

PART IV—General Mortality Statistics

Chart 4.1
Age-Adjusted Mortality Rates
Calendar Years 1991–1993

In 1991–1993, the age-adjusted mortality rate (all causes) for the IHS service area population was 594.1. When the 3 IHS Areas with apparent problems in underreporting of Indian race on death certificates are excluded, the rate is 723.2. This is 43 percent higher than the U.S. All Races rate of 504.5 for 1992. The Aberdeen rate (1,045.9) was more than double the U.S. rate.

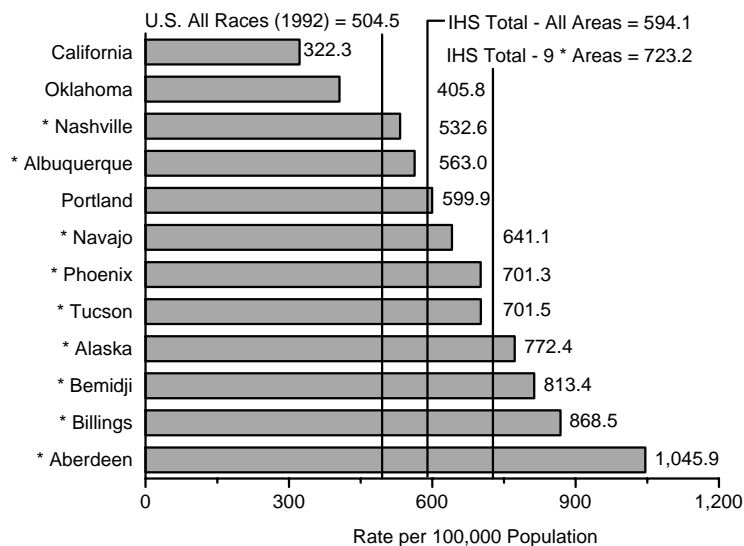


Table 4.1
Age-Adjusted Mortality Rates
(All Causes)

Calendar Years 1991–1993

	Total Deaths	Rate ¹
U.S. All Races (1992)	2,175,613	504.5
All IHS Areas	20,217	594.1
9* Areas ²	13,693	723.2
Aberdeen*	1,983	1,045.9
Alaska*	1,778	772.4
Albuquerque*	1,064	563.0
Bemidji*	1,303	813.4
Billings*	997	868.5
California	967	322.3
Nashville*	847	532.6
Navajo*	3,203	641.1
Oklahoma	3,634	405.8
Phoenix*	2,063	701.3
Portland	1,923	599.9
Tucson*	455	701.5

¹ Rate per 100,000 population.

² The 3 IHS Areas that do not have an asterisk (California, Oklahoma, and Portland) appear to have a problem with underreporting of Indian race on death certificates. Therefore a separate IHS rate was calculated excluding these 3 Areas.

Chart 4.2
Years of Potential Life Lost Rates
 Calendar Years 1991–1993

In 1991-1993, the years of potential life lost rate (all causes) for the IHS service area population was 81.1. When the 3 IHS Areas with apparent problems in underreporting of Indian race on death certificates are excluded, the rate is 101.5. This is nearly double the U.S. All Races rate of 54.1 for 1992. Each of the remaining 9 IHS Areas had a rate greater than the U.S. All Races rate.

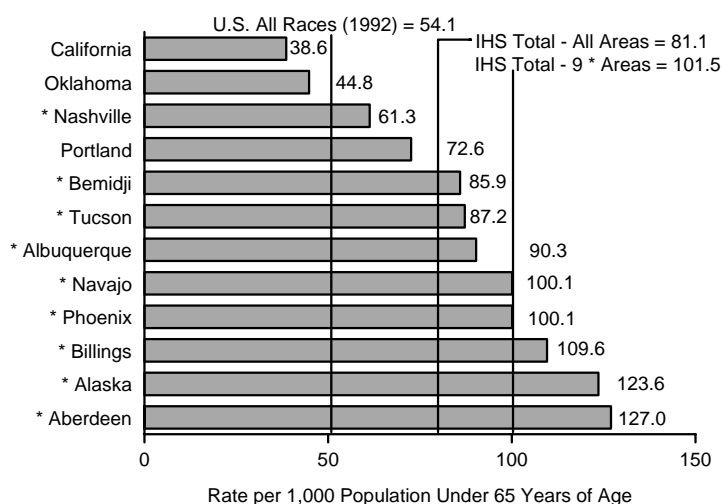


Table 4.2
Years of Potential Life Lost
(YPLL) Rates (All Causes)
 Calendar Years 1991–1993



	Number of YPLL ¹	Rate ²
U.S. All Races (1992)	12,363,946	54.1
All IHS Areas	291,557	81.1
9* Areas ³	218,315	101.5
Aberdeen*	30,199	127.0
Alaska*	32,133	123.6
Albuquerque*	18,096	90.3
Bemidji*	15,603	85.9
Billings*	15,503	109.6
California	11,984	38.6
Nashville*	9,511	61.3
Navajo*	54,763	100.1
Oklahoma	33,612	44.8
Phoenix*	36,211	100.1
Portland	27,646	72.6
Tucson*	6,296	87.2

¹ Years of Potential Life Lost (YPLL) is a mortality indicator which measures the burden of premature deaths. It is calculated by subtracting the age at death from age 65 and summing the result over all deaths.

² Rate per 1,000 population under 65 years of age.

³ The 3 IHS Areas that do not have an asterisk (California, Oklahoma, and Portland) appear to have a problem with underreporting of Indian race on death certificates. Therefore a separate IHS rate was calculated excluding these 3 Areas.

Chart 4.3

Leading Causes of Death

All IHS Areas, Calendar Years 1991–1993

In 1991-1993, 21.9 percent of all deaths in the IHS service area were caused by diseases of the heart. This was followed by malignant neoplasms at 15.2 percent.

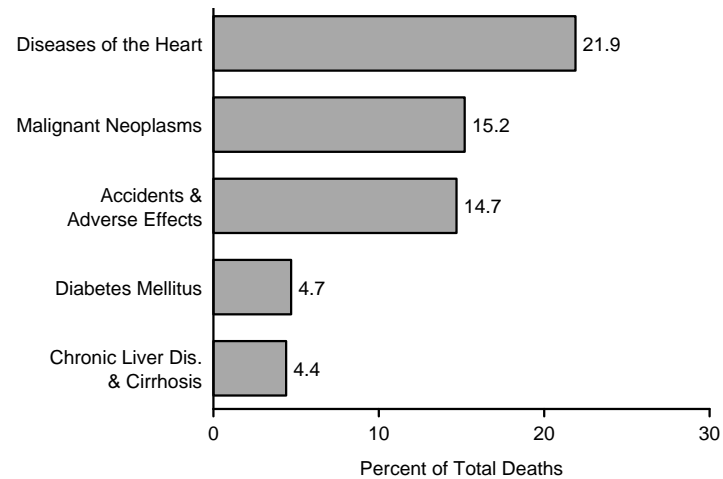


Chart 4.4

Leading Causes of Death

U.S. All Races, Calendar Year 1992

In 1992, 33.0 percent of all deaths in the U.S. were caused by diseases of the heart. This was followed by malignant neoplasms at 23.9 percent.

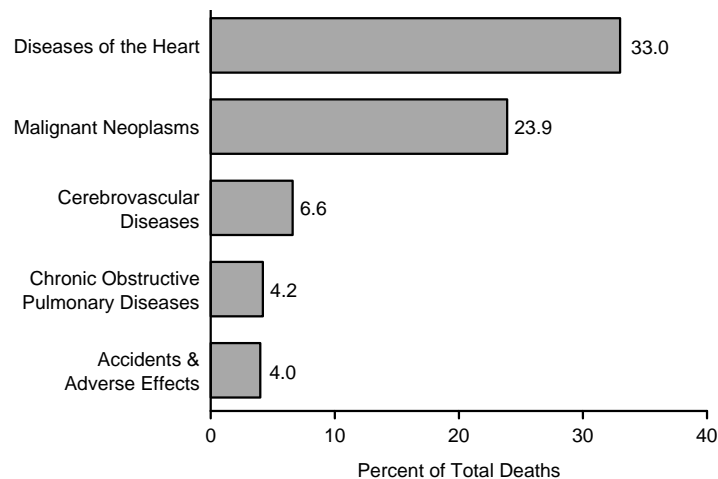


Chart 4.5 Leading Causes of Death

Aberdeen Area, Calendar Years 1991–1993

In 1991-1993, 21.1 percent of all deaths in the Aberdeen Area were caused by diseases of the heart. This was followed by malignant neoplasms at 15.7 percent.

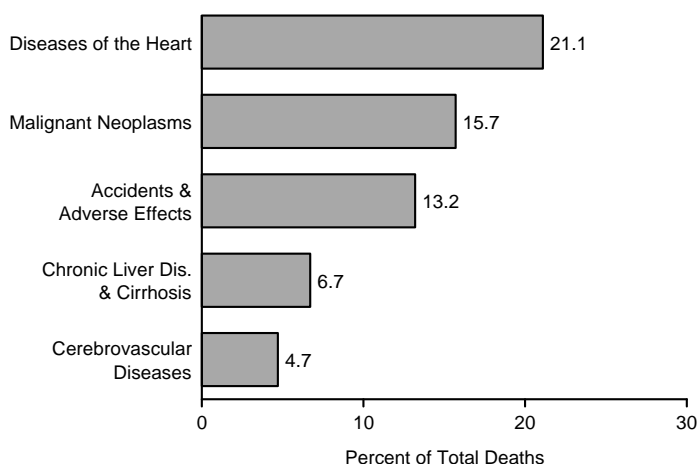


Chart 4.6 Leading Causes of Death

Alaska Area, Calendar Years 1991–1993

In 1991-1993, 20.2 percent of all deaths in the Alaska Area were caused by accidents and adverse effects. This was followed by malignant neoplasms at 16.6 percent.



Chart 4.7
Leading Causes of Death
 Albuquerque Area, Calendar Years 1991–1993

In 1991-1993, 16.4 percent of all deaths in the Albuquerque Area were caused by accidents and adverse effects. This was followed by diseases of the heart at 14.1 percent.

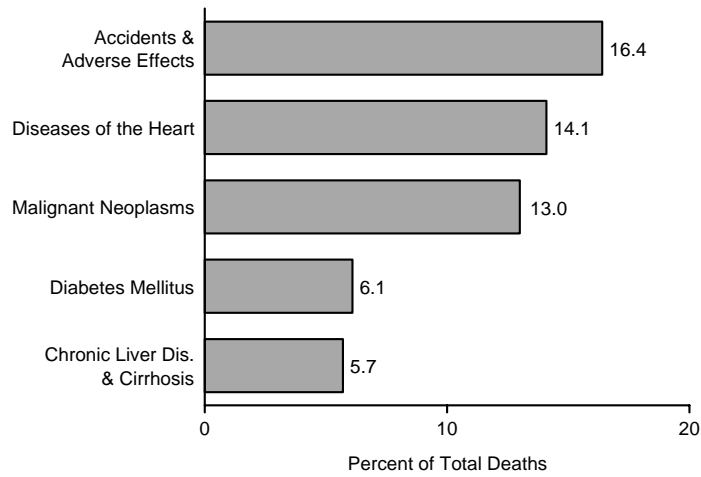


Chart 4.8
Leading Causes of Death
 Bemidji Area, Calendar Years 1991–1993

In 1991-1993, 27.3 percent of all deaths in the Bemidji Area were caused by diseases of the heart. This was followed by malignant neoplasms at 18.9 percent.

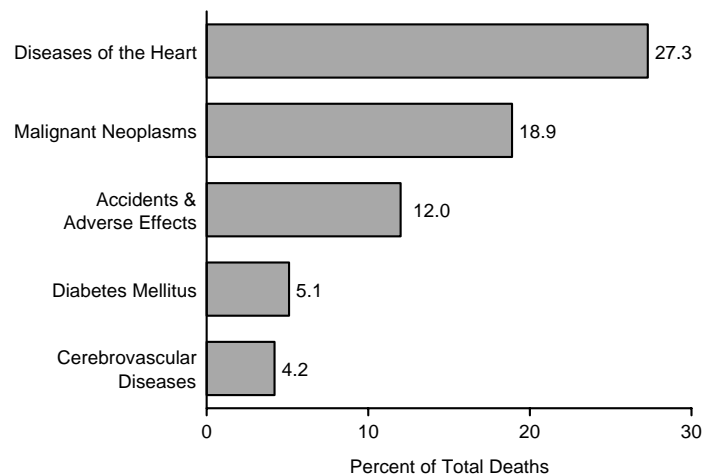


Chart 4.9 Leading Causes of Death

Billings Area, Calendar Years 1991–1993

In 1991-1993, 18.2 percent of all deaths in the Billings Area were caused by diseases of the heart. This was followed by malignant neoplasms at 16.1 percent.

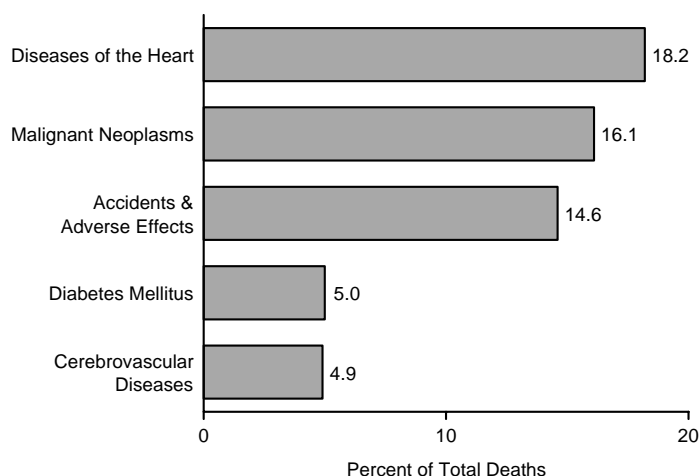


Chart 4.10 Leading Causes of Death

California Area, Calendar Years 1991–1993

In 1991-1993, 27.7 percent of all deaths in the California Area were caused by diseases of the heart. This was followed by malignant neoplasms at 15.4 percent.

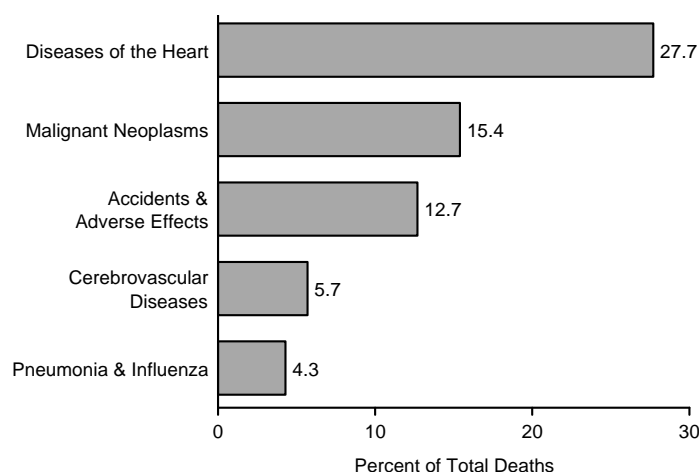


Chart 4.11 Leading Causes of Death

Nashville Area, Calendar Years 1991–1993

In 1991-1993, 27.0 percent of all deaths in the Nashville Area were caused by diseases of the heart. This was followed by malignant neoplasms at 16.4 percent.

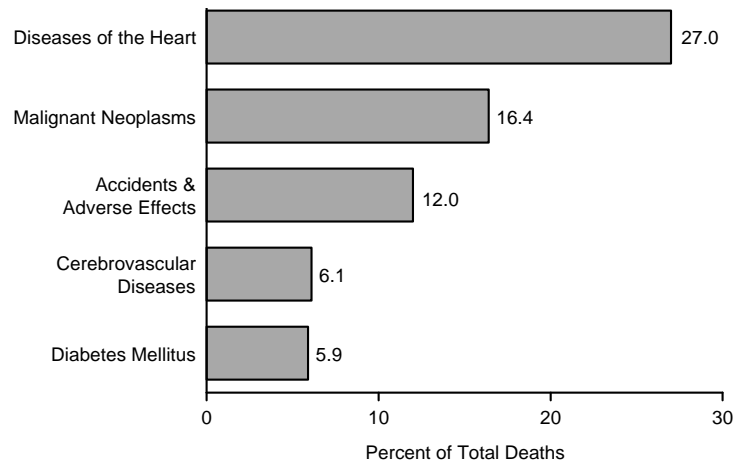


Chart 4.12 Leading Causes of Death

Navajo Area, Calendar Years 1991–1993

In 1991-1993, 22.0 percent of all deaths in the Navajo Area were caused by accidents and adverse effects. This was followed by diseases of the heart at 16.3 percent.

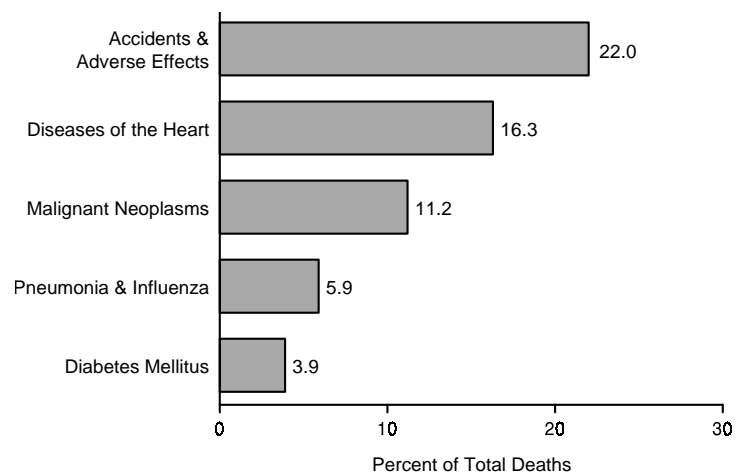


Chart 4.13 Leading Causes of Death

Oklahoma Area, Calendar Years 1991–1993

In 1991-1993, 32.4 percent of all deaths in the Oklahoma Area were caused by diseases of the heart. This was followed by malignant neoplasms at 18.9 percent.

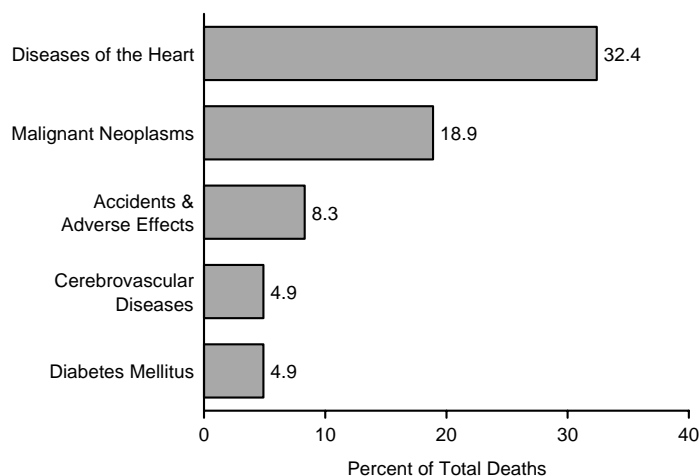


Chart 4.14 Leading Causes of Death

Phoenix Area, Calendar Years 1991–1993

In 1991-1993, 17.3 percent of all deaths in the Phoenix Area were caused by diseases of the heart. This was followed by accidents and adverse effects at 16.1 percent.

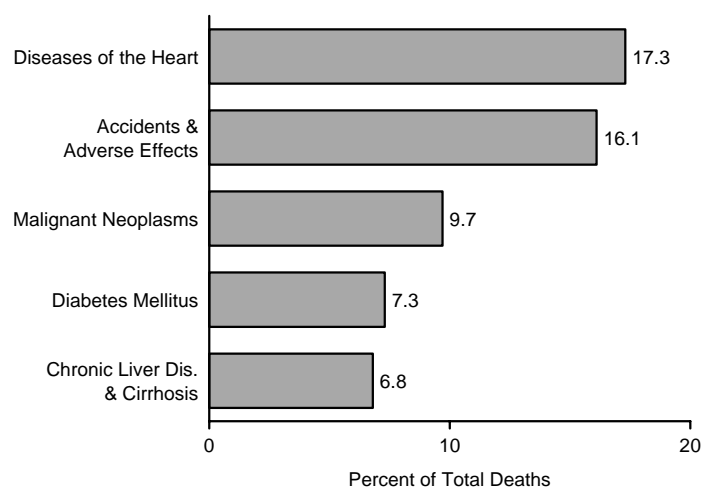


Chart 4.15

Leading Causes of Death

Portland Area, Calendar Years 1991–1993

In 1991-1993, 21.2 percent of all deaths in the Portland Area were caused by diseases of the heart. This was followed by malignant neoplasms at 17.5 percent.

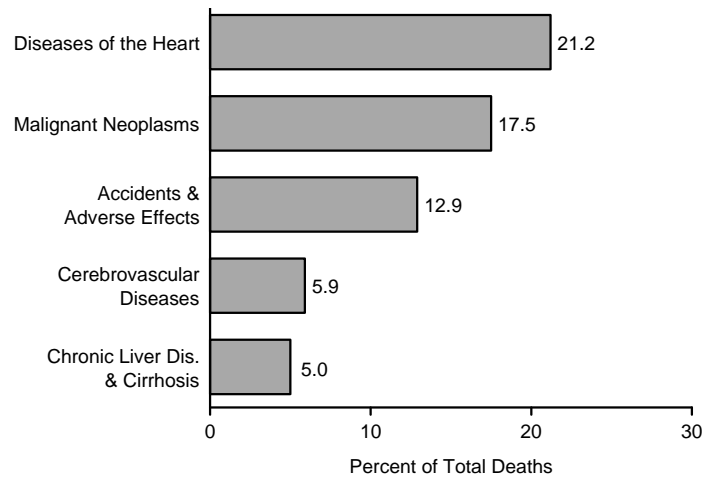


Chart 4.16

Leading Causes of Death

Tucson Area, Calendar Years 1991–1993

In 1991-1993, 15.4 percent of all deaths in the Tucson Area were caused by diseases of the heart. This was followed by accidents and adverse effects at 13.0 percent.

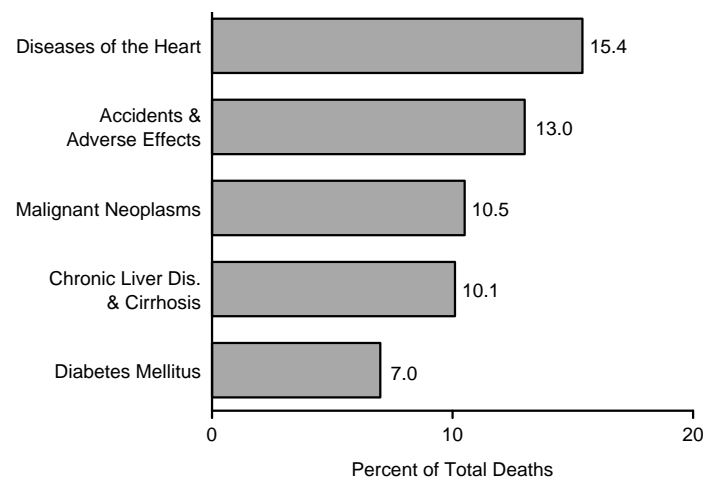


Chart 4.17 Age-Adjusted Injury and Poisoning Mortality Rates

Calendar Years 1991-1993

In 1991-1993, the age-adjusted injury and poisoning mortality rate for the IHS service area population was 116.3. When the 3 IHS Areas with apparent problems in underreporting of Indian race on death certificates are excluded, the rate is 153.8. This is nearly 3 times the U.S. All Races rate of 52.4 for 1992. Three Areas (Aberdeen, Navajo, and Alaska) had rates in the 185 to 190 range.

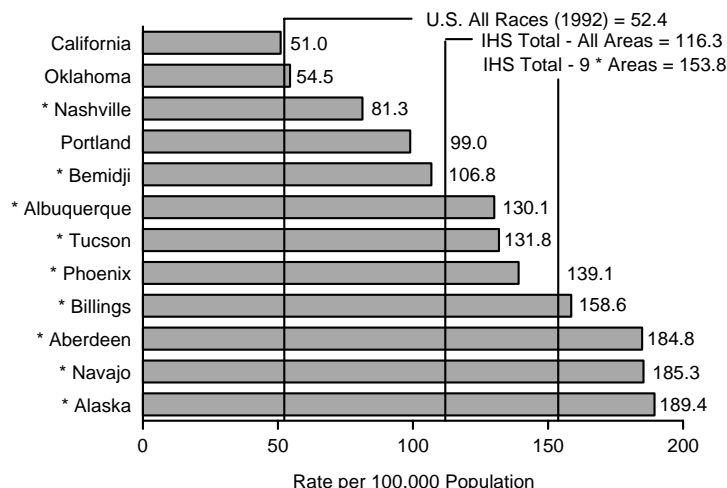


Table 4.17 Age-Adjusted Injury and Poisoning¹ Mortality Rates

Calendar Years 1991-1993

	Deaths ²	Rate ³
U.S. All Races (1992)	146,195	52.4
All IHS Areas	4,169	116.3
9* Areas ⁴	3,181	153.8
Aberdeen*	385	184.8
Alaska*	495	189.4
Albuquerque*	258	130.1
Bemidji*	194	106.8
Billings*	213	158.6
California	169	51.0
Nashville*	134	81.3
Navajo*	923	185.3
Oklahoma	430	54.5
Phoenix*	490	139.1
Portland	389	99.0
Tucson*	89	131.8

¹ Includes the following ICD-9 cause of death groups combined: Motor vehicle accidents-E810-E825. Other accidents-E800-E807, E826-E949. Suicide-E950-E959. Homicide-E960-E978. Injury undetermined whether accidentally or purposely inflicted-E980-E989. Injury resulting from operations of war-E990-E999.

² Includes deaths with age not reported. For IHS, includes Albuquerque-1 death, Navajo-2 deaths, Oklahoma-3 deaths, and Phoenix-1 death.

³ Age-adjusted rate per 100,000 population.

⁴ The 3 IHS Areas that do not have an asterisk (California, Oklahoma, and Portland) appear to have a problem with underreporting of Indian race on death certificates. Therefore a separate IHS rate was calculated excluding these 3 Areas.



Chart 4.18
Age-Adjusted Accident Mortality Rates
 Calendar Years 1991–1993

In 1991–1993, the age-adjusted accident mortality rate for the IHS service area population was 83.4. When the 3 IHS Areas with apparent problems in underreporting of Indian race on death certificates are excluded, the rate is 112.4. This is 282 percent higher than the U.S. All Races rate of 29.4 for 1992. The Navajo Area had the highest rate (143.4), and the Alaska Area was second (138.0). For the IHS service area, 23.4 percent of the motor vehicle accident deaths were pedestrian-related compared to 15.6 percent for the U.S. All Races population.

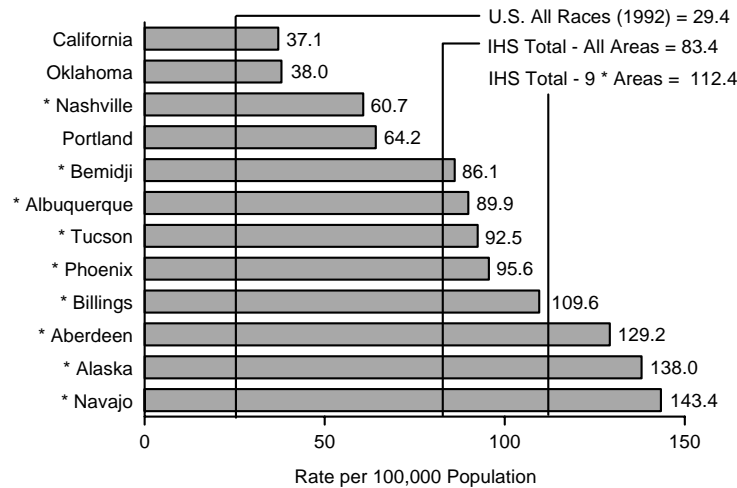


Table 4.18
Age-Adjusted Accident Mortality Rates
 Calendar Years 1991–1993

	Motor Vehicle Accidents							
					Pedestrian-related ¹			
	All Accidents		Totals		Percent of Motor Vehicle Accident		Other Accidents	
	Deaths	Rate ²	Deaths	Rate ²	Deaths	Deaths	Deaths	Rate ²
U.S. All Races (1992)	86,777	29.4	40,982	15.8	6,378	15.6%	45,795	13.7
All IHS Areas	2,970	83.4	1,664	47.0	390	23.4%	1,308	36.4
9* Areas ³	2,297	112.4	1,282	62.6	324	25.3%	1,016	49.7
Aberdeen*	261	129.2	155	77.6	31	20.0%	106	51.6
Alaska*	360	138.0	82	31.4	27	32.9%	278	106.6
Albuquerque*	175	89.9	118	58.3	39	33.1%	57	31.5
Bemidji*	156	86.1	93	52.3	15	16.1%	63	33.8
Billings*	146	109.6	92	69.6	11	12.0%	54	40.0
California	123	37.1	69	20.8	15	21.7%	54	16.3
Nashville*	102	60.7	67	40.8	16	23.9%	35	20.0
Navajo*	705	143.4	429	85.9	133	31.0%	277	57.4
Oklahoma	302	38.0	180	23.0	33	18.3%	123	14.9
Phoenix*	333	95.6	210	60.1	45	21.4%	123	35.4
Portland	248	64.2	133	34.5	18	13.5%	115	29.8
Tucson*	59	92.5	36	53.6	7	19.4%	23	38.9

¹ Includes motor vehicle accidents having ICD-9 codes E810-E825 with a fourth digit code .7. The fourth digit code .7 indicates that a pedestrian was the subject decedent as a result of the motor vehicle accident.

² Age-adjusted rate per 100,000 population. Rates based on a small number of deaths should be interpreted with caution.

³ The 3 IHS Areas that do not have an asterisk (California, Oklahoma, and Portland) appear to have a problem with underreporting of Indian race on death certificates. Therefore a separate IHS rate was calculated excluding these 3 Areas.

Chart 4.19 Age-Adjusted Suicide Mortality Rates

Calendar Years 1991–1993

In 1991–1993, the age-adjusted suicide mortality rate for the IHS service area population was 16.2. When the 3 IHS Areas with apparent problems in underreporting of Indian race on death certificates are excluded, the rate is 21.0. This is 89 percent higher than the U.S. All Races rate of 11.1 for 1992. Four Areas (Alaska, Aberdeen, Albuquerque, and Billings) had rates more than double the U.S. rate.

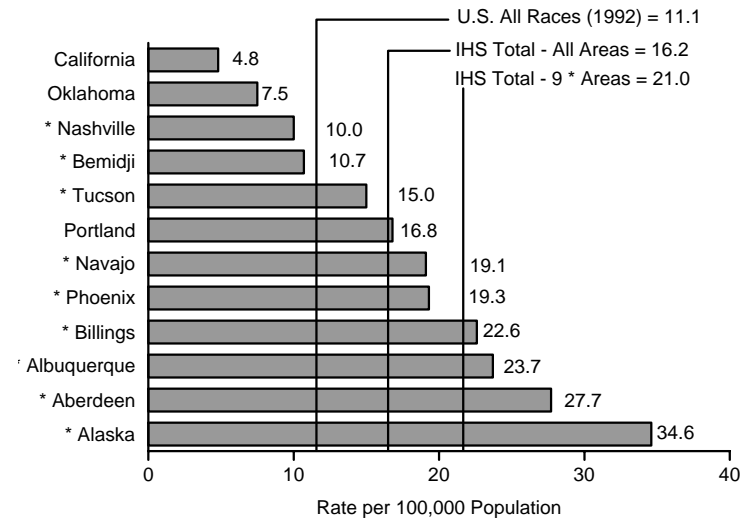


Table 4.19 Age-Adjusted Suicide Mortality Rates

Calendar Years 1991–1993

	Deaths	Rate ¹
U.S. All Races (1992)	30,484	11.1
All IHS Areas	581	16.2
9* Areas ²	443	21.0
Aberdeen*	61	27.7
Alaska*	90	34.6
Albuquerque*	49	23.7
Bemidji*	20	10.7
Billings*	30	22.6
California	15	4.8
Nashville*	16	10.0
Navajo*	99	19.1
Oklahoma	58	7.5
Phoenix*	67	19.3
Portland	65	16.8
Tucson*	11	15.0

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

² The 3 IHS Areas that do not have an asterisk (California, Oklahoma, and Portland) appear to have a problem with underreporting of Indian race on death certificates. Therefore a separate IHS rate was calculated excluding these 3 Areas.

Chart 4.20 Age-Adjusted Homicide Mortality Rates

Calendar Years 1991–1993

In 1991–1993, the age-adjusted homicide mortality rate for the IHS service area population was 14.6. When the 3 IHS Areas with apparent problems in underreporting of Indian race on death certificates are excluded, the rate is 17.6. This is 68 percent higher than the U.S. All Races rate of 10.5 for 1992. The Aberdeen Area rate of 24.7 was 2.4 times the U.S. rate.

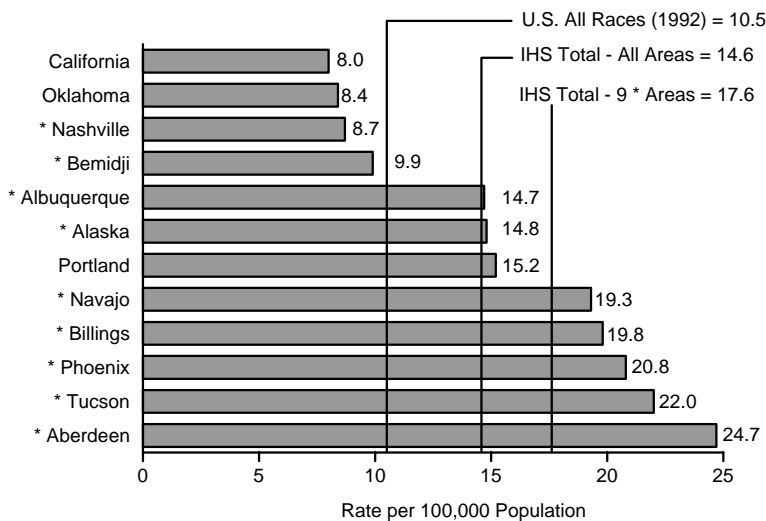


Table 4.20 Age-Adjusted Homicide Mortality Rates

Calendar Years 1991–1993

	Deaths	Rate ¹
U.S. All Races (1992)	25,488	10.5
All IHS Areas	535	14.6
9* Areas ²	381	17.6
Aberdeen*	57	24.7
Alaska*	41	14.8
Albuquerque*	29	14.7
Bemidji*	18	9.9
Billings*	29	19.8
California	27	8.0
Nashville*	13	8.7
Navajo*	99	19.3
Oklahoma	63	8.4
Phoenix*	78	20.8
Portland	64	15.2
Tucson*	17	22.0

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

² The 3 IHS Areas that do not have an asterisk (California, Oklahoma, and Portland) appear to have a problem with underreporting of Indian race on death certificates. Therefore a separate IHS rate was calculated excluding these 3 Areas.

Note: Includes deaths due to homicide and legal intervention.



Chart 4.21

Age-Adjusted Mortality Rates for Injury and Poisoning Deaths Due to Other Causes

Calendar Years 1991–1993

In 1991–1993 for the IHS service area population, the age-adjusted mortality rate for injury and poisoning deaths due to other causes was 2.2. When the 3 IHS Areas with apparent problems in underreporting of Indian race on death certificates are excluded, the rate is 2.8. This is 2.5 times the U.S. All Races rate of 1.1 for 1992. The Area rates should be interpreted with caution because of the small number of deaths involved.

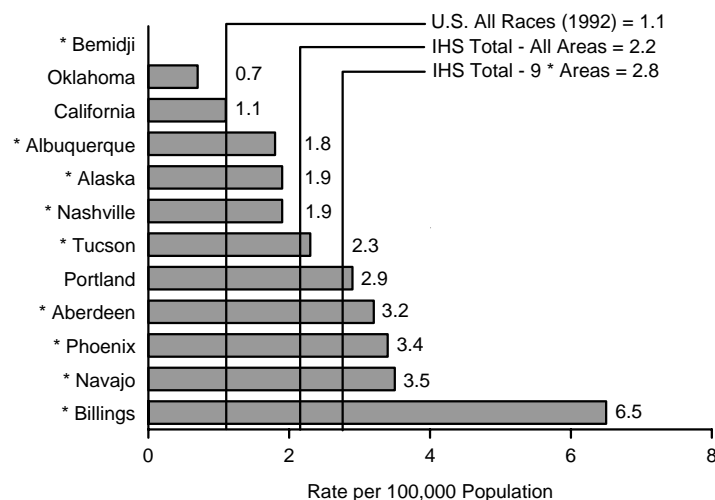


Table 4.21

Age-Adjusted Mortality Rates for Injury and Poisoning Deaths Due to Other Causes¹

Calendar Years 1991–1993



	Deaths	Rate ²
U.S. All Races (1992)	2,906	1.1
All IHS Areas	81	2.2
9* Areas ³	59	2.8
Aberdeen*	6	3.2
Alaska*	4	1.9
Albuquerque*	5	1.8
Bemidji*	—	—
Billings*	8	6.5
California	4	1.1
Nashville*	3	1.9
Navajo*	19	3.5
Oklahoma	6	0.7
Phoenix*	12	3.4
Portland	12	2.9
Tucson*	2	2.3

¹ Includes the following ICD-9 cause of death groups combined: Injury undetermined whether accidentally or purposely inflicted-E980-E989. Injury resulting from operations of war-E990-E999 (there were 11 deaths due to this cause for the U.S. All Races during 1992 and 0 deaths for the American Indian and Alaska Native population in the IHS service area, 1991–1993).

² Age-adjusted rate per 100,000 population. Rates based on a small number of deaths should be interpreted with caution.

³ The 3 IHS Areas that do not have an asterisk (California, Oklahoma, and Portland) appear to have a problem with underreporting of Indian race on death certificates. Therefore a separate IHS rate was calculated excluding these 3 Areas.

Chart 4.22

Age-Adjusted Alcoholism Mortality Rates

Calendar Years 1991–1993

In 1991–1993, the age-adjusted alcoholism mortality rate for the IHS service area population was 38.4. When the 3 IHS Areas with apparent problems in underreporting of Indian race on death certificates are excluded, the rate is 54.6. This is 703 percent higher than the U.S. All Races rate of 6.8 for 1992. The Aberdeen Area rate of 98.0 was over 14 times the U.S. rate.

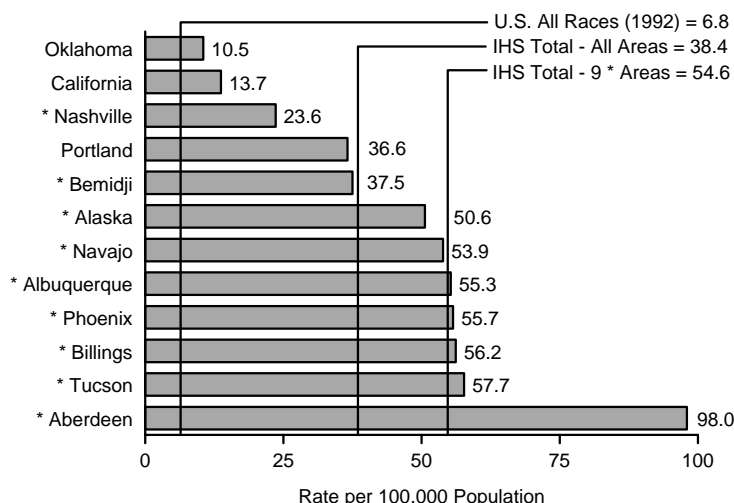


Table 4.22

Age-Adjusted Alcoholism Mortality Rates

Calendar Years 1991–1993

	All Causes	Number of Deaths and ICD-9 Causes of Death Group								Rate ¹
		291	303	305.0	425.5	535.3	571.0–571.3	790.3	E860	
U.S. All Races (1992)	19,438	385	5,225	792	879	63	11,881	34	179	6.8
All IHS Areas	1,164	13	317	121	25	7	626	13	42	38.4
9* Areas ²	934	9	257	105	19	4	495	13	32	54.6
Aberdeen*	160	—	38	11	4	—	105	—	2	98.0
Alaska*	113	1	20	29	7	1	39	13	3	50.6
Albuquerque*	91	2	30	7	1	—	47	—	4	55.3
Bemidji*	53	2	17	2	1	1	26	—	4	37.5
Billings*	62	1	19	1	2	—	39	—	—	56.2
California	38	—	14	2	—	—	22	—	—	13.7
Nashville*	34	—	6	2	—	1	25	—	—	23.6
Navajo*	231	2	77	40	3	1	93	—	15	53.9
Oklahoma	74	1	13	8	1	1	47	—	3	10.5
Phoenix*	154	1	43	12	1	—	93	—	4	55.7
Portland	118	3	33	6	5	2	62	—	7	36.6
Tucson*	36	—	7	1	—	—	28	—	—	57.7

¹ Age-adjusted rate per 100,000 population. The rate computation excludes 0 IHS All Area and 10 U.S. All Races deaths with age not reported. Rates based on a small number of deaths should be interpreted with caution.

² The 3 IHS Areas that do not have an asterisk (California, Oklahoma, and Portland) appear to have a problem with underreporting of Indian race on death certificates. Therefore a separate IHS rate was calculated excluding these 3 Areas.

291—Alcoholic Psychoses; 303—Alcoholic Dependence Syndrome; 305.0—Alcohol Overdose; 357.5—Alcoholic Polyneuropathy; 425.5—Alcoholic Cardiomyopathy; 535.3—Alcoholic Gastritis; 571.0–571.3—Alcoholic Liver Disease; 790.3—Elevated Blood-Alcohol Level; E860—Accidental Poisoning by Alcohol, not elsewhere classified. There were no deaths in the IHS Area (1991–93) for 357.5—Alcoholic Polyneuropathy.

Chart 4.23

Age-Adjusted Diabetes Mellitus Mortality Rates

Calendar Years 1991–1993

In 1991-1993, the age-adjusted diabetes mortality rate for the IHS service area population was 31.7. When the 3 IHS Areas with apparent problems in underreporting of Indian race on death certificates are excluded, the rate is 41.4. This is 248 percent higher than the U.S. All Races rate of 11.9 for 1992. All of the IHS Areas had a rate greater than the U.S. rate.

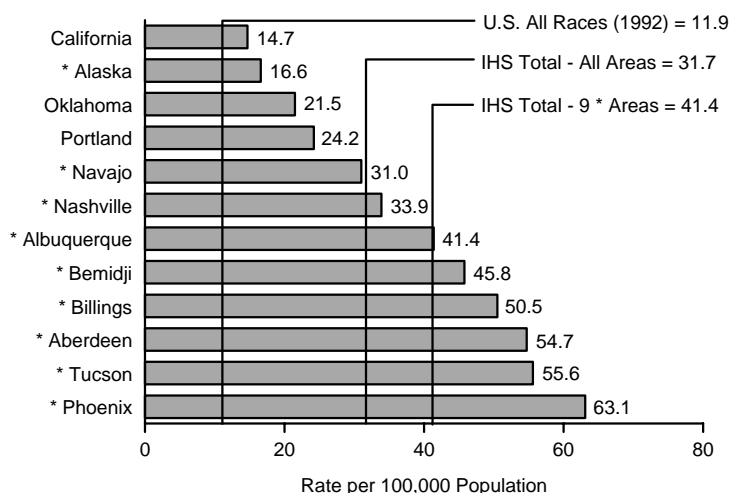


Table 4.23

Age-Adjusted Diabetes Mellitus Mortality Rates

Calendar Years 1991–1993

	Deaths	Rate ¹
U.S. All Races (1992)	50,067	11.9
All IHS Areas	953	31.7
9* Areas ²	668	41.4
Aberdeen*	93	54.7
Alaska*	34	16.6
Albuquerque*	65	41.4
Bemidji*	67	45.8
Billings*	50	50.5
California	39	14.7
Nashville*	50	33.9
Navajo*	126	31.0
Oklahoma	177	21.5
Phoenix*	151	63.1
Portland	69	24.2
Tucson*	32	55.6

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

² The 3 IHS Areas that do not have an asterisk (California, Oklahoma, and Portland) appear to have a problem with underreporting of Indian race on death certificates. Therefore a separate IHS rate was calculated excluding these 3 Areas.

Chart 4.24

Age-Adjusted Tuberculosis Mortality Rates

Calendar Years 1991–1993

In 1991–1993, the age-adjusted tuberculosis mortality rate for the IHS service area population was 2.1. When the 3 IHS Areas with apparent problems in underreporting of Indian race on death certificates are excluded, the rate is 2.5. This is over 6 times the U.S. All Races rate of 0.4 for 1992. The Area rates should be interpreted with caution because of the small number of deaths involved. The Navajo and Oklahoma Areas had the most deaths over the 3-year period with 18 and 11, respectively.

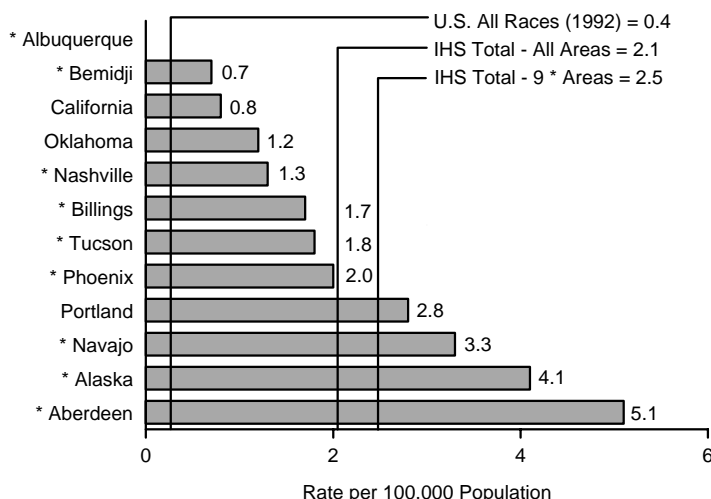


Table 4.24

Age-Adjusted Tuberculosis Mortality Rates

Calendar Years 1991–1993

	Deaths	Rate ¹
U.S. All Races (1992)	1,705	0.4
All IHS Areas	68	2.1
9* Areas ²	47	2.5
Aberdeen*	9	5.1
Alaska*	9	4.1
Albuquerque*	—	—
Bemidji*	1	0.7
Billings*	2	1.7
California	2	0.8
Nashville*	2	1.3
Navajo*	18	3.3
Oklahoma	11	1.2
Phoenix*	5	2.0
Portland	8	2.8
Tucson*	1	1.8

¹ Rate per 100,000 population. Rates based on a small number of deaths should be interpreted with caution.

² The 3 IHS Areas that do not have an asterisk (California, Oklahoma, and Portland) appear to have a problem with underreporting of Indian race on death certificates. Therefore a separate IHS rate was calculated excluding these 3 Areas.



Chart 4.25

Age-Adjusted Gastrointestinal Diseases Mortality Rates

Calendar Years 1991–1993

In 1991–1993, the age-adjusted gastrointestinal diseases mortality rate for the IHS service area population was 1.5. When the 3 IHS Areas with apparent problems in underreporting of Indian race on death certificates are excluded, the rate is 1.9. This is 46 percent greater than the U.S. All Races rate for 1992 (1.3). The Area rates should be interpreted with caution because of the small number of deaths involved. The Navajo and Alaska Areas had the most deaths over the 3-year period (10 and 9, respectively).

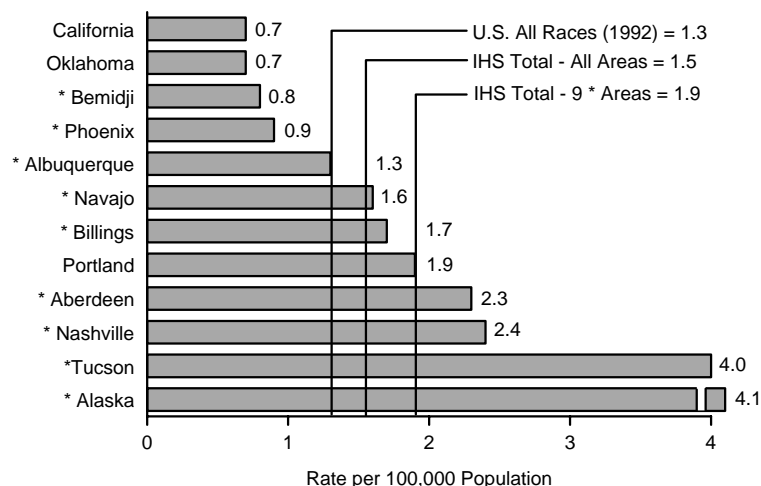


Table 4.25

Age-Adjusted Gastrointestinal Diseases Mortality Rates

Calendar Years 1991–1993

	Deaths	Rate ¹
U.S. All Races (1992)	6,338	1.3
All IHS Areas	53	1.5
9* Areas ²	39	1.9
Aberdeen*	5	2.3
Alaska*	9	4.1
Albuquerque*	3	1.3
Bemidji*	1	0.8
Billings*	2	1.7
California	2	0.7
Nashville*	4	2.4
Navajo*	10	1.6
Oklahoma	6	0.7
Phoenix*	3	0.9
Portland	6	1.9
Tucson*	2	4.0

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

² The 3 IHS Areas that do not have an asterisk (California, Oklahoma, and Portland) appear to have a problem with underreporting of Indian race on death certificates. Therefore a separate IHS rate was calculated excluding these 3 Areas.

Chart 4.26 Age-Adjusted Diseases of the Heart Mortality Rates

Calendar Years 1991–1993

In 1991–1993, the age-adjusted diseases of the heart mortality rate for the IHS service area population was 132.4. When the 3 IHS Areas with apparent problems in underreporting of Indian race on death certificates are excluded, the rate is 143.3. This is essentially the same as the U.S. All Races rate in 1992, i.e., 144.3. The Albuquerque, Tucson, and Navajo Area rates are well below the U.S. rate.

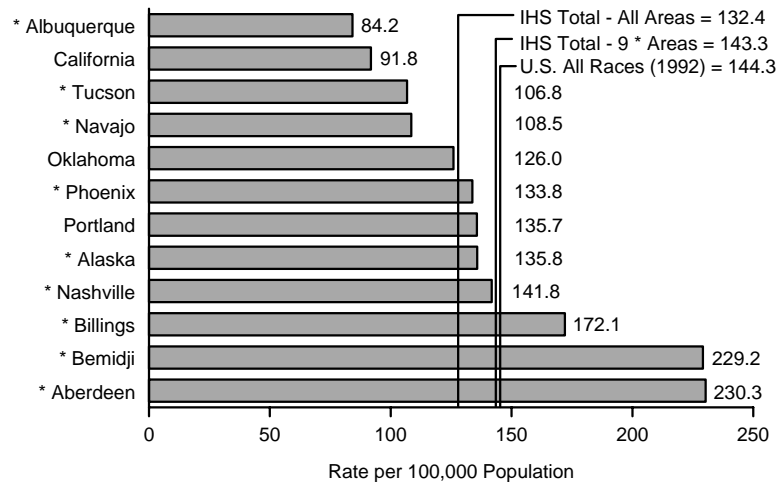


Table 4.26 Age-Adjusted Diseases of the Heart Mortality Rates

Calendar Years 1991–1993

	Deaths	Rate ¹
U.S. All Races (1992)	717,706	144.3
All IHS Areas	4,422	132.4
9* Areas ²	2,569	143.3
Aberdeen*	419	230.3
Alaska*	283	135.8
Albuquerque*	150	84.2
Bemidji*	356	229.2
Billings*	181	172.1
California	268	91.8
Nashville*	229	141.8
Navajo*	524	108.5
Oklahoma	1,178	126.0
Phoenix*	357	133.8
Portland	407	135.7
Tucson*	70	106.8

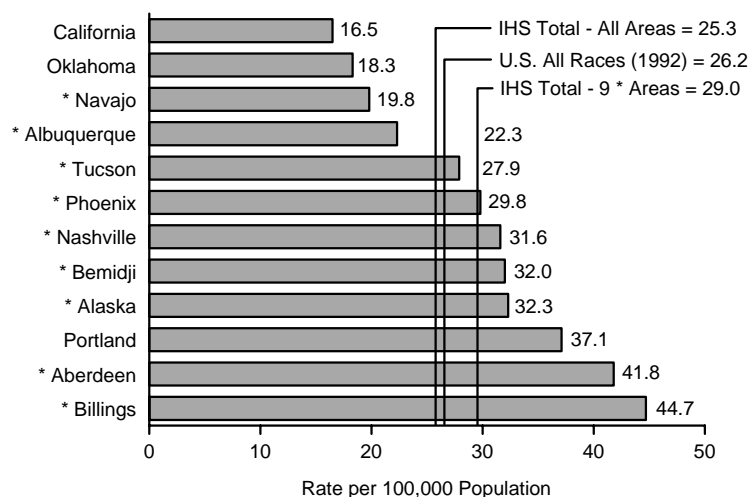
¹ Age-adjusted rate per 100,000 population.

² The 3 IHS Areas that do not have an asterisk (California, Oklahoma, and Portland) appear to have a problem with underreporting of Indian race on death certificates. Therefore a separate IHS rate was calculated excluding these 3 Areas.

Chart 4.27**Age-Adjusted Cerebrovascular Diseases Mortality Rates**

Calendar Years 1991–1993

In 1991-1993, the age-adjusted cerebrovascular diseases mortality rate for the IHS service area population was 25.3. When the 3 IHS Areas with apparent problems in underreporting of Indian race on death certificates are excluded, the rate is 29.0. This is 11 percent higher than the U.S. All Races rate of 26.2 for 1992. The Billings Area rate of 44.7 was 2.3 times the Navajo Area rate of 19.8.

**Table 4.27****Age-Adjusted Cerebrovascular Diseases Mortality Rates**

Calendar Years 1991–1993

	Deaths	Rate ¹
U.S. All Races (1992)	143,769	26.2
All IHS Areas	887	25.3
9* Areas ²	539	29.0
Aberdeen*	76	41.8
Alaska*	68	32.3
Albuquerque*	45	22.3
Bemidji*	55	32.0
Billings*	49	44.7
California	55	16.5
Nashville*	52	31.6
Navajo*	96	19.8
Oklahoma	180	18.3
Phoenix*	80	29.8
Portland	113	37.1
Tucson*	18	27.9

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

² The 3 IHS Areas that do not have an asterisk (California, Oklahoma, and Portland) appear to have a problem with underreporting of Indian race on death certificates. Therefore a separate IHS rate was calculated excluding these 3 Areas.

Chart 4.28 Age-Adjusted Malignant Neoplasm Mortality Rates

Calendar Years 1991–1993

In 1991–1993, the age-adjusted malignant neoplasm mortality rate for the IHS service area population was 98.8. When the 3 IHS Areas with apparent problems in underreporting of Indian race on death certificates are excluded, the rate is 113.4. This is 15 percent less than the U.S. All Races rate of 133.1 for 1992. However, the northern IHS Areas (excluding Portland), Aberdeen, Bemidji, Billings, and Alaska, had rates greater than the U.S. rate. The recent increase in northern cancers is believed to be almost entirely related to tobacco, although a minor factor may be the high fat content in the northern diet.

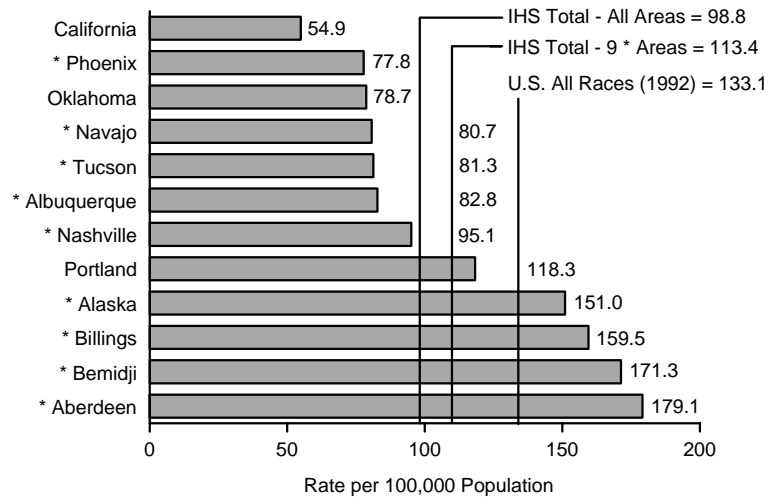


Table 4.28 **Age-Adjusted Malignant Neoplasm** **Mortality Rates**

Calendar Years 1991–1993

	Deaths	Rate ¹
U.S. All Races (1992)	520,578	133.1
All IHS Areas	3,071	98.8
9* Areas ²	1,899	113.4
Aberdeen*	311	179.1
Alaska*	296	151.0
Albuquerque*	138	82.8
Bemidji*	246	171.3
Billings*	161	159.5
California	149	54.9
Nashville*	139	95.1
Navajo*	359	80.7
Oklahoma	686	78.7
Phoenix*	201	77.8
Portland	337	118.3
Tucson*	48	81.3

¹ Age-adjusted rate per 100,000 population.

² The 3 IHS Areas that do not have an asterisk (California, Oklahoma, and Portland) appear to have a problem with underreporting of Indian race on death certificates. Therefore a separate IHS rate was calculated excluding these 3 Areas.



Chart 4.29

Age-Adjusted Breast Cancer Mortality Rates for Females

Calendar Years 1991–1993

In 1991–1993, the age-adjusted breast cancer mortality rate for females in the IHS service area population was 12.3. When the 3 IHS Areas with apparent problems in underreporting of Indian race on death certificates are excluded, the rate is 12.9. This is 42 percent less than the U.S. All Races rate of 22.4 for 1992. The Aberdeen Area rate of 24.6 exceeds the U.S. rate.

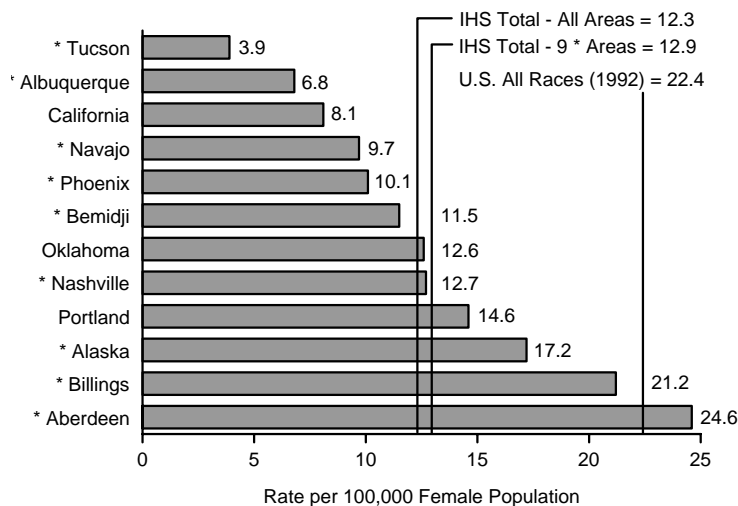


Table 4.29

Age-Adjusted Breast Cancer Mortality Rates For Females

Calendar Years 1991–1993

	Total Deaths	Rate ¹
U.S. All Races (1992)	43,098	22.4
All IHS Areas	201	12.3
9* Areas ²	116	12.9
Aberdeen*	24	24.6
Alaska*	17	17.2
Albuquerque*	7	6.8
Bemidji*	9	11.5
Billings*	12	21.2
California	12	8.1
Nashville*	10	12.7
Navajo*	22	9.7
Oklahoma	50	12.6
Phoenix*	14	10.1
Portland	23	14.6
Tucson*	1	3.9

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

² The 3 IHS Areas that do not have an asterisk (California, Oklahoma, and Portland) appear to have a problem with underreporting of Indian race on death certificates. Therefore a separate IHS rate was calculated excluding these 3 Areas.

Chart 4.30

Age-Adjusted Cervical Cancer Mortality Rates for Females

Calendar Years 1991–1993

In 1991-1993, the age-adjusted cervical cancer mortality rate for females in the IHS service area population was 4.3. When the 3 IHS Areas with apparent problems in underreporting of Indian race on death certificates are excluded, the rate is 5.2. This is nearly double the U.S. All Races rate of 2.7 for 1992. The Area rates should be interpreted with caution because of the small number of deaths involved. Navajo had the highest number of deaths (14) over the 3-year period, followed closely by Aberdeen and Oklahoma, each with 13.

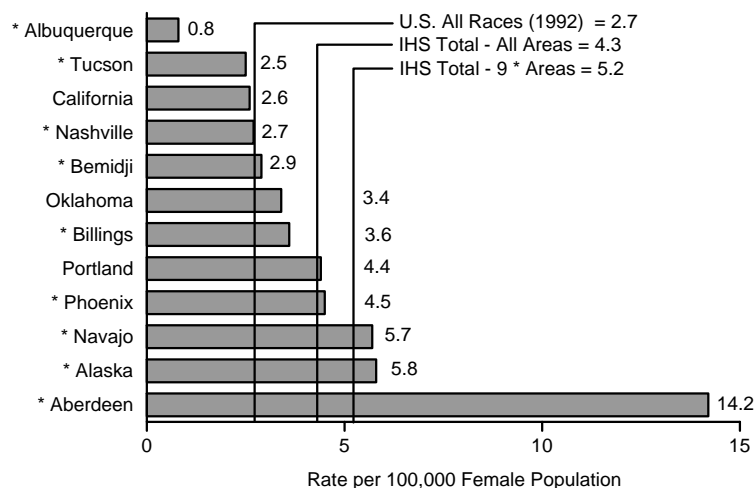


Table 4.30

Age-Adjusted Cervical Cancer Mortality Rates For Females

Calendar Years 1991–1993

	Total Deaths	Rate ¹
U.S. All Races (1992)	4,641	2.7
All IHS Areas	72	4.3
9* Areas ²	48	5.2
Aberdeen*	13	14.2
Alaska*	6	5.8
Albuquerque*	1	0.8
Bemidji*	2	2.9
Billings*	2	3.6
California	4	2.6
Nashville*	2	2.7
Navajo*	14	5.7
Oklahoma	13	3.4
Phoenix*	7	4.5
Portland	7	4.4
Tucson*	1	2.5

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

² The 3 IHS Areas that do not have an asterisk (California, Oklahoma, and Portland) appear to have a problem with underreporting of Indian race on death certificates. Therefore a separate IHS rate was calculated excluding these 3 Areas.

Chart 4.31 **Age-Adjusted Human** **Immunodeficiency Virus (HIV)** **Infection Mortality Rates**

Calendar Years 1991–1993

In 1991-1993, the age-adjusted human immunodeficiency virus (HIV) infection mortality rate for the IHS service area population was 2.7. When the 3 IHS Areas with apparent problems in underreporting of Indian race on death certificates are excluded, the rate drops to 2.5. This is because the rate of HIV deaths is relatively high in the Portland (5.0) and California (3.1) Areas even with the death certificate problem. The IHS rate (total or 9 Area) is about 80 percent less than the 1992 U.S. rate of 12.6. The Area rates should be interpreted with caution because of the small number of deaths involved.

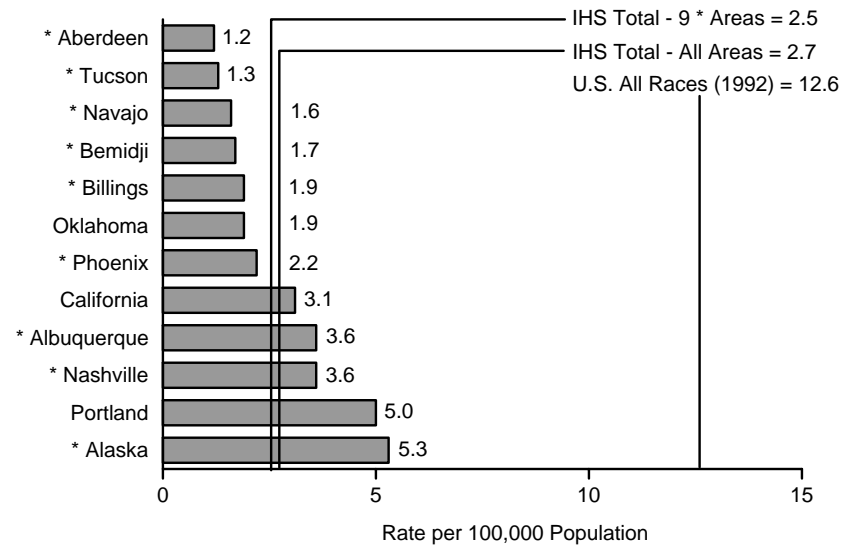


Table 4.31 **Age-Adjusted Human** **Immunodeficiency Virus (HIV)** **Infection Mortality Rates**

Calendar Years 1991–1993

	Total Deaths	Rate ¹
U.S. All Races (1992)	33,566	12.6
All IHS Areas	97	2.7
9* Areas ²	52	2.5
Aberdeen*	2	1.2
Alaska*	14	5.3
Albuquerque*	7	3.6
Bemidji*	3	1.7
Billings*	3	1.9
California	10	3.1
Nashville*	6	3.6
Navajo*	8	1.6
Oklahoma	15	1.9
Phoenix*	8	2.2
Portland	20	5.0
Tucson*	1	1.3

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

² The 3 IHS Areas that do not have an asterisk (California, Oklahoma, and Portland) appear to have a problem with underreporting of Indian race on death certificates. Therefore a separate IHS rate was calculated excluding these 3 Areas.



Chart 4.32

Life Expectancy at Birth, Both Sexes

Calendar Years 1991–1993

In 1991–1993, the life expectancy at birth (both sexes) for the IHS service area population was 73.2 years. When the 3 IHS Areas with apparent problems in underreporting of Indian race on death certificates are excluded, the life expectancy is 70.2 years. This is 5.6 years less than the 1992 figure of 75.8 for the U.S. All Races population.

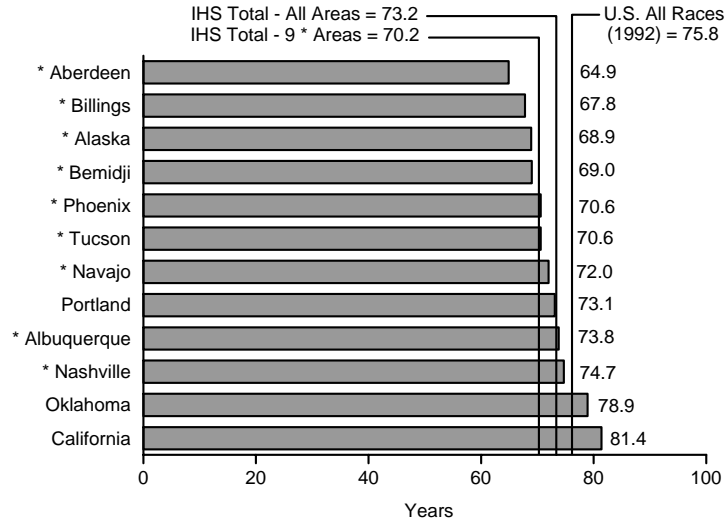


Chart 4.33

Life Expectancy at Birth, Males

Calendar Years 1991–1993

In 1991–1993, the life expectancy at birth for males in the IHS service area population was 69.3 years. When the 3 IHS Areas with apparent problems in underreporting of Indian race on death certificates are excluded, the life expectancy is 66.1 years. This is 6.2 years less than the 1992 figure of 72.3 years for the U.S. All Races male population.

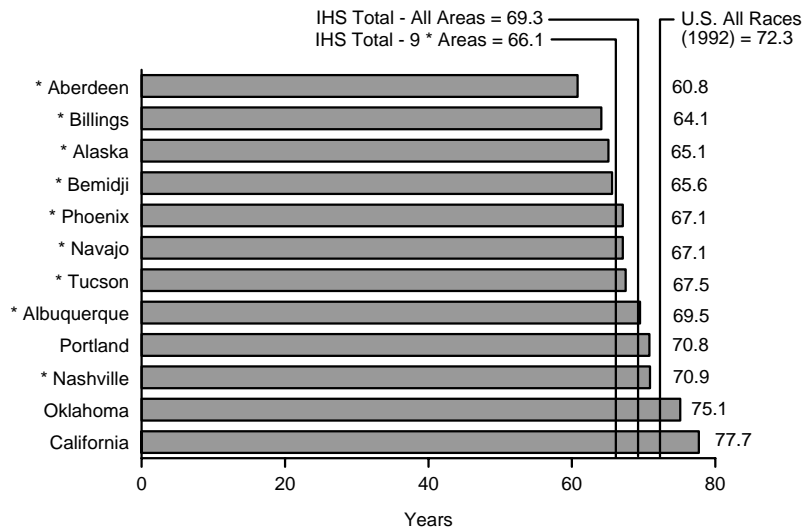


Chart 4.34

Life Expectancy at Birth, Females

Calendar Years 1991–1993

In 1991-1993, the life expectancy at birth for females in the IHS service area population was 77.1 years. When the 3 IHS Areas with apparent problems in underreporting of Indian race on death certificates are excluded, the life expectancy is 74.4 years. This is 4.7 years less than the 1992 figure of 79.1 years for the U.S. All Races female population.

