also similar to those for U.S. All Races and White elders. However, these Indian age- and sex-specific death rates need to be interpreted with caution since they are based on a small number of deaths. The highest All Races and White elder drug-related death rates occur in the 85 and over age group, while the Indian rates for this age group are zero. These Indian rates are adjusted for miscoding of Indian race on death certificates.



**Table 10 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.

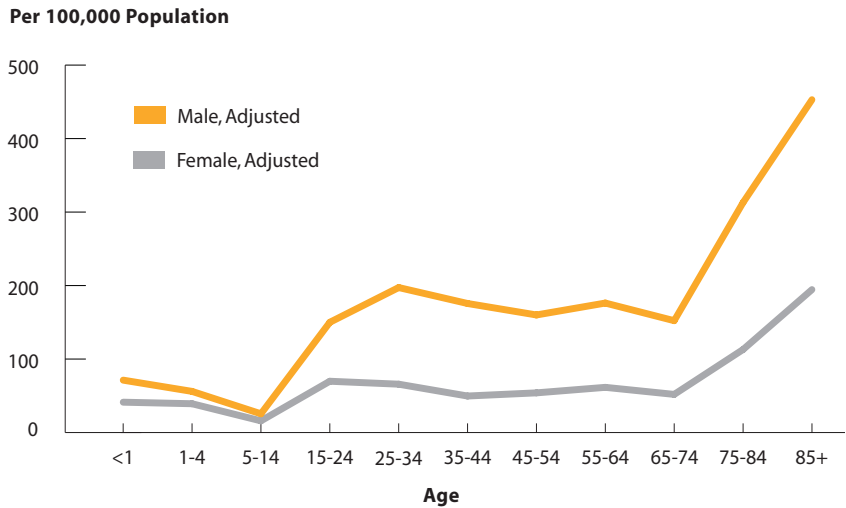
NOTE: — Represents zero.





**Chart 11 Accident Death Rates by Age and Sex, American Indians and Alaska Natives (1992-94)**

The likelihood of an Indian person dying from an accident increases with age for age groups 45 years and older, except for the age group 65 to 74 years. This is true without exception for the U.S. All Races and White populations. Indian males of all ages are much more likely to die from accidents than the corresponding Indian female groups; the male death rates for age groups 55 years and over range from 2.3 to 2.9 times as great as the female rates. When compared to these same age groups for U.S. All Races and White males, the Indian male death rates are still higher but the gaps are less than the Indian male-female gaps, except for the 55 to 64 year age group. Indian female accident death rates are higher than those for U.S. All Races and White females for age groups 55 to 84, but are less for the age group 85 years and older. These Indian rates are adjusted for miscoding of Indian race on death certificates.



**Table 11 Accident Death Rates by Age and Sex**

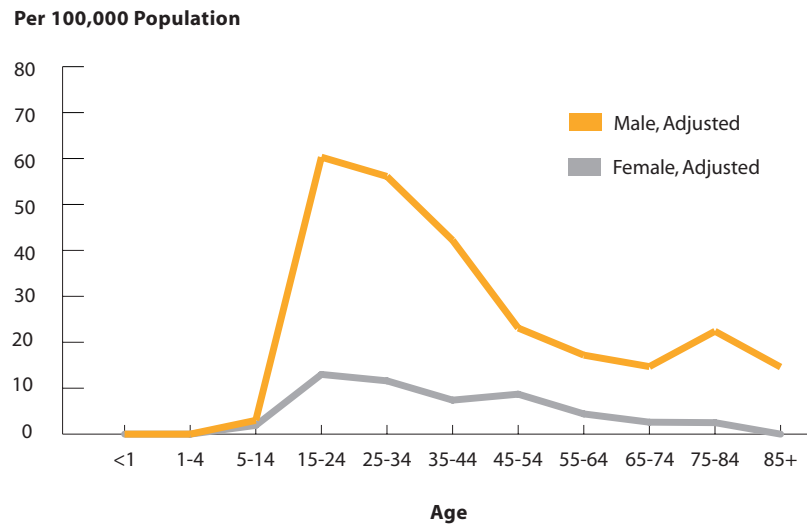
American Indians and Alaska Natives, IHS Service Area, 1992-94, and U.S. All Races and White Populations, 1993 (Rate per 100,000 population)

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

Suicide death rates are relatively low for Indian females in age groups 55 and over. U.S. All Races and White females have higher suicide death rates for these age groups than Indian females, but their rates are considerably less than the corresponding rates for males in the Indian, U.S. All Races, and U.S. White populations. Indian male elders, though, are less likely to die from suicide than U.S. All Races and White male elders. These Indian rates are adjusted for miscoding of Indian race on death certificates.



**Table 12 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)

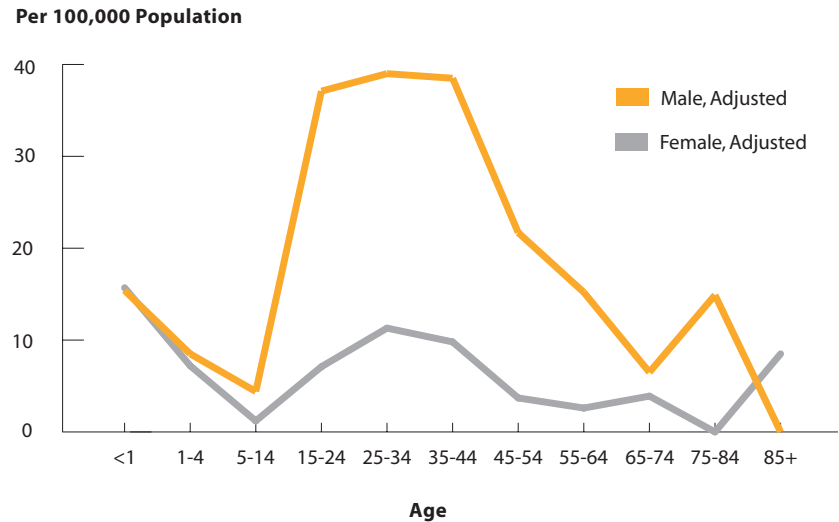
Age Group	American Indian and Alaska Native						U.S. All Races			U.S. White		
	Both Sexes		Male		Female		Both Sexes	Male	Female	Both Sexes	Male	Female
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>						
Under 1 year	—	—	—	—	—	—	—	—	—	—	—	—
1-4 years	—	—	—	—	—	—	—	—	—	—	—	—
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 13 Homicide Death Rates by Age and Sex, American Indians and Alaska Natives (1992-94)**

The elderly are less likely to die from homicide than persons in age groups between 15 and 54 years. However, Indian elders in the age group 55 to 64 years have a homicide death rate that is 1.8 times the rate for U.S. All Races elders and 2.4 times the rate for U.S. White elders in this age group. Within the Indian population, males ages 55 to 64 years are 5.8 times as likely to die from homicide than the corresponding group for females. These Indian rates are adjusted for miscoding of Indian race on death certificates.



**Table 13 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)

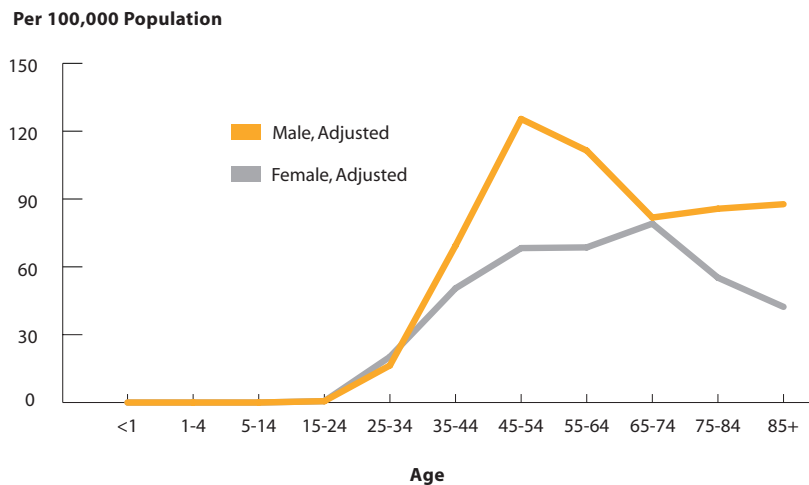
Age Group	American Indian and Alaska Native		U.S. All Races			U.S. White			
	Both Sexes	Male	Female	Both Sexes	Male	Female	Both Sexes	Male	Female
Under 1 year	14.6	15.6	13.8	8.8	9.6	7.9	6.4	7.0	5.9
1-4 years	7.1	7.9	6.6	2.9	3.4	2.5	1.8	2.2	1.4
5-14 years	2.6	2.9	1.0	1.8	2.2	1.4	1.2	1.3	1.0
15-24 years	19.5	22.4	5.6	23.4	39.2	6.9	10.9	17.3	4.2
25-34 years	22.6	24.8	10.1	17.4	27.2	7.6	9.7	14.5	4.7
35-44 years	20.0	23.6	8.2	11.1	17.2	5.2	6.9	10.2	3.7
45-54 years	11.0	12.3	3.1	7.2	10.0	2.7	5.1	7.8	2.5
55-64 years	8.0	8.5	2.6	4.7	7.4	2.2	3.5	5.2	1.9
65-74 years	5.1	5.1	3.9	3.7	5.3	2.5	2.8	5.0	2.1
75-84 years	6.0	6.0	—	3.5	4.5	3.0	2.7	3.1	2.4
85 years+	5.4	5.4	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 14 Chronic Liver Disease and Cirrhosis Death Rates by Age and Sex, American Indians and Alaska Natives (1992-94)**

The likelihood of dying from chronic liver disease and cirrhosis is generally greater for persons over 44 years of age than for younger persons. The peak death rate for this cause for Indian elders (88.9 deaths per 100,000 population) occurs at 55 to 64 years. This is also the age group that has the highest rate for Indian male elders, 111.4. For Indian female elders, the highest rate of 79.1 is for 65 to 74 years, which is 71 percent of the peak Indian male elder rate. Elders in the U.S. All Races and White populations have considerably lower rates—their peak rates (32.7 for 65 to 74 years and 33.4 for 75 to 84 years, respectively) are 37 percent and 38 percent of the Indian elder peak rate. These Indian rates are adjusted for miscoding of Indian race on death certifi-



**Table 14 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)

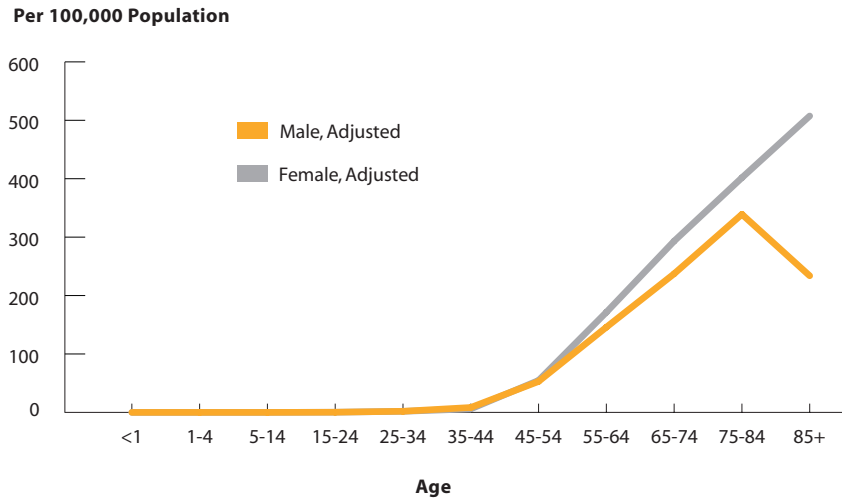
Age Group	American Indian and Alaska Native						U.S. All Races			U.S. White		
	Both Sexes		Male		Female		Both Sexes	Male	Female	Both Sexes	Male	Female
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>						
Under 1 year	—	—	—	—	—	—	0.5	0.7	0.2	0.5	0.6	0.3
1-4 years	—	—	—	—	—	—	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 15 Diabetes Mellitus Death Rates by Age and Sex, American Indians and Alaska Natives (1992-94)**

Death rates due to diabetes mellitus increase with age. Indian elders die from diabetes mellitus at greater rates than elders in the U.S. All Races and White populations. However, the gaps decrease with age. That is, the Indian rate is 4.5 times the All Races rate for the age group 55 to 64 years, but 1.5 times for the age group 85 years and older. In comparison to White elders, the Indian gap narrows from 5.3 times to 1.6 times. Indian female elders are more likely to die from diabetes mellitus than Indian male elders. The widest difference is for the age group 85 years and older—the female rate is 2.2 times the male rate. These Indian rates are adjusted for miscoding of Indian race on death certificates.



**Table 15 Diabetes Mellitus Death Rates by Age and Sex**

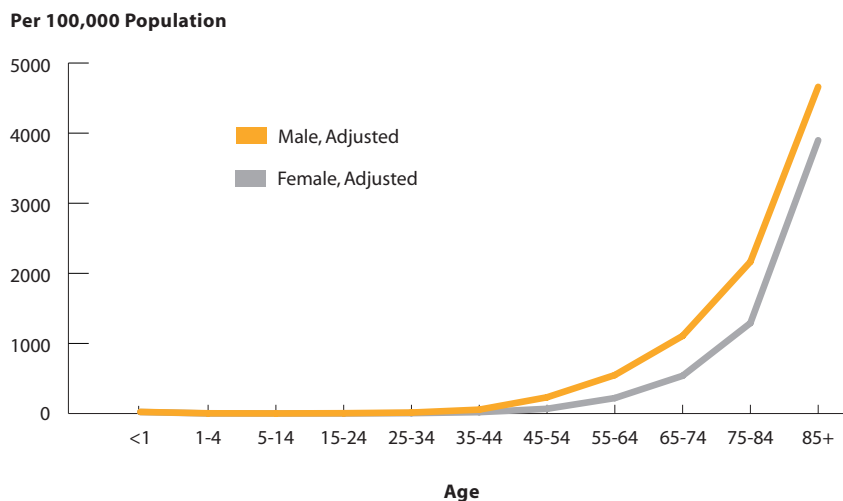
American Indians and Alaska Natives, IHS Service Area, 1992-94, and U.S. All Races and White Populations, 1993 (Rate per 100,000 population)

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

For the elder age groups (both sexes combined), the death rate due to diseases of the heart more than doubles as it applies to the next higher age group. Indian elders have a higher death rate for this cause than elders in the U.S. All Races and White populations for the age groups 55 to 74 years. The Indian rate is less, however, for the other elder age groups in comparison to these two populations. For 75 to 84 years, it is 10 percent less than both the All Races and White rates. For 85 years and older, it is 33 and 34 percent less, respectively. Indian males are 1.2 to 2.6 times more likely to die from diseases of the heart than Indian females in the elder age groups. These Indian rates are adjusted for miscoding of Indian race on death certificates.



**Table 16 Heart Disease Death Rates by Age and Sex**

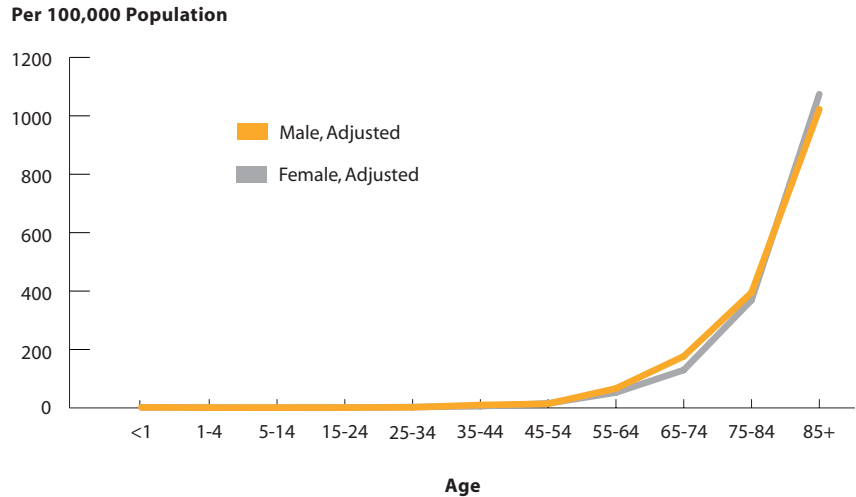
American Indians and Alaska Natives, IHS Service Area, 1992-94, and U.S. All Races and White Populations, 1993 (Rate per 100,000 population)

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

Indian elders die from cerebrovascular diseases at higher rates than elders in the U.S. All Races and White populations for age groups 55 to 74 years. For older age groups, All Races and White elders are more likely to die from this cause than Indian elders. Indian male elders are somewhat more likely to die from cerebrovascular diseases than Indian female elders, except for the age group 85 years and over. These Indian rates are adjusted for miscoding of Indian race on death certificates.



**Table 17 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

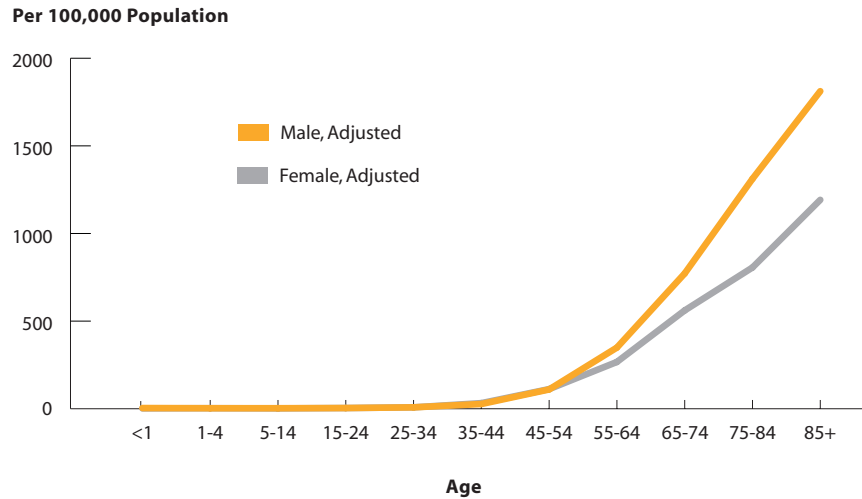
<sup>1</sup> Adjusted to compensate for miscoding of Indian race on death certificates.

NOTE: — Represents zero.



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

From the age of 5, the older a person is, the more likely that person will die as a result of a malignant neoplasm. However, Indian elders have lower malignant neoplasm death rates than elders in the U.S. All Races and White populations. Within the Indian population, male elders are more likely to die from malignant neoplasms than female elders. These Indian rates are adjusted for miscoding of Indian race on death certificates.



**Table 18 Malignant Neoplasm Death Rates by Age and Sex**

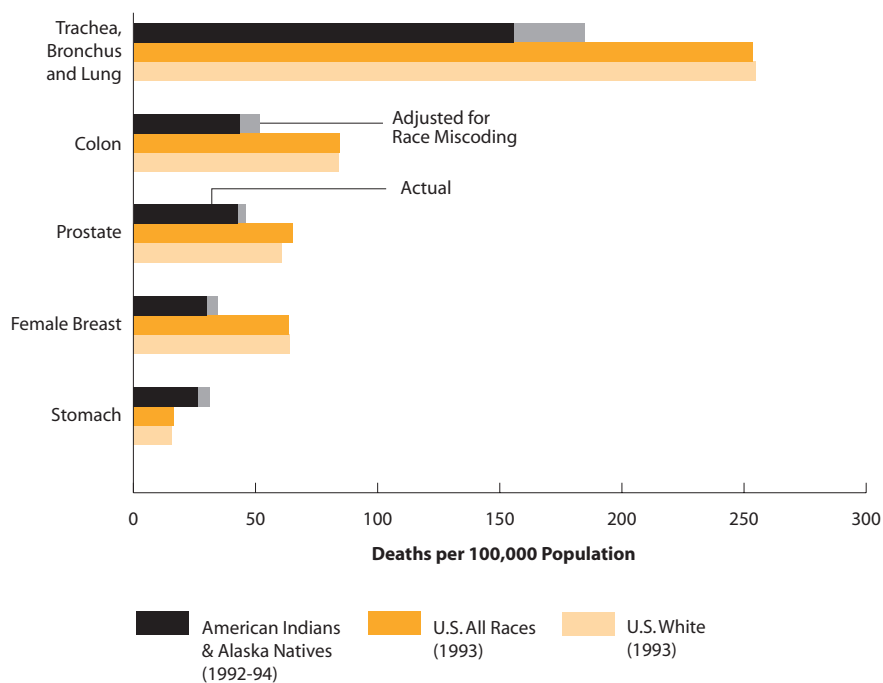
American Indians and Alaska Natives, IHS Service Area, 1992-94, and U.S. All Races and White Populations, 1993 (Rate per 100,000 population)

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 19 Death Rates, Leading Cancer Sites: Ages 55+ Years**

The leading site for cancer deaths among Indian elders is, by a large margin, trachea, bronchus, and lung. The number of cancer deaths among Indian elders for this site is 3.6 and 4.1 times the numbers for the second and third leading sites, colon and prostate, respectively. The number of prostate cancer deaths is 31 percent greater than the number of female breast (the fourth leading site) cancer deaths for Indian elders and 51 percent greater than the number for stomach (the fifth leading site). Elders in the U.S. All Races and White populations have the same top four leading sites in the same order, except that the order for prostate and female breast cancer deaths is reversed for U.S. White elders. The fifth leading site for the All Races and White populations is pancreas. However, elders in the All Races and White populations have much higher cancer death rates for these sites than Indian elders, except for stomach. The next sites, order 6 through 10, vary greatly between Indian elders and All Races/White elders. In contrast to the first five sites, Indian elder cancer death rates for Indian sites 7 through 9 (liver, kidney, and gallbladder) exceed the corresponding All Races and White rates. In particular, Indian elders die from gallbladder cancer at a rate 2.5 times that for All Races and White elders. These Indian counts and rates are adjusted for miscoding of Indian race on death certificates.



**Table 19 Leading Sites for Cancer Deaths for Decedents 55 Years Old and Older**

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

Site of Cancer Death	American Indian and Alaska Native		U.S.		U.S.		Ratio <sup>1</sup> of American Indian and Alaska Native to:	
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>	All Races	White	U.S. All Races	U.S. White
All Sites	2,491	2,838	571.3	650.8	860.8	855.4	0.8	0.8
Trachea, bronchus, and lung	669	810	153.4	185.8	250.2	251.1	0.7	0.7
Colon	188	225	43.1	51.6	83.3	83.0	0.6	0.6
Prostate	183	199	42.0	45.6	64.3	60.1	0.7	0.8
Female breast	130	152	29.8	34.9	62.8	63.4	0.6	0.6
Stomach	113	132	25.9	30.3	22.8	20.7	1.3	1.5
Pancreas	109	128	25.0	29.4	44.9	44.1	0.7	0.7
Liver	113	119	25.9	27.3	16.3	15.4	1.7	1.8
Kidney	103	109	23.6	25.0	17.2	17.6	1.5	1.4
Gallbladder	72	73	16.5	16.7	6.6	6.7	2.5	2.5
Ovary	57	66	13.1	15.1	20.7	21.2	0.7	0.7
Esophagus	49	58	11.2	13.3	17.0	15.6	0.8	0.9
Leukemia	53	55	12.2	12.8	29.2	30.1	0.4	0.4
Multiple myeloma	49	50	11.2	11.5	17.0	9.7	0.7	1.2
Rectum, rectosigmoid junction and anus	38	45	8.7	10.3	13.6	13.6	0.8	0.8
Cervix uteri	31	33	7.1	7.6	4.9	4.2	1.6	1.8
Pharynx	32	32	7.3	7.3	5.8	5.4	1.3	1.4
Bladder	23	28	5.3	6.4	19.5	20.2	0.3	0.3
Brain	22	23	5.1	5.3	15.0	15.9	0.4	0.3
Larynx	19	19	4.4	4.4	6.5	6.1	0.7	0.7
Connective and other soft tissue	12	16	2.8	3.7	4.7	4.6	0.8	0.8
Tongue	11	12	2.5	2.8	2.7	2.6	1.0	1.1
Melanoma of skin	7	10	1.6	2.3	8.7	9.6	0.3	0.2
Bone and articular cartilage	7	9	1.6	2.1	1.4	1.4	1.5	1.5
Thyroid gland	6	6	1.4	1.4	2.5	2.5	0.6	0.6
All other sites	395	429						

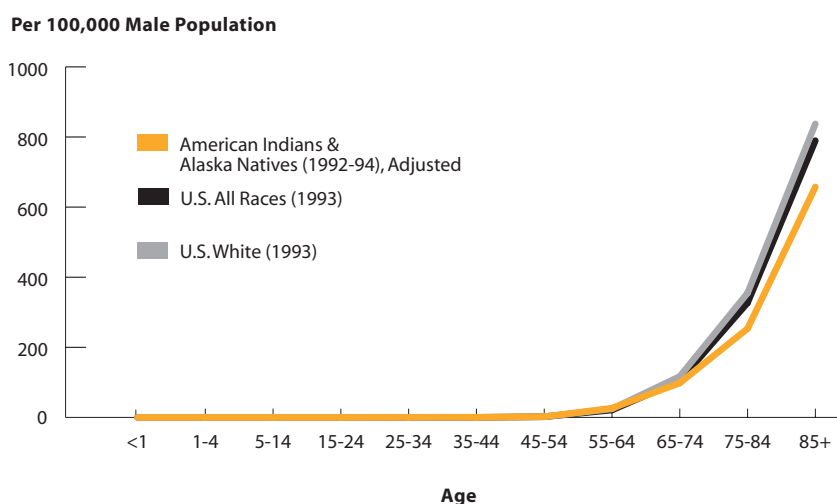
<sup>1</sup> Adjusted to compensate for miscoding of Indian race on death certificates.

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



## Chart 20 Age-Specific Prostate Cancer Death Rates

The likelihood of a man dying from prostate cancer increases with age. The death rates become pronounced at age 55. The Indian rate is somewhat higher than the rates in the U.S. All Races and White populations for the age group 55 to 64 years. However for the older age groups, the Indian rate ranges from 6 percent to 29 percent less than the comparable rates in these two populations. These Indian rates are adjusted for miscoding of Indian race on death certificates.



## Table 20 Age-Specific Prostate Cancer Death Rates

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

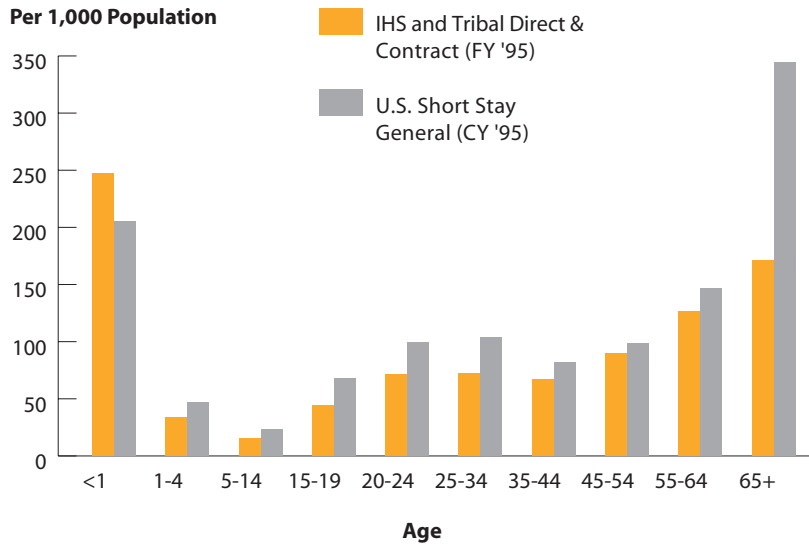
Age Group	IHS Service Area				U.S. All Races		U.S. White	
	Number		Rate		Number	Rate	Number	Rate
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>				
Age-adjusted rate	188	12.4	204	13.4	34,865	16.3	28,847	14.9
Under 1 year	—	—	—	—	—	—	—	—
1-4 years	—	—	—	—	—	—	—	—
5-14 years	—	—	—	—	—	—	—	—
15-24 years	—	—	—	—	2	0.0	2	0.0
25-34 years	1	0.3	1	0.3	3	0.0	3	0.0
35-44 years	1	0.4	1	0.4	28	0.1	19	0.1
45-54 years	3	2.0	3	2.0	316	2.0	224	1.8
55-64 years	25	25.3	26	26.3	2,423	24.4	1,835	1.1
65-74 years	54	88.4	60	98.2	9,628	116.9	7,754	105.0
75-84 years	63	234.7	68	253.4	14,539	354.9	12,260	327.1
85 years +	41	599.0	45	657.4	7,926	837.5	6,750	789.7

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

NOTE: 0.0 Rounds to zero. — Represents zero. ICD-9 Codes 185.0 to 185.9.

### Chart 21 Hospital Discharge Rates by Age

The IHS hospital (IHS and Tribal direct and contract general hospitals) discharge rate, all ages, is considerably less than the rate for U.S. general short-stay hospitals, i.e., 64.5 discharges per 1,000 population compared to 117.5, or 45 percent less. The gap is even greater for those ages 65 years and older. The IHS rate (171.4) is half the U.S. rate (344.6).



**Table 21 Comparison of IHS and U.S. Hospital Discharge Rates by Age**

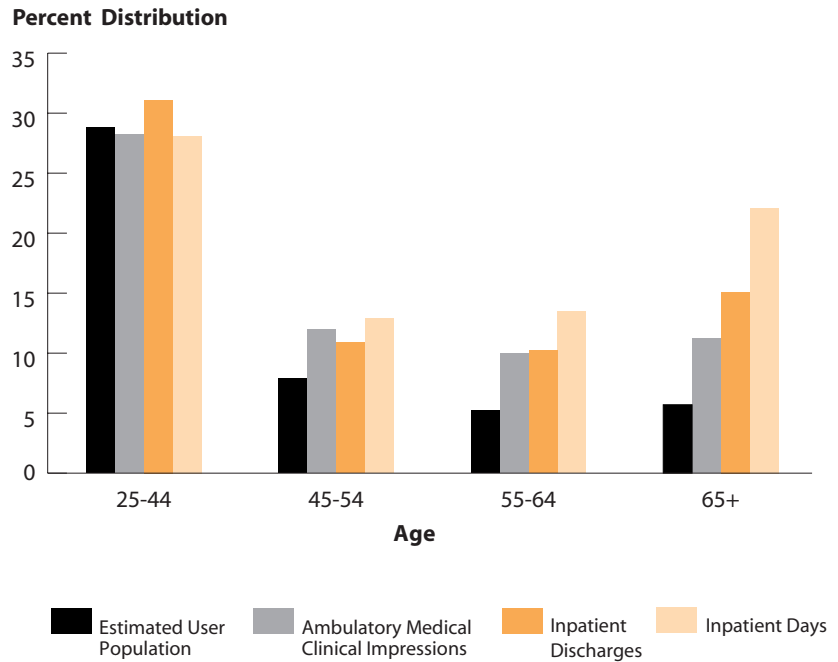
IHS and Tribal Direct and Contract General Hospitals, FY 1995, and U.S. General Short-Stay Hospital, CY 1995

Age at Admission	Discharges per 1,000 Population		Percent Difference IHS Rate to U.S. Rate
	IHS	U.S.	
All Ages	64.5	117.5	-45.1
Under 1 year	247.3	205.3	20.4
1-4 years	33.9	47.2	-28.1
5-14 years	15.5	22.9	-32.3
15-19 years	44.6	67.7	-34.1
20-24 years	71.5	98.9	-27.7
25-34 years	71.9	104.1	-31.0
35-44 years	67.2	81.7	-17.7
45-54 years	89.7	98.6	-9.1
55-64 years	126.4	147.0	-14.0
65 years and over	171.4	344.6	-50.3

NOTE: IHS discharge rates were calculated using the IHS FY 1995 user population.  
 SOURCE: IHS - Annual Reports 2C and 3I  
 U.S. - Utilization of Short-Stay Hospitals, Annual Summary of the U.S., NCHS

**Chart 22 Percent Distribution for Population and Patient Care Workloads, FY 1995**

Indians over 64 years of age comprise 5.7 percent of the IHS user population but consume considerably higher percentages of IHS health services, i.e., 11.2 percent of the ambulatory medical clinical impressions, 15.1 percent of the inpatient discharges, and 22.1 percent of the inpatient days. A similar relationship exists for Indians in the age group 55 to 64 years, although to a lesser degree for inpatient services. They are 5.2 percent of the user population but have 10.0 percent of the ambulatory medical clinical impressions, 10.2 percent of the inpatient discharges, and 13.5 percent of the inpatient days.

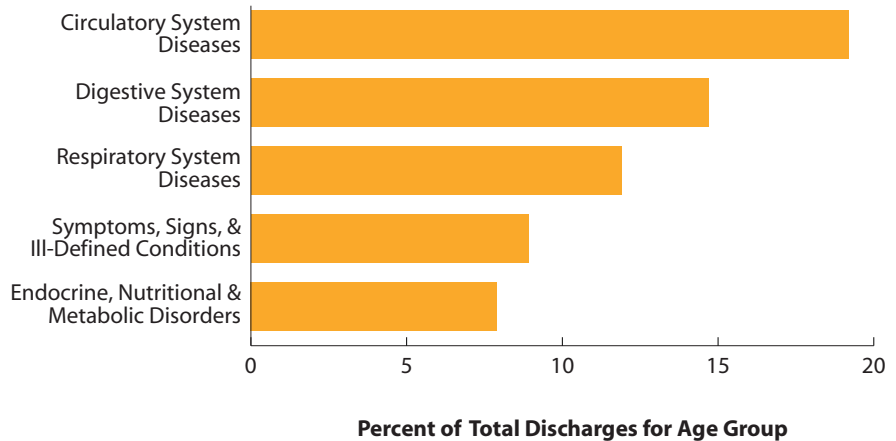


**Table 22 Percent Distribution for Estimated User Population, Ambulatory Medical Clinical Impressions, and Inpatient Discharges and Days, FY 1995**

Distribution	Age								
	All Ages	Under 1 year	1-4 years	5-14 years	15-24 years	25-44 years	45-54 years	55-64 years	65 years & over
Estimated user population	100.0	1.5	9.8	22.9	18.2	28.8	7.9	5.2	5.7
Ambulatory medical clinical impressions	100.0	4.5	8.9	12.0	13.1	28.2	12.0	10.0	11.2
Inpatient discharges	100.0	5.7	5.1	5.5	16.3	31.1	10.9	10.2	15.1
Inpatient days	100.0	4.7	3.3	4.0	11.4	28.1	12.9	13.5	22.1

**Chart 23** Leading Causes of Hospitalization: Ages 55 to 64 Years  
IHS and Tribal Direct and Contract General Hospitals, FY 1995

Circulatory system diseases are the leading cause of hospitalization for patients, ages 55 to 64 years, in IHS and Tribal direct and contract general hospitals. The second leading cause of hospitalization is digestive system diseases. These are also the top two leading causes for both males and females in this age group.



**Table 23** Ten Leading Causes of Hospitalization for GM&S Patients 55 to 64 Years of Age

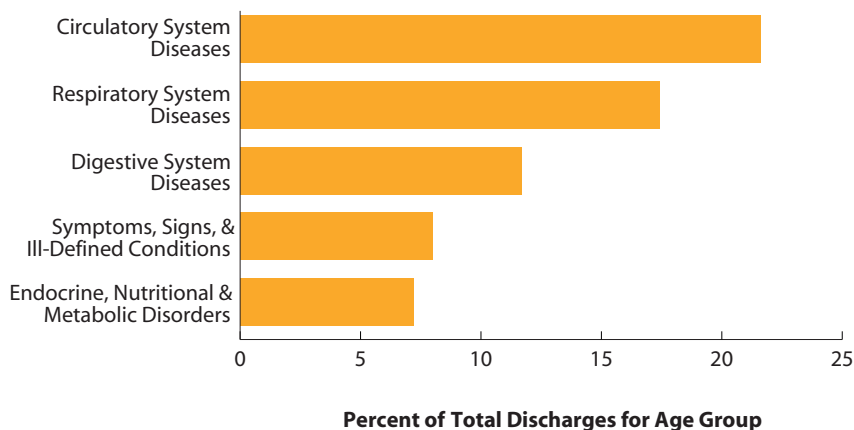
Indian Health Service and Tribal Direct and Contract General Hospitals, FY 1995

Diagnostic Category	Number of Discharges			Percent Distribution		
	Combined	Male	Female	Combined	Male	Female
All categories	8,171	3,718	4,453	100.0	45.5	54.5
Circulatory system diseases	1,571	808	763	19.2	21.7	17.1
Digestive system diseases	1,201	531	670	14.7	14.3	15.0
Respiratory system diseases	974	406	568	11.9	10.9	12.8
Symptoms, signs, & ill-defined conditions	728	351	377	8.9	9.4	8.5
Endocrine, nutritional, & metabolic disorders	646	280	366	7.9	7.5	8.2
Genitourinary system diseases	532	173	359	6.5	4.7	8.1
Injury & poisoning	523	270	253	6.4	7.3	5.7
Neoplasms	444	173	271	5.4	4.7	6.1
Skin and subcutaneous tissue diseases	385	191	194	4.7	5.1	4.4
Musculoskeletal system diseases	369	169	200	4.5	4.5	4.5
All other	798	366	432	9.8	9.8	9.7

SOURCE: Direct: Annual Report 2C  
Contract: Annual Report 3I

**Chart 24 Leading Causes of Hospitalization: Ages 65+ Years  
IHS and Tribal Direct and Contract General Hospitals, FY 1995**

Circulatory system diseases are the leading cause of hospitalization for patients, ages 65 years and older, in IHS and Tribal direct and contract general hospitals. The second leading cause of hospitalization is respiratory system diseases. These are also the top two leading causes for both males and females in this age group.



**Table 24 Ten Leading Causes of Hospitalization for GM&S Patients 65 Years Old and Older**

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

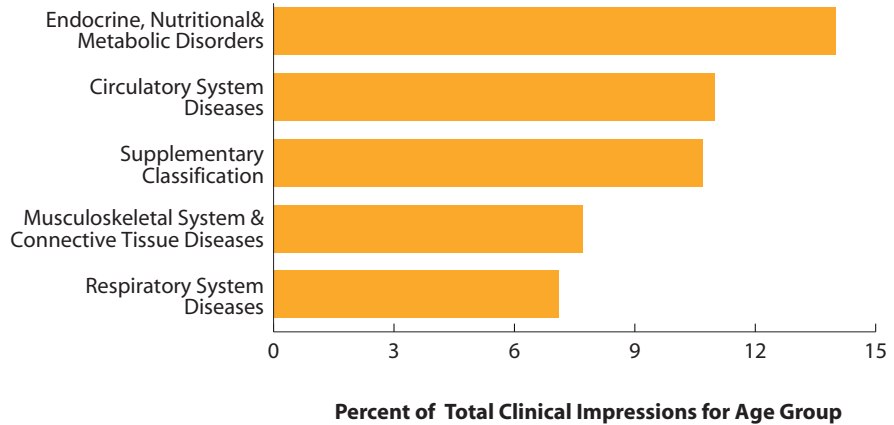
Diagnostic Category	Number of Discharges			Percent Distribution		
	Combined	Male	Female	Combined	Male	Female
All categories	12,145	5,452	6,693	100.0	44.9	55.1
Circulatory system diseases	2,627	1,252	1,375	21.6	23.0	20.5
Respiratory system diseases	2,116	1,028	1,088	17.4	18.9	16.3
Digestive system diseases	1,419	586	833	11.7	10.7	12.4
Symptoms, signs, & ill-defined conditions	974	431	543	8.0	7.9	8.1
Endocrine, nutritional, & metabolic disorders	880	350	530	7.2	6.4	7.9
Genitourinary system diseases	827	350	477	6.8	6.4	7.1
Injury & poisoning	742	310	432	6.1	5.7	6.5
Malignant neoplasms	538	275	263	4.4	5.0	3.9
Skin and subcutaneous tissue diseases	480	216	264	4.0	4.0	3.9
Nervous system & sense organ diseases	361	150	211	3.0	2.8	3.2
All other	1,181	504	677	9.7	9.2	10.1

SOURCE: Direct: Annual Report 2C  
Contract: Annual Report 3I



**Chart 25 Leading Causes of Ambulatory Medical Visits: Ages 55 to 64 Years  
IHS and Tribal Direct and Contract General Facilities, FY 1995**

Endocrine, nutritional, and metabolic disorders are the leading cause of ambulatory medical visits for patients, ages 55 to 64 years, in IHS and Tribal direct and contract general facilities. The second leading cause of ambulatory medical visits is circulatory system diseases. These are also the top two causes for males in this age group, but with the order reversed. For females in this age group, the top two leading causes are endocrine, nutritional, and metabolic disorders and supplementary classification conditions (e.g., other preventive health services, well child care, physical examination, tests only, hospital/medical/surgical follow-up).



**Table 25 Ten Leading Causes of Ambulatory Medical Clinical Impressions for Patients 55 to 64 Years of Age**

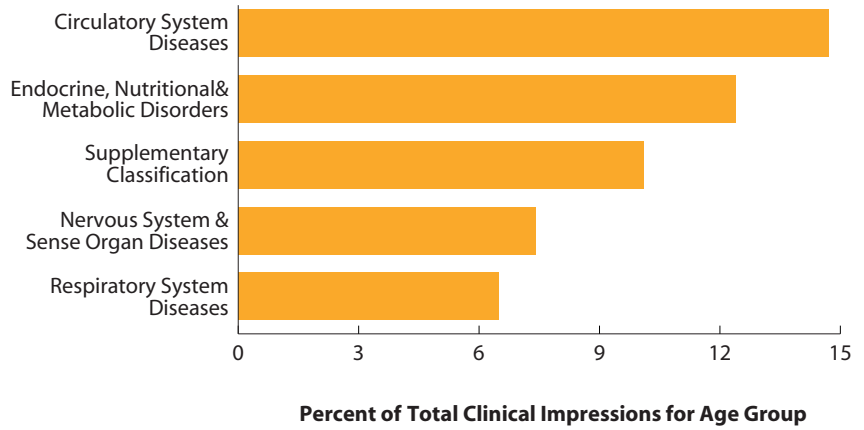
Indian Health Service and Tribal Direct and Contract General Facilities, FY 1995

Diagnostic Category	Number of Clinical Impressions			Percent Distribution		
	Combined	Male	Female	Combined	Male	Female
All categories	879,458	325,652	553,806	100.0	37.0	63.0
Endocrine, nutritional, & metabolic disorders	123,125	43,454	79,671	14.0	13.3	14.4
Circulatory system diseases	97,097	45,246	51,851	11.0	13.9	9.4
Supplementary classification	93,793	31,529	62,264	10.7	9.7	11.2
Musculoskeletal system diseases	67,460	22,416	45,044	7.7	6.9	8.1
Respiratory system diseases	62,193	20,308	41,885	7.1	6.2	7.6
Nervous system & sense organ diseases	60,856	23,579	37,277	6.9	7.2	6.7
Symptoms, signs, & ill-defined conditions	43,244	15,777	27,467	4.9	4.8	5.0
Genitourinary system diseases	35,373	8,847	26,526	4.0	2.7	4.8
Skin and subcutaneous tissue diseases	31,175	12,565	18,610	3.5	3.9	3.4
Digestive system diseases	26,426	10,960	15,466	3.0	3.4	2.8
All other	238,716	90,971	147,745	27.1	27.9	26.7

SOURCE: Direct: Annual Report 2C  
Contract: Annual Report 3I

**Chart 26 Leading Causes of Ambulatory Medical Visits: Ages 65+ Years  
IHS and Tribal Direct and Contract General Facilities, FY 1995**

Circulatory system diseases are the leading cause of ambulatory medical visits for patients, ages 65 years and older, in IHS and Tribal direct and contract general facilities. The second leading cause of ambulatory medical visits is endocrine, nutritional, and metabolic disorders. These are also the top two leading causes for both males and females in this age group.



**Table 26 Ten Leading Causes of Ambulatory Medical Clinical Impressions for Patients 65 Years Old and Over**

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

Diagnostic Category	Number of Clinical Impressions			Percent Distribution		
	Combined	Male	Female	Combined	Male	Female
All categories	991,617	379,090	612,527	100.0	38.2	61.8
Circulatory system diseases	145,298	60,254	85,044	14.7	15.9	13.9
Endocrine, nutritional, & metabolic disorders	123,321	43,194	80,127	12.4	11.4	13.1
Supplementary classification	100,367	36,839	63,528	10.1	9.7	10.4
Nervous system & sense organ diseases	73,759	29,979	43,780	7.4	7.9	7.1
Respiratory system diseases	64,231	26,618	37,613	6.5	7.0	6.1
Musculoskeletal system diseases	62,533	20,083	42,450	6.3	5.3	6.9
Symptoms, signs, & ill-defined conditions	49,879	19,394	30,485	5.0	5.1	5.0
Genitourinary system diseases	37,230	12,313	24,917	3.8	3.2	4.1
Skin and subcutaneous tissue diseases	33,946	13,955	19,991	3.4	3.7	3.3
Digestive system diseases	27,565	11,125	16,440	2.8	2.9	2.7
All other	273,488	105,336	168,152	27.6	27.8	27.5

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

# Glossary of ICD-9 Codes

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

Cause of death	ICD-9 Codes
Shigellosis and amebiasis . . . . .	004, 006
Certain other intestinal infections . . . . .	007-009
Tuberculosis . . . . .	010-018
Tuberculosis of respiratory system . . . . .	010-012
Other tuberculosis . . . . .	013-018
Whooping cough . . . . .	033
Streptococcal sore throat, scarlatina, and erysipelas . . . . .	034-035
Meningococcal infection . . . . .	036
Septicemia . . . . .	038
Acute poliomyelitis . . . . .	045
Measles . . . . .	055
Viral hepatitis . . . . .	070
Syphilis . . . . .	090-097
All other infectious and parasitic diseases . . . . .	001-003, 005, 020-032, 037, 039-041, 042-044, 046-054, 056-066, 071-088, 098-139
Malignant neoplasms, including neoplasms of lymphatic and hematopoietic tissues . . . . .	140-208
Malignant neoplasms of lip, oral cavity, and pharynx . . . . .	140-149
Malignant neoplasms of digestive organs and peritoneum . . . . .	150-159
Malignant neoplasms of respiratory and intrathoracic organs . . . . .	160-165
Malignant neoplasm of breast . . . . .	174-175
Malignant neoplasms of genital organs . . . . .	179-187
Malignant neoplasms of urinary organs . . . . .	188-189
Malignant neoplasms of all other and unspecified sites . . . . .	170-173, 190-199
Leukemia . . . . .	204-208
Other malignant neoplasms of lymphatic and hematopoietic tissues . . . . .	200-203
Benign neoplasms, carcinoma in situ, and neoplasms of uncertain behavior and of unspecified nature . . . . .	210-239
Diabetes mellitus . . . . .	250
Nutritional deficiencies . . . . .	260-269
Anemias . . . . .	280-285
Meningitis . . . . .	320-322
Major cardiovascular diseases . . . . .	390-448
Diseases of heart . . . . .	390-398, 402, 404-429
Rheumatic fever and rheumatic heart disease . . . . .	390-398
Hypertensive heart disease . . . . .	402
Hypertensive heart and renal disease . . . . .	404
Ischemic heart disease . . . . .	410-414
Acute myocardial infarction . . . . .	410
Other acute and subacute forms of ischemic heart disease . . . . .	411
Angina pectoris . . . . .	413
Old myocardial infarction and other forms of chronic ischemic heart disease . . . . .	412, 414



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

Cause of death	ICD-9 Codes
Other diseases of endocardium .....	424
All other forms of heart disease .....	415-423, 425-429
Hypertension with or without renal disease .....	401, 403
Cerebrovascular diseases .....	430-438
Intracerebral and other intracranial hemorrhage .....	431-432
Cerebral thrombosis and unspecified occlusion of cerebral arteries .....	434.0, 434.9
Cerebral embolism .....	434.1
All other and late effects of cerebrovascular diseases .....	430, 433, 435-438
Atherosclerosis .....	440
Other diseases of arteries, arterioles, and capillaries .....	441-448
Acute bronchitis and bronchiolitis .....	466
Pneumonia and influenza .....	480-487
Pneumonia .....	480-486
Influenza .....	487
Chronic obstructive pulmonary diseases and allied conditions .....	490-496
Bronchitis, chronic and unspecified .....	490-491
Emphysema .....	492
Asthma .....	493
Other chronic obstructive pulmonary diseases and allied conditions .....	494-496
Ulcer of stomach and duodenum .....	531-533
Appendicitis .....	540-543
Hernia of abdominal cavity and intestinal obstruction without mention of hernia .....	550-553, 560
Chronic liver disease and cirrhosis .....	571
Cholelithiasis and other disorders of gallbladder .....	574-575
Nephritis, nephrotic syndrome, and nephrosis .....	580-589
Acute glomerulonephritis and nephrotic syndrome .....	580-581
Chronic glomerulonephritis, nephritis and nephropathy, not specified as acute or chronic, and renal sclerosis, unspecified .....	582-583, 587
Renal failure, disorders resulting from impaired renal function, and small kidney of unknown cause .....	584-586, 588-589
Infections of kidney .....	590
Hyperplasia of prostate .....	600
Complications of pregnancy, childbirth, and the puerperium .....	630-676
Pregnancy with abortive outcome .....	630-638
Other complications of pregnancy, childbirth, and the puerperium .....	640-676
Congenital anomalies .....	740-759
Certain conditions originating in the perinatal period .....	760-779
Birth trauma, intrauterine hypoxia, birth asphyxia, and respiratory distress syndrome .....	767-769
Other conditions originating in the perinatal period .....	760-766, 770-779
Symptoms, signs, and ill-defined conditions .....	780-799
All other diseases .....	Residual
Accidents and adverse effects .....	E800-E949
Motor vehicle accidents .....	E810-E825
All other accidents and adverse effects .....	E800-E807, E826-E949
Suicide .....	E950-E959
Homicide and legal intervention .....	E960-E978
All other external causes .....	E980-E999



## ***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



# Method Used to Rank Leading Sites of Cancer Deaths

## Site of Cancer Death

## ICD-9 Codes

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

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





**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





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