

# **CHAPTER 2**

## **TRENDS AND PATTERNS IN MORTALITY, ARIZONA, 1999-2009**

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### **2A. TOTAL MORTALITY**

### **2B. LEADING CAUSES OF DEATH**

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- **ADOLESCENT MORTALITY**
- **YOUNG ADULT MORTALITY**
- **MIDDLE-AGED ADULT MORTALITY**
- **ELDERLY MORTALITY**

### **2D. PATTERNS OF PREMATURE MORTALITY**





## 2A.

### TOTAL MORTALITY

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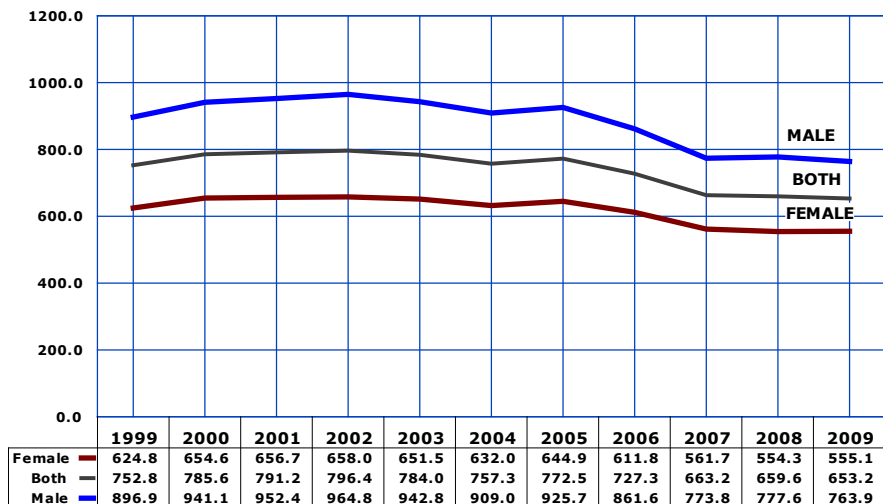
The number of deaths among Arizona residents decreased slightly from 45,128 in 2008 to 45,065 in 2009 (**Table 2A-1**). The number of deaths occurring in Arizona (including the deaths of out-of-State residents) also slightly decreased from 46,515 in 2008 to 46,429 in 2009(**Table 5E-2**).

Only one population subgroup (based on race/ethnicity) did not experience an increase in mortality. The number of deaths among White non-Hispanic actually decreased from 2008 to 2009. However, based on age and race/ethnicity, the number of deaths among Hispanic or Latinos aged 15-34 years (the age and ethnic group most likely to be illegally in Arizona) declined by 29.3 percent. In fact, Hispanics or Latinos accounted for 9 out of every 10 fewer deaths of Arizonans 15-34 years old in 2009 compared to 2007. We do not think that there was a miraculous improvement in the survival chances among Hispanics or Latinos aged 15-34 years. Rather, there were fewer deaths because the number of illegal Hispanic residents of the State was lower in 2009 than it was in 2007. In contrast, the number of deaths increased among White non-Hispanics, Blacks or African Americans, American Indians or Alaska Native, and Asians or Pacific Islanders. The number of deaths decreased by 22.0 percent among infants less than 1 year of age (obviously associated with an unprecedented decrease in the number of live births). Other age groups, including preschoolers 1-4 years old, and Arizonans aged 35 -74 years or older experienced an increase in mortality between 2008 and 2009.

There were fewer deaths in 2009 for some of the leading causes of mortality including diseases of heart, accidents (unintentional injuries), chronic obstructive pulmonary diseases, stroke, diabetes, influenza and pneumonia, and homicide. The causes with the largest increases were suicide (9.5 percent), kidney disease (9.0 percent), and chronic liver disease and cirrhosis (5.1 percent).

## 2A. TOTAL MORTALITY

**Figure 2A-1**  
Age-adjusted Mortality Rates for all Causes by Gender and Year,  
Arizona, 1999-2009



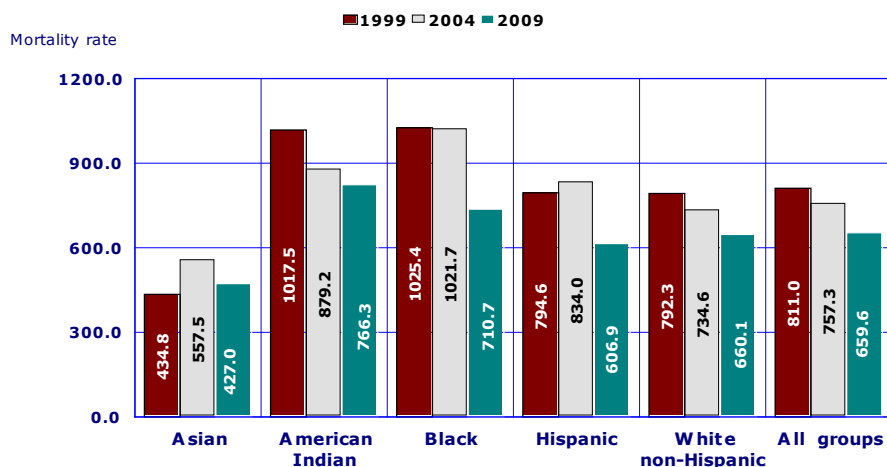
Beginning with the 2000 data year in Arizona, the age-adjusted mortality rates discussed below are based on the year 2000 population standard. The rates for 1999 were re-calculated using the new standard. All mortality rates in sections 2A and 2B are age-adjusted. A detailed explanation of the age-adjustment of mortality rates is given in *Technical Notes*.

The total age-adjusted mortality rate decreased for the 4<sup>th</sup> consecutive year from 772.5 in 2005 to 653.2 in 2009 (**Figure 2A-1, Table 2B-2**). The death rate for females in 2009 was 555.1, 0.1 percent higher than in 2008. For males, the age-adjusted mortality rate decreased by 1.8 percent from 777.6 in 2008 to 763.9 in 2009.

The percent difference between male and female mortality rates narrowed from 44 percent greater mortality rate in 1999 to 27 percent greater in 2009. However, the parallel trend lines (**Figure 2A-1**) do not seem to suggest that the full convergence in mortality risk between males and females is likely to happen anytime soon.

Number of deaths per 100,000 persons (adjusted to the 2000 standard U.S. population).

**Figure 2A-2**  
Age-adjusted Mortality Rates\* for all Causes by Race/Ethnicity and Year,  
Arizona Residents, 1999, 2004 and 2009



The 2009 age-adjusted death rates for the major race/ethnic groups were as follows: for Asian or Pacific Islander, 427.0 deaths per 100,000 population; Hispanic or Latino, 606.9; White non-Hispanic, 660.1; Black or African American, 710.7 and American Indian or Alaska Native, 766.3 (Figure 2A-2, Table 2B-4).

In 2009, as in 2004 and in 1999, Blacks and American Indians had higher total mortality rates than White non-Hispanics, Hispanics and Asians. In contrast, the total mortality rates for Asians were lower than the rates of White non-Hispanics in 1999, 2004 and 2009.

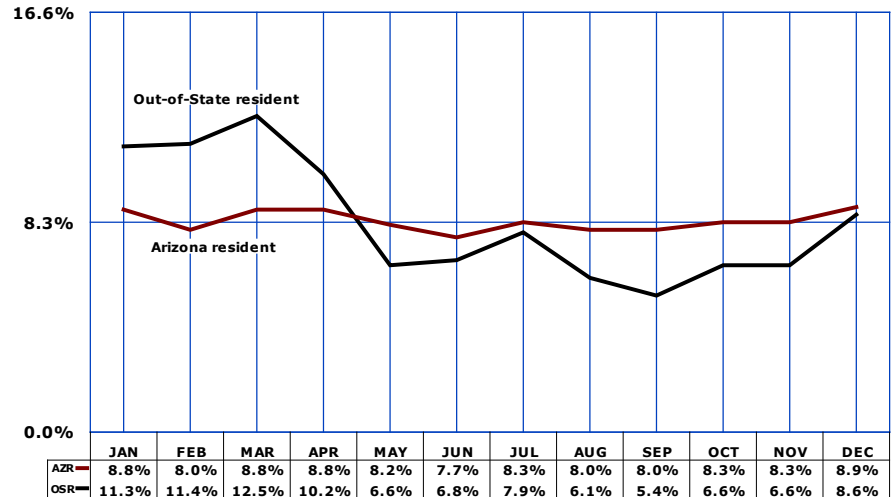
Number of deaths per 100,000 population age-adjusted to the 2000 standard U.S.

## 2A. TOTAL MORTALITY

**Figure 2A-3**  
Percent Annual Deaths by Month of Occurrence and Residence Status, Arizona, 2009

If there was no monthly variation in proportional contribution to the annual deaths total, 8.3 percent (100/12) of deaths should occur monthly. However, when the monthly distribution of resident deaths is examined, four months, December (8.9 percent of annual deaths), January, March, and April (8.8 percent each) deviated in 2009 from the expected value by no less than 6 percent (**Figure 2A-3**). June was the month with the lowest proportional contribution (7.7 percent) to the annual death total among Arizona residents.

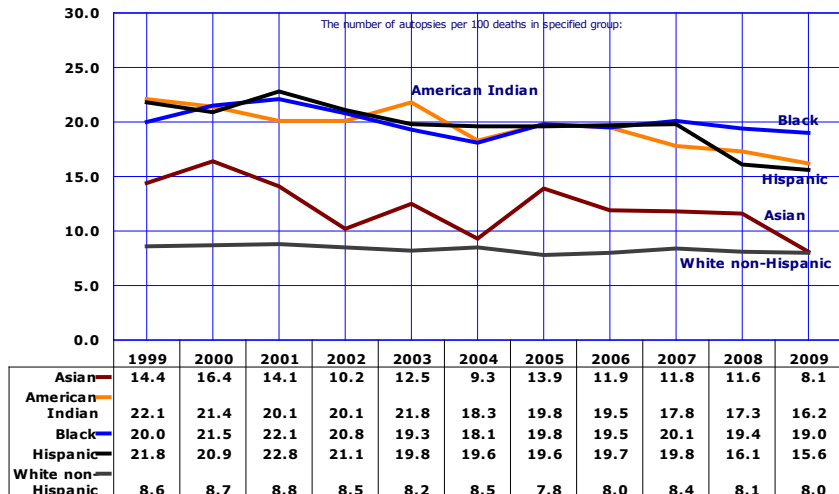
The majority of the 2,094 non-residents who died in Arizona during 2009 did so during January, February, March, and April. September was the month with the lowest proportional contribution (5.4 percent) to the annual death total among out-of-State residents who died in Arizona



**Figure 2A-4**  
Percentage of Deaths for which Autopsies were Reported by Race/Ethnicity and Year, Arizona Residents, 1999-2009

Autopsies were reported as performed on 4,358 decedents, or 9.7 percent of the deaths that occurred among Arizona residents in 2009. In 1999 - 2009, the percentage of deaths for which autopsies were reported varied from a high of 10.9 percent in 1999 to a low of 9.7 percent in 2008.

The percentage autopsied varies by the decedent's demographic characteristics. By race/ethnicity (**Figure 2A-4**) the percentage autopsied was lower for the White non-Hispanic population than for other groups. The prevalence of autopsies was substantially greater among Hispanic or Latino, American Indians and Black or African Americans. A substantial portion of the differential in the use of autopsy by race/ethnicity reflects differences in the age and manner of death. For example, autopsies tend to be more common at younger ages and for homicide, suicide, accidents, and undetermined manner.



**TABLE 2A-1  
NUMBER OF DEATHS BY RACE/ETHNICITY, GENDER AND YEAR, ARIZONA RESIDENTS, 1999-2009**

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
<b>TOTAL</b>											
<b>Total</b>	39,673	40,202	40,851	42,320	42,830	42,736	45,115	45,415	44,640	45,128	45,065
<b>Male</b>	21,020	21,080	21,480	22,317	22,452	22,400	23,614	23,658	23,321	23,744	23,535
<b>Female</b>	18,653	19,122	19,371	20,003	20,378	20,336	21,501	21,757	21,319	21,384	21,530
<b>White non-Hispanic</b>											
<b>Total</b>	32,675	33,111	33,443	34,845	34,906	34,813	36,558	36,952	35,805	36,235	35,829
<b>Male</b>	16,996	17,063	17,250	17,946	17,972	17,916	18,723	18,711	18,339	18,758	18,476
<b>Female</b>	15,679	16,048	16,193	16,899	16,934	16,897	17,835	18,241	17,466	17,477	17,353
<b>Hispanic or Latino</b>											
<b>Total</b>	4,025	4,207	4,415	4,670	4,914	5,009	5,323	5,284	5,496	5,313	5,401
<b>Male</b>	2,368	2,394	2,560	2,750	2,812	2,874	3,115	3,114	3,146	2,996	2,978
<b>Female</b>	1,657	1,813	1,855	1,920	2,102	2,135	2,208	2,170	2,350	2,317	2,423
<b>Black or African American</b>											
<b>Total</b>	990	1,002	1,045	950	1,138	1,095	1,173	1,274	1,276	1,295	1,334
<b>Male</b>	559	556	567	557	623	598	623	754	695	712	697
<b>Female</b>	431	446	478	393	515	497	550	520	581	583	637
<b>American Indian or Alaska Native</b>											
<b>Total</b>	1,566	1,524	1,562	1,536	1,527	1,402	1,651	1,543	1,661	1,722	1,871
<b>Male</b>	867	875	897	884	864	780	929	901	950	981	1,028
<b>Female</b>	699	649	665	652	663	622	722	642	711	741	843
<b>Asian or Pacific Islander</b>											
<b>Total</b>	215	263	292	264	289	300	338	336	365	449	469
<b>Male</b>	108	126	139	142	129	145	172	164	168	230	241
<b>Female</b>	107	137	153	122	160	155	166	172	197	219	228
<b>Other/Unknown</b>											
<b>Total</b>	202	95	94	55	56	117	72	26	37	114	161
<b>Male</b>	122	66	67	38	52	87	52	14	23	67	115
<b>Female</b>	80	29	27	17	4	30	20	12	14	47	46



TABLE 2A-3  
DEATHS BY DAY AND MONTH OF OCCURRENCE, ARIZONA RESIDENTS, 2009

Day of death	Month of death												Total
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	
1	136	112	123	130	138	108	122	116	119	103	117	109	1,433
2	133	134	125	158	127	132	131	125	105	118	160	112	1,560
3	138	153	125	137	132	116	104	121	114	122	148	121	1,531
4	134	128	120	136	106	117	114	107	122	120	115	117	1,436
5	126	140	143	117	144	128	124	118	133	125	129	137	1,564
6	124	123	110	124	130	115	130	114	112	107	122	125	1,436
7	129	126	135	145	113	108	112	120	111	111	126	116	1,452
8	151	139	133	118	113	113	129	110	119	107	119	154	1,505
9	141	121	124	135	142	114	126	101	107	130	108	140	1,489
10	138	132	133	132	109	106	102	111	127	112	108	122	1,432
11	130	116	95	155	117	144	110	116	130	118	134	141	1,506
12	144	112	120	135	93	114	119	108	127	116	123	140	1,451
13	105	126	136	129	108	113	116	118	113	142	113	137	1,456
14	115	116	143	141	117	107	114	126	132	136	128	131	1,506
15	116	127	127	116	124	102	124	119	119	135	139	124	1,472
16	115	113	150	127	112	100	130	106	130	137	112	116	1,448
17	162	128	127	119	118	107	129	127	117	127	105	140	1,506
18	111	128	138	132	134	105	113	99	115	130	126	125	1,456
19	104	144	126	123	116	120	128	108	136	103	131	126	1,465
20	127	134	122	138	102	134	143	122	127	112	120	116	1,497
21	130	132	146	144	118	117	125	107	107	109	141	136	1,512
22	141	122	123	121	124	120	113	135	127	124	113	141	1,504
23	143	139	145	137	109	111	111	129	114	99	111	127	1,475
24	111	129	116	130	129	130	100	119	129	125	128	133	1,479
25	102	121	116	123	119	109	125	103	115	131	122	142	1,428
26	134	129	114	135	127	110	115	121	124	121	106	123	1,459
27	119	142	108	127	123	117	113	131	133	126	124	110	1,473
28	132	126	140	119	115	122	129	118	108	127	118	144	1,498
29	115		115	138	85	135	128	132	110	118	126	135	1,337
30	139		160	124	133	126	146	117	122	122	122	146	1,457
31	138		116		122		116	113		126		111	842
<b>Total</b>	<b>3,983</b>	<b>3,592</b>	<b>3,954</b>	<b>3,945</b>	<b>3,699</b>	<b>3,500</b>	<b>3,741</b>	<b>3,617</b>	<b>3,604</b>	<b>3,739</b>	<b>3,694</b>	<b>3,997</b>	<b>45,065</b>



**TABLE 2A-4  
AGE-SPECIFIC MORTALITY BY PLACE OF DEATH AND DECEDENT STATUS, ARIZONA, 2009**

	Age											Total				
	<1	1-4	5-14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	85+		Un-known			
<b>IN HOSPITAL</b>																
<b>In-patient</b>	432	47	59	135	215	417	935	1,684	2,296	2,786	1,918	1	10,925			
<b>Out-patient*</b>	72	49	30	141	144	188	306	380	350	414	246	0	2,320			
<b>Died on arrival</b>	4	3	1	2	7	13	12	12	17	11	2	0	84			
<b>Subtotal</b>	508	99	90	278	366	618	1,253	2,076	2,663	3,211	2,166	1	13,329			
<b>NOT IN HOSPITAL</b>																
<b>Nursing home**</b>	3	1	4	16	55	165	554	1,248	2,146	4,298	5,863	1	14,354			
<b>Residence</b>	28	16	27	140	291	481	1,199	1,809	2,477	3,227	3,162	0	12,857			
<b>Other***</b>	5	11	21	211	255	259	370	366	456	845	1,327	17	4,143			
<b>Unspecified</b>	3	0	2	10	12	15	35	45	68	91	98	3	382			
<b>Subtotal</b>	39	28	54	377	613	920	2,158	3,468	5,147	8,461	10,450	21	31,736			
<b>TOTAL</b>	547	127	144	655	979	1,538	3,411	5,544	7,810	11,672	12,616	22	45,065			

\* Includes Emergency Room.  
 \*\* Includes other long-term care facilities.  
 \*\*\* Includes hospices.





## 2B.

### LEADING CAUSES OF DEATH

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Since 2008, the Office of Vital Records (OVR) of the Arizona Department of Health Services has been implementing a new online death registration system. In the death certificate database some of the 2008 records originated with the old and some with the new registration systems. All of the 2009 death records were registered using the new system.

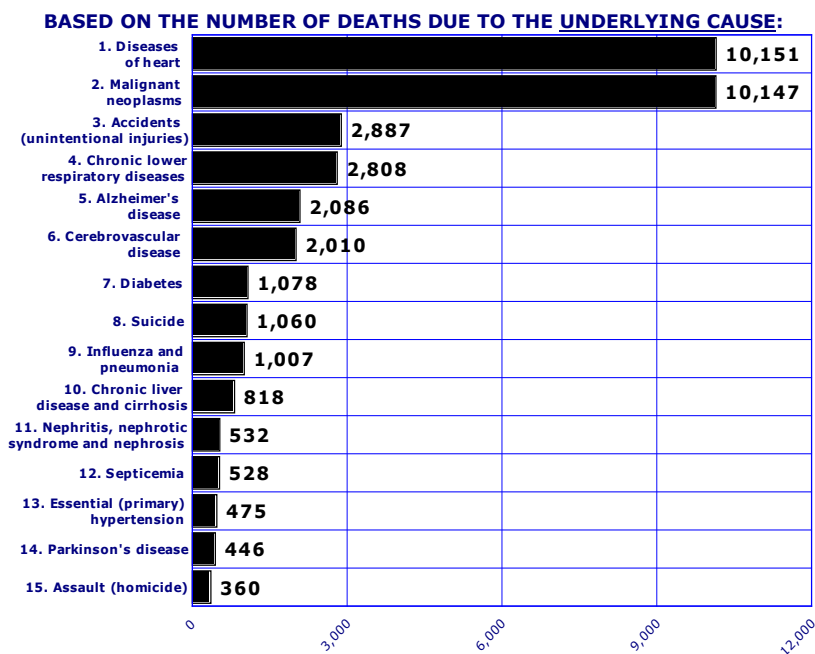
Before downloading the 2009 death certificate data for analysis by the end of April, 2010, we have been testing our computer programs re-written to deal with the peculiarities of the new system (new variables, changed variable names and formats, etc.).

We were astonished to find out that a surprisingly large number of 2,692 deaths in 2009 had the ICD-10 codes 'R00-R99' (*Symptoms, signs, and abnormal findings*) for the underlying cause of death. A single ICD-10 code 'R99' (*Unknown cause of mortality*) was used on 2,372 death records. A more in-depth analysis proved that the **underlying cause of death was misclassified** on a great majority of these records. Unfortunately, similar misclassification by the OVR nosologist applied to (a smaller number) of the 2008 death records; those registered using the new registration system. The misclassified records were corrected in the death certificate database for both 2008 and 2009. While it was not too late to use the corrected cause-of-death data in the analysis of 2009 mortality statistics; our options were quite limited as far as the already published mortality statistics for 2008. It was not possible to re-write and re-print the bound version of the "Arizona Health Status and Vital Statistics 2008" report. Instead, we have corrected the 2008 online data products which were affected by the misclassification. In addition, our 2009 report includes corrected for misclassification data for 2008 in all time-series mortality statistics for 1990-2009 and 1999-2009.



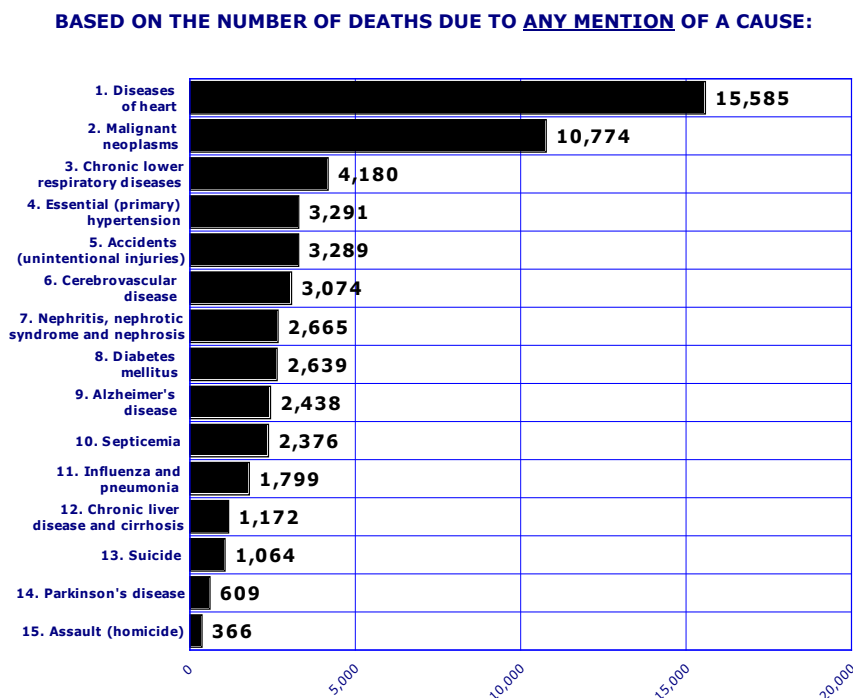
## 2B. LEADING CAUSES OF DEATH

**Figure 2B-1A**  
**Leading Causes of Death among Arizona Residents in 2009**



Based on the number of deaths (but not age-adjusted mortality rate), the leading underlying cause of death to Arizona residents in 2009 continued to be *heart disease*, which accounted for 10,151 or 22.5 percent of all deaths (**Figure 2B-1A, Table 2B-1, Table 5E-14**). There were only 4 more deaths from heart disease than *cancer* (10,147) which also was responsible for 22.5 percent of all deaths in 2009. Deaths due to *accidents (unintentional injuries)* ranked third in 2009, with 2,887 resident deaths reported. The fourth leading cause of death, *chronic lower respiratory diseases* accounted for 2,808 or 6.2 percent of total deaths. Deaths due to *Alzheimer's disease* ranked fifth in 2009, with 2,086 resident deaths reported. Together, these five causes accounted for 62.3 percent of total deaths in 2009. The fifteen leading causes accounted for 80.8 percent of all deaths among Arizona residents.

**Figure 2B-1B**  
**Leading Causes of Death among Arizona Residents in 2009**



For the purpose of mortality statistics, every death is attributed to one underlying condition or underlying cause of death. The underlying cause is defined as the disease or injury that initiated the chain of events leading directly to death. It is selected from up to 20 causes and conditions entered by the physician on the death certificate. The totality of all these conditions is known as multiple cause of death.

In addition to 10,151 deaths that had diseases of the heart assigned as the underlying cause, another 5,434 deaths had diseases of the heart assigned as the other than underlying cause. The sum of these two counts (15,585, **Figure 2 B-1B**) is the total number of deaths that had any mention of diseases of the heart on the 2009 death certificates. The ranking based on any mention of the 15 diagnostic categories is different from ranking of the leading causes of death based on the underlying cause. In particular, essential (primary) hypertension ranked 13<sup>th</sup> as the underlying cause but ranked

2B. LEADING CAUSES OF DEATH  
Five Leading Causes by Gender

It is important to note that Figure 2B-2, 2B-3, 2B-4, and 2B-5 are based on the age-adjusted mortality rates and not on the number of deaths.

In 2009, diseases of the heart were the leading cause of death for three of the five race/ethnic groups in Arizona: American Indians, Blacks or African Americans, and Hispanics or Latinos (**Figure 2B-2, Table 2B-4**). Cancer was the number one cause among Asians or Pacific Islanders and White non-Hispanics. Unintentional injury was the third leading cause of death only for American Indians and Hispanics. For Asians and Blacks, stroke was the 3<sup>rd</sup> leading cause of death in 2009. Diabetes was among the top five causes of death among American Indians, Blacks and Hispanics, but not among Asians or White non-Hispanics (**Table 2B-4**).

Alzheimer's disease was the fifth leading cause of death only among Asians and White non-Hispanics. Chronic liver disease and cirrhosis was the fifth leading cause of death specific to American Indians. Chronic lower respiratory diseases were the third leading cause of death specific to White non-Hispanics.

**Figure 2B-2**  
Age-adjusted\* Mortality Rates for the Five Leading Causes of Death for Both Genders by Race/Ethnicity, Arizona, 2009

Rank	Asian or Pacific Islander	American Indian or Alaska Native	Black or African American	Hispanic or Latino	White non-Hispanic
1	Cancer 108.1	Diseases of heart 125.8	Diseases of heart 171.3	Diseases of heart 130.5	Cancer 151.1
2	Diseases of heart 96.7	Cancer 113.3	Cancer 153.1	Cancer 128.4	Diseases of heart 147.5
3	Stroke 39.2	Unintentional injury 92.6	Stroke 42.8	Unintentional injury 35.3	Chronic lower respiratory diseases 45.0
4	Unintentional injury 24.5	Diabetes 54.2	Unintentional injury 36.5	Stroke 33.8	Unintentional injury 43.3
5	Alzheimer's disease 18.1	Chronic liver disease and cirrhosis 54.0	Diabetes 31.1	Diabetes 28.1	Alzheimer's disease 30.4

Number of deaths per 100,000 population age-adjusted to the 2000 U.S. standard.

**Figure 2B-3**  
Age-adjusted\* Mortality Rates for the Five Leading Causes of Death by Race/Ethnicity among Females, Arizona, 2009

Except Blacks or African Americans, cancer, not diseases of the heart, was the number one cause of death among females in all other race/ethnic groups (**Figure 2B-3, Table 2B-4**). Diseases of the heart were the 2<sup>nd</sup> leading cause of female mortality among Asians, American Indians, Hispanics or Latinos, and White non-Hispanic females. Alzheimer's disease was the 4<sup>th</sup> leading cause of mortality among Black or African American, Hispanic and White non-Hispanic females, and the 5<sup>th</sup> leading cause among Asian, females. Chronic liver disease and cirrhosis was the fourth leading cause of death specific to American Indian females. Chronic lower respiratory diseases were the third leading cause of death specific to White non-Hispanic females.

Rank	Asian or Pacific Islander	American Indian or Alaska Native	Black or African American	Hispanic or Latino	White non-Hispanic
1	Cancer 98.7	Cancer 103.5	Diseases of heart 160.4	Cancer 105.9	Cancer 128.7
2	Diseases of heart 80.9	Disease of heart 100.5	Cancer 154.2	Diseases of heart 105.4	Diseases of heart 114.2
3	Stroke 35.9	Diabetes 59.9	Stroke 54.5	Stroke 32.7	Chronic lower respiratory diseases 42.1
4	Unintentional injury 21.1	Chronic liver disease and cirrhosis 49.9	Alzheimer's disease 39.1	Alzheimer's disease 30.5	Alzheimer's disease 33.5
5	Alzheimer's disease 20.1	Unintentional injury 46.4	Diabetes 34.9	Diabetes 27.2	Unintentional injury 30.4

Number of deaths per 100,000 population to the 2000 U.S. standard.

2B. LEADING CAUSES OF DEATH  
Five Leading Causes by Gender

**Figure 2B-4**  
Age-adjusted\* Mortality Rates for the Five Leading Causes of Death  
by Race/Ethnicity among Males, Arizona, 2009

Rank	Asian or Pacific Islander	American Indian or Alaska Native	Black or African American	Hispanic or Latino	White non-Hispanic
1	Cancer 122.0	Diseases of heart 156.1	Diseases of heart 176.1	Diseases of heart 159.6	Diseases of heart 186.5
2	Diseases of heart 118.1	Unintentional injury 144.4	Cancer 160.3	Cancer 157.1	Cancer 179.8
3	Stroke 43.6	Cancer 127.5	Unintentional injury 42.1	Unintentional injury 48.2	Unintentional injury 56.6
4	Chronic lower respiratory diseases 33.4	Chronic liver disease and cirrhosis 57.9	Chronic lower respiratory diseases 34.1	Stroke 34.3	Chronic lower respiratory disease 48.7
5	Unintentional injury 27.6	Diabetes 46.6	Stroke 31.4	Diabetes 29.2	Intentional self-harm (suicide) 28.0

Diseases of the heart followed by cancer were the two leading causes of death among American Indian, Black, Hispanic, and White non-Hispanic males (**Figure 2 B-4; Table 2B-4**). Cancer was the first leading cause of death among Asian or Pacific Islander males, followed by diseases of the heart and stroke.

Chronic lower respiratory diseases were the 4<sup>th</sup> leading cause of death for Asian, Black, and White non-Hispanic males.

In 2009, based on the age-adjusted mortality rates, diabetes was the 5<sup>th</sup> leading cause for American Indian and Hispanic males.

Number of deaths per 100,000 population to the 2000 U.S. standard.

**Figure 2B-5**  
Age-adjusted\* Mortality Rates for the Five Leading Causes of Death  
by Gender in Urban\*\* and Rural Areas, Arizona, 2009

Rank	Urban male	Urban female	Rural male	Rural female
1	Diseases of heart 176.5	Cancer 124.6	Diseases of heart 208.5	Cancer 129.3
2	Cancer 172.3	Diseases of heart 112.1	Cancer 182.6	Diseases of heart 122.7
3	Unintentional injury 52.0	Chronic lower respiratory diseases 36.3	Unintentional injury 78.4	Chronic lower respiratory diseases 40.5
4	Chronic lower respiratory diseases 43.2	Alzheimer's disease 35.2	Chronic lower respiratory diseases 49.8	Unintentional injury 34.9
5	Stroke 28.3	Stroke 29.2	Intentional self-harm (suicide) 37.0	Stroke 28.5

In 2009, the profile of the leading causes of death differed by gender for the residents of the urban (Maricopa, Pima, Pinal, and Yuma counties) and rural (all the remaining counties) areas of the State (**Figure 2 B-5, Table 2 B-5**). For both urban and rural males, diseases of the heart were the leading cause of death with cancer, unintentional injuries, and chronic lower respiratory diseases in second, third, and fourth positions respectively. Cancer exceeded diseases of the heart as the leading cause of death among both urban and rural females. Stroke was the fifth leading cause of death in urban and rural areas regardless of gender. Alzheimer's disease was the fourth leading cause of death among urban females. Suicide was the 5<sup>th</sup> leading cause of death specific to rural males.

Number of deaths per 100,000 population age-adjusted to the 2000 U.S. standard.

\*\*Urban = Maricopa, Pima, Pinal and Yuma counties. The remaining counties comprise Arizona's rural areas.

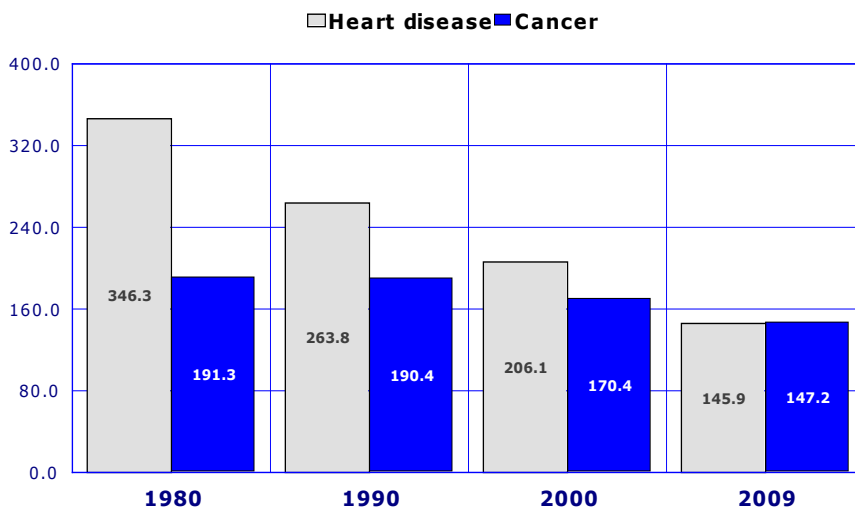
2B. LEADING CAUSES OF DEATH  
**Diseases of heart and malignant neoplasm (cancer)**

**Figure 2B-6**  
**Comparison of Age-adjusted\* Mortality Rates for Heart Disease and Cancer**  
**(Malignant Neoplasm), Arizona, 1980, 1990, 2000 and 2009**

The age-adjusted mortality rate for diseases of the heart decreased by 57.9 percent from 346.3 deaths per 100,000 population in 1980 to 145.9/100,000 in 2009 (Figure 2B-6). The age-adjusted mortality rate for cancer declined substantially less by 23.1 percent during 1980-2009. In Arizona, the relative risk of death from the two leading causes changed from 81 percent greater for heart disease in 1980 to 0.9 percent greater for cancer in 2009.

In 2000, 1,436 more Arizonans died from diseases of the heart than cancer (Table 2B-1). In 2009, the number of deaths from heart disease exceeded the number of cancer deaths by 4.

In 2009, based on the age-adjusted mortality rates, cancer replaced diseases of the heart as the leading cause of death in Arizona.

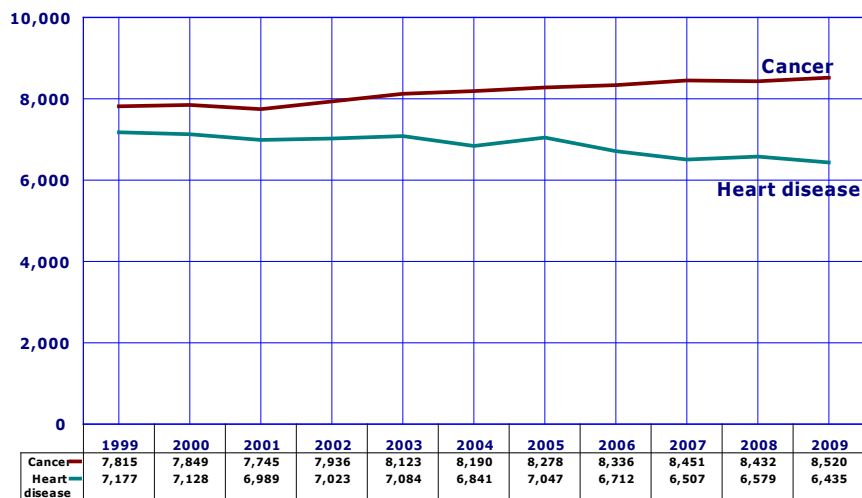


\*Adjusted to the 2000 standard U.S. population.

**Figure 2B-7**  
**Number of Deaths from Heart Disease and Cancer among**  
**Arizonans 0-84 Years, 1999-2009**

The prediction, that “in the early 21<sup>st</sup> century cancer will displace heart disease as the leading cause of death”, was originally published in the 1990 edition of the *Arizona Health Status and Vital Statistics* report (p.90).

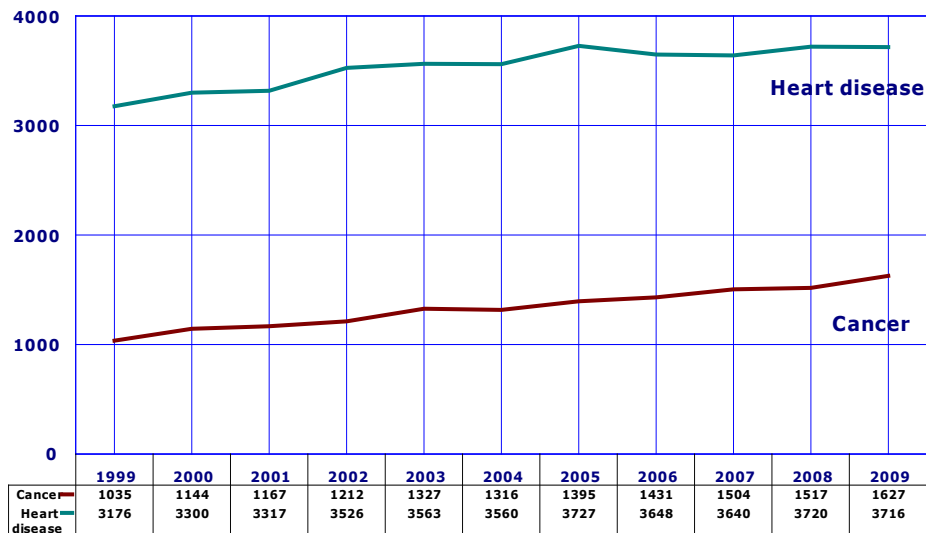
In fact, for the past fourteen years cancer has already been the number one cause of death among Arizonans aged 0-84 years (Figure 2 B-7). Beginning in 1996, the annual number of cancer deaths exceeded the number of deaths from heart disease. In 2009, 2,085 more Arizonans 0-84 years old died from cancer (8,520) than heart disease (6,435).





2B. LEADING CAUSES OF DEATH  
Diseases of heart and malignant neoplasm (cancer)

**Figure 2B-8**  
Deaths from Heart Disease and Cancer among Arizonans 85+, 1999-2009

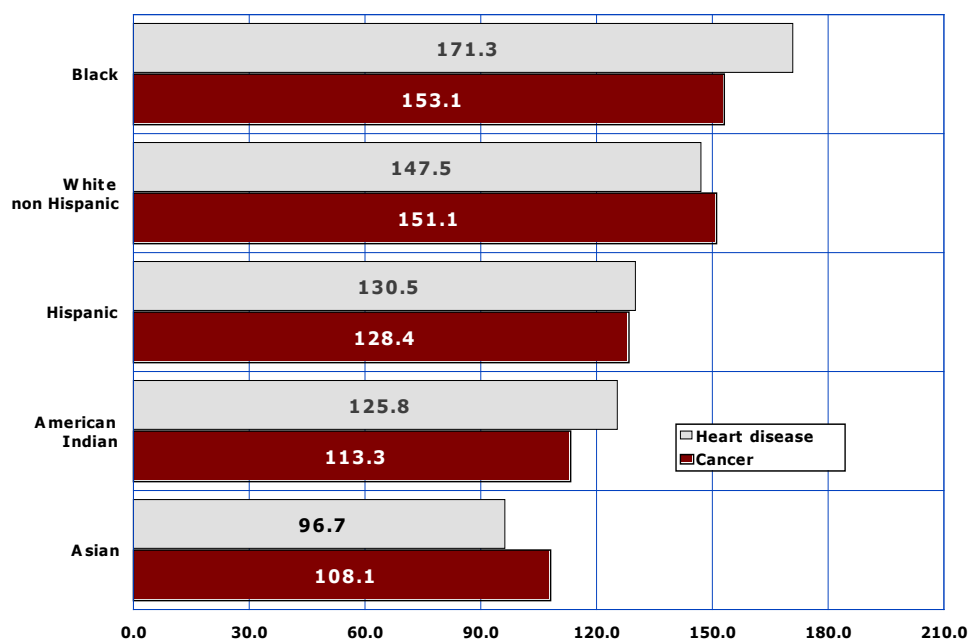


It is only among the oldest, 85 or older, that heart disease continues to be the number one cause of death (**Figure 2 B-8**). In 2009, the elderly aged 85 years or older accounted for 16.0 percent of all deaths from cancer but 36.6 percent of all deaths from heart disease. In 2009, the median age at death from heart disease was 81 years (**Table 2D-3**) and only a minority of deaths (42.1 percent, **Table 2 D-4**) was premature, i.e., before reaching the expected years of life at birth for all U.S. residents (77.7 years in 2006).

However, from 1999 to 2009, the number of deaths from cancer increased by 57.2 percent among Arizonans 85 years or older, a 3.4 times greater rise than the one seen for diseases of the heart (a 17.0 percent increase).

Note: there is more information available in our special online report "Heart Disease vs. Cancer: An Epidemiologic Transition in Mortality Risks, Arizona residents, 1990-2008". This publication can be accessed at <http://www.azdhs.gov/plan/report/epitrans/index.htm>

**Figure 2B-9**  
Age-adjusted Mortality Rates for Heart Disease and Cancer by Race/Ethnicity, Arizona, 2009



Arizona's Blacks were 1.8 times more likely to die from diseases of the heart and 1.4 times more likely to die from malignant neoplasms in 2009 than Asians, the group at the lowest risk of both heart disease and cancer death among race/ethnic groups (**Figure 2B-9, Table 2B-4**).

Among Asians and White non-Hispanics, the relative risk of death from cancer exceeded the mortality risk of death from heart disease in 2009 (**Table 2B-3**).

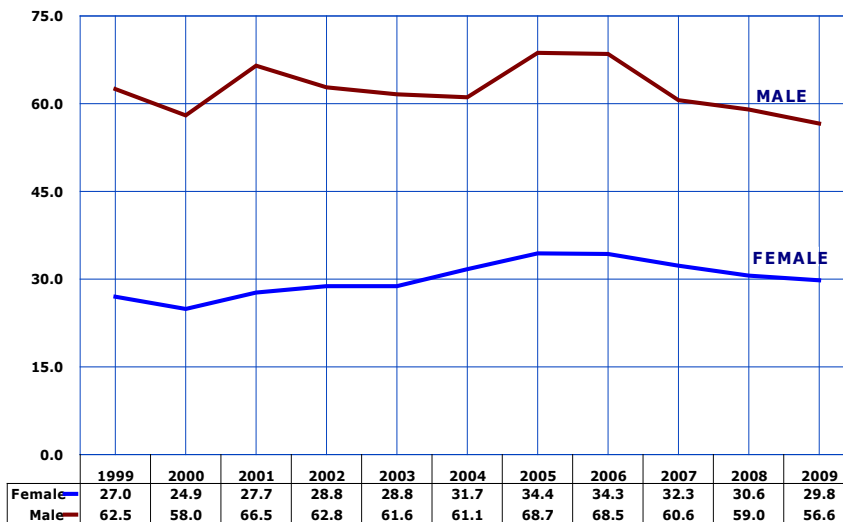
Number of deaths per 100,000 population age-adjusted to the 2000 U.S. standard.

2B. LEADING CAUSES OF DEATH  
**Accidents (unintentional injury)**

**Figure 2B-10**  
**Age-adjusted Mortality Rates for Accidents (unintentional injuries) by Gender and Year, Arizona, 1999-2009**

The number of deaths from unintentional injuries decreased by 8.5 percent from 3,156 in 2006 to and 2,887 in 2009 (Table 2B-1). In 2009, based on age-adjusted mortality rates, accidents ranked third as a leading cause of death for males and fifth for females (Table 2B-4). From 2005 to 2009 the age-adjusted mortality for accidents decreased by 17.6 percent for males and by 13.4 percent for females (Figure 2B-10).

In 2009, the number of deaths in motor vehicle accidents declined to 771, the lowest annual number of deaths since 1991. (Due to high unemployment and high gas prices there were, arguably, fewer drivers on Arizona roads, and less driving). In contrast, Arizonans experienced particularly large increase in the number of accidental drug overdoses from 383 deaths in 1999 to 802 deaths in 2009. In 2009, the number of deaths from accidental poisoning by drugs exceeded the number of deaths from motor vehicle-related injuries (Table 2B-9).

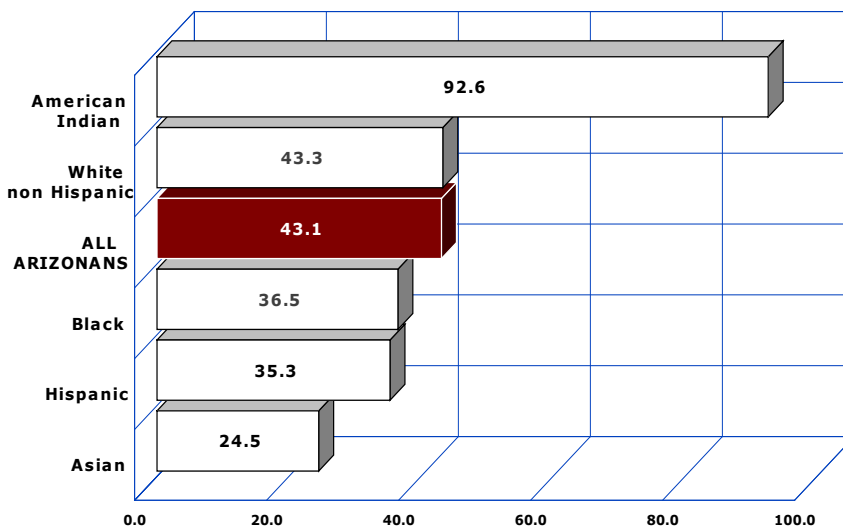


Number of deaths per 100,000 population age-adjusted to the 2000 U.S. standard.

**Figure 2B-11**  
**Age-adjusted Mortality Rates for Accidents (unintentional injuries) by Race/Ethnicity, Arizona, 2009**

The American Indian death rate for unintentional injuries (92.6/100,000) was 3.8 times greater than the rate for Asians (24.5/100,000), the group at the lowest risk of unintentional injury death among race/ethnic groups in the State (Figure 2B-11, Table 2B-4).

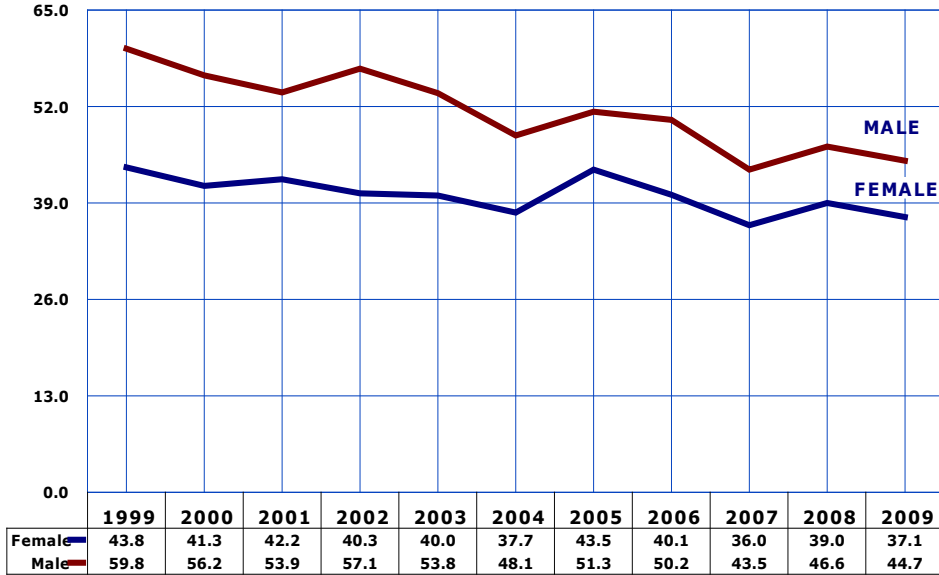
In 2008, Apache (116.3/100,000) and Navajo (94.5/100,000) counties had the two highest age-adjusted mortality rates for unintentional injuries (Table 5E-11).



Number of deaths per 100,000 population age-adjusted to the 2000 U.S. standard.

2B. LEADING CAUSES OF DEATH  
Chronic lower respiratory diseases

**Figure 2B-12**  
Age-adjusted Mortality Rates for Chronic Lower\* Respiratory Diseases by Gender and Year, Arizona, 1999-2009

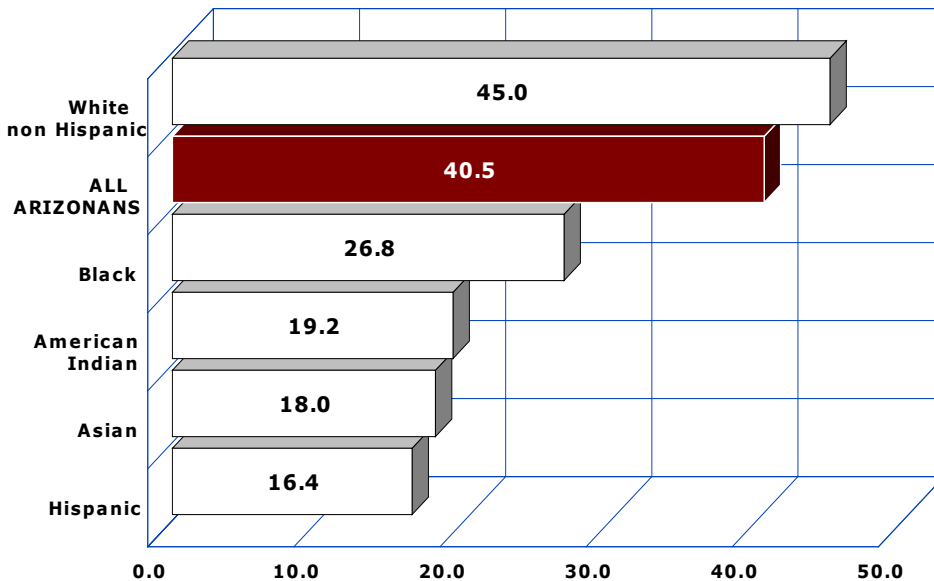


In 2009, chronic lower respiratory diseases (bronchitis, emphysema, asthma) were the 4th leading cause of death among Arizona residents (**Table 2B-1**). From 2008 to 2009, the mortality rates for chronic lower respiratory diseases (CLRD) decreased for both genders (**Figure 2B-12**, **Table 2B-2**).

Urban females had the lowest mortality rate for CLRD (36.3/100,000) among the gender by region groups (**Table 2 B-5**). Rural males, the group at the highest mortality risk for CLRD (49.8/100,000), were 15.3 percent more likely in 2009 to die from this cause than urban males (43.2 deaths per 100,000).

\*Number of deaths per 100,000 population age-adjusted to the 2000 U.S. standard.  
\*This ICD-10 title corresponds to Chronic Obstructive Pulmonary Disease (ICD-9 title)

**Figure 2B-13**  
Age-adjusted Mortality Rates for Chronic Lower\* Respiratory Diseases by Race/Ethnicity, Arizona, 2009



Death rates for emphysema, chronic bronchitis, asthma and other lower respiratory disorders were substantially higher among White non-Hispanics (45.0 deaths per 100,000) than they were among Blacks or African American (26.8/100,000), American Indians (19.2/100,000), Asians (18.0/100,000), and Hispanic or Latinos (16.4/100,000; **Figure 2 B-13**, **Table 2B-4**).

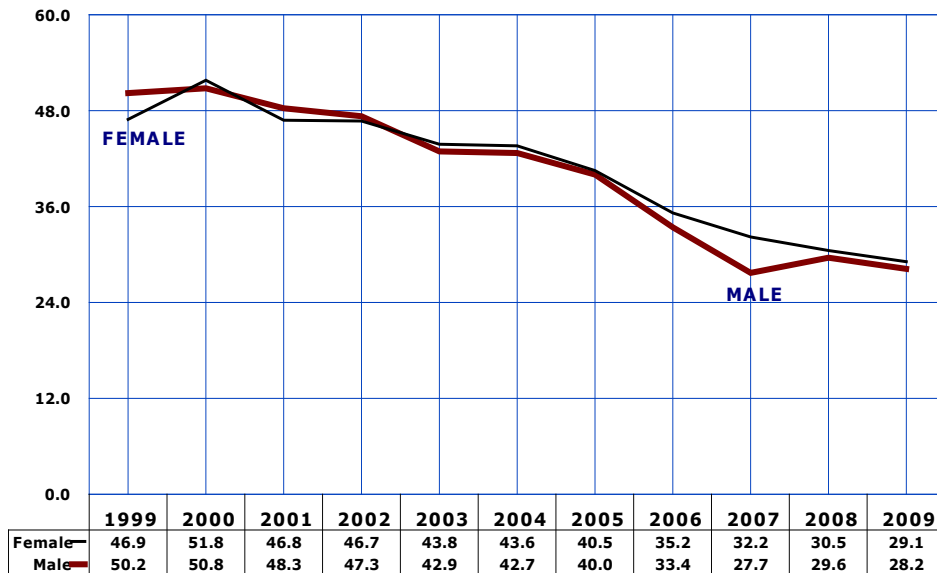
Number of deaths per 100,000 population age-adjusted to the 2000 U.S. standard.

2B. LEADING CAUSES OF DEATH  
Cerebrovascular disease

**Figure 2B-14**  
Age-adjusted Mortality Rates for Cerebrovascular Disease by Gender and Year, Arizona, 1999-2009

Cerebrovascular disease and diseases of the heart are two of the leading causes of death that share many risk factors such as hypertension, smoking, obesity and high levels of cholesterol. The age-adjusted mortality rate for stroke decreased by 40.4 percent from 48.5 deaths per 100,000 population in 1999 to 28.9/100,000 in 2009 (Table 2B-3).

In 2002, the number of deaths from cerebrovascular disease was greater among females (1,167) than males (843, Table 2 B-4). Females remained at greater risk than males to die from a stroke in 2003-2009, as they were in 2000 (Figure 2B-14). In 2009 the age-adjusted mortality rate for stroke decreased for both males and females (Figure 2B-14, Table 2B-2).

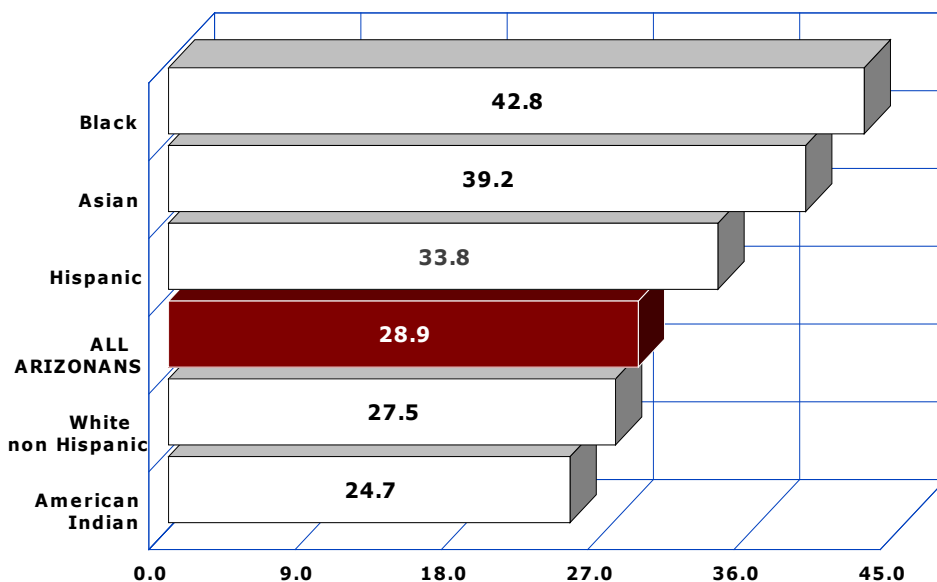


Number of deaths per 100,000 population age-adjusted to the 2000 U.S. standard.

**Figure 2B-15**  
Age-adjusted Mortality Rates for Cerebrovascular Disease by Race/Ethnicity, Arizona, 2009

Compared to Arizona's rate, Blacks or African Americans were 48.1 percent more likely to die from cerebrovascular disease in 2009 (Figure 2B-15, Table 2 B-4). The 2009 mortality rate for cerebrovascular disease among American Indians (24.7/100,000) was the lowest among race/ethnic groups.

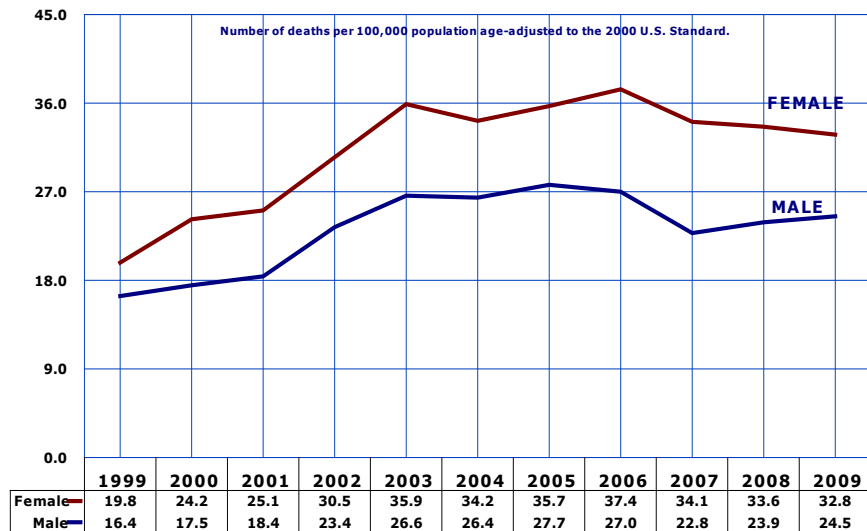
American Indian females had the lowest mortality rate for cerebrovascular disease among gender by race subgroups (20.0 deaths per 100,000, Table 2B-4), while Asian or Pacific Islander males had the highest rate of 43.6 deaths per 100,000.



Number of deaths per 100,000 population age-adjusted to the 2000 U.S. standard.

2B. LEADING CAUSES OF DEATH  
Alzheimer's disease

**Figure 2B-16**  
Age-adjusted Mortality Rates for Alzheimer's Disease by  
Gender and Year, Arizona, 1999-2009



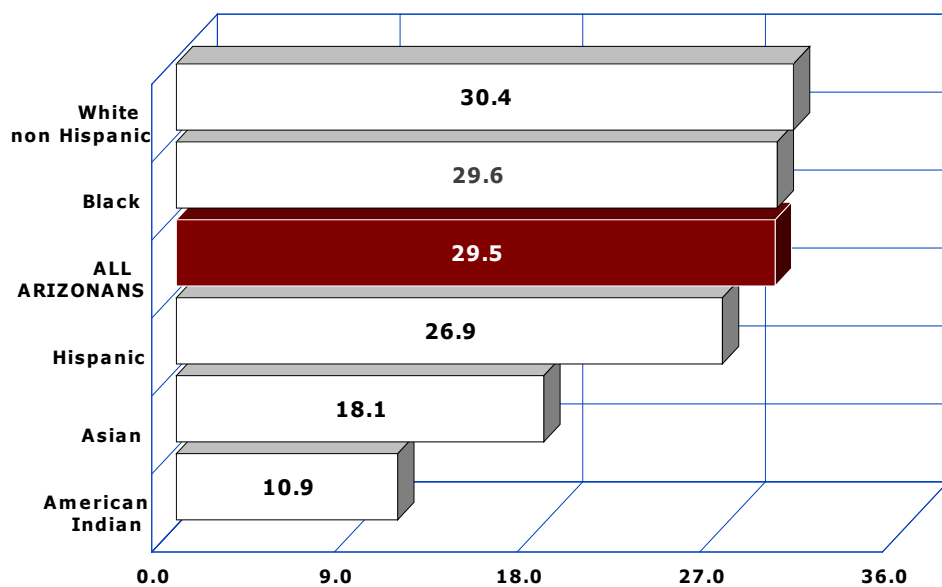
Based on the number of deaths in 2009, Alzheimer's disease was the 4th leading cause of death for females and 7<sup>th</sup> leading cause for males (**Table 2B-4**).

The age-adjusted mortality rate for Alzheimer's disease among females decreased for the third consecutive year by 12.3 percent from 37.4/100,000 in 2006 to 32.8 /100,000 in 2009 (**Figure 2B-16**). The age-adjusted mortality rate for Alzheimer's disease increased for the second consecutive year for males by from 22.8/100,000 in 2007 to 24.5/100,000 in 2009

In 2008, the age-adjusted death rate for Alzheimer's disease was 33.9 percent higher for females than for males.

Note: The rates for 1998-1999 are comparability-modified.

**Figure 2B-17**  
Age-adjusted Mortality Rates for Alzheimer's Disease by  
Race/Ethnicity, Arizona, 2009



The age-adjusted mortality rates for Alzheimer's disease in 2009 were higher among White non-Hispanic (30.4 deaths per 100,000) and Black or African American (29.6/100,000) than they were among Hispanic or Latino (26.9/100,000), Asian (18.1/100,000), and American Indian residents of Arizona (10.9/100,000; **Figure 2 B-17, Table 2B-4**).

White non-Hispanic residents of Arizona disproportionately contributed to mortality from Alzheimer's disease. In 2009, White non-Hispanics accounted for 60.3 percent (**Table 1 0C-1**) of the State's population, but 88.8 percent of all deaths from Alzheimer's disease (1,854 out of 2,086; **Table 2B-4**).

In 2009, the median age at death from Alzheimer's disease was 88 for females and 86 for males (**Table 2D-3**).

Number of deaths per 100,000 population age-adjusted to the 2000 U.S. standard.

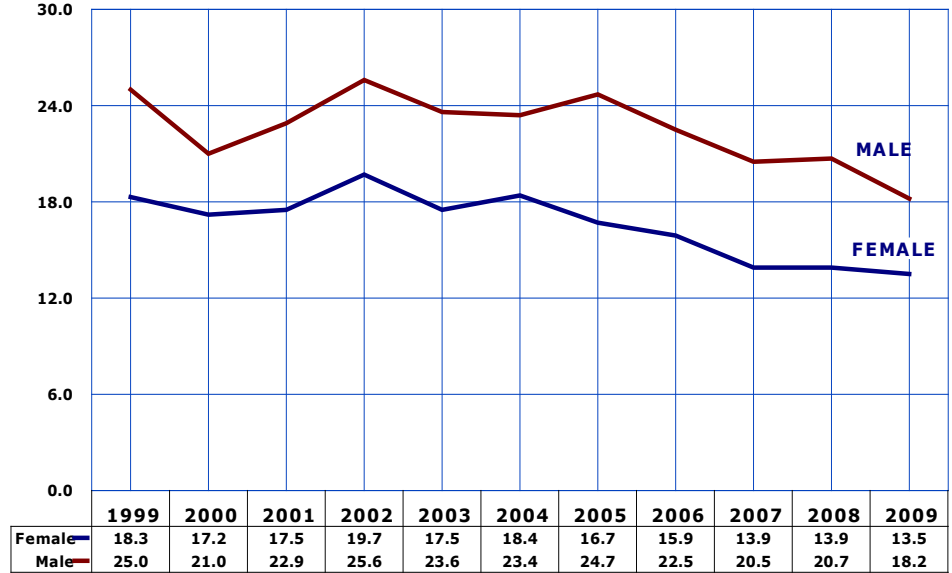
2B. LEADING CAUSES OF DEATH  
Diabetes

**Figure 2B-18**  
Age-adjusted Mortality Rates for Diabetes by Gender and Year, Arizona, 1999-2009

Both in 1999 and 2009, diabetes was the 7<sup>th</sup> leading cause of death among Arizona residents (**Table 2B-1**). Both men and women experienced a decline in mortality rates for diabetes from 2005 to 2009 (**Figure 2B-18**).

In 2009, in addition to 1,078 deaths that had diabetes assigned as the underlying cause, another 1,561 deaths had diabetes assigned as a contributing factor (**Figure 2 B-1B**. The diabetes-related death rate of 38.2/100,000 (**Table 6 A-6**) was 2.4 times greater than the rate for diabetes as underlying cause (15.7/100,000, **Table 2B-2**).

The diabetes-related death rate includes all mentions of diabetes on the death certificate as the underlying or other than underlying cause.

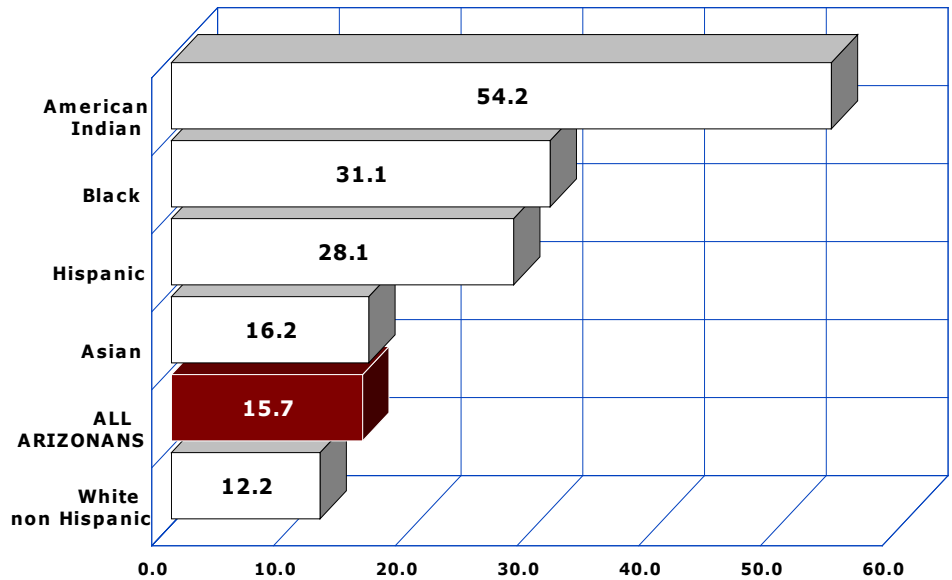


Number of deaths per 100,000 population age-adjusted to the 2000 U.S. standard.

**Figure 2B-19**  
Age-adjusted Mortality Rates for Diabetes by Race/Ethnicity, Arizona, 2009

In 2009, compared to Arizona's rate, American Indians were 3.5 times more likely to die from diabetes (54.2 deaths per 100,000; **Figure 2 B-19**, **Table 2B-4**). The rate of 12.2 deaths per 100,000 among White non-Hispanics was the lowest rate among race/ethnic groups in the State.

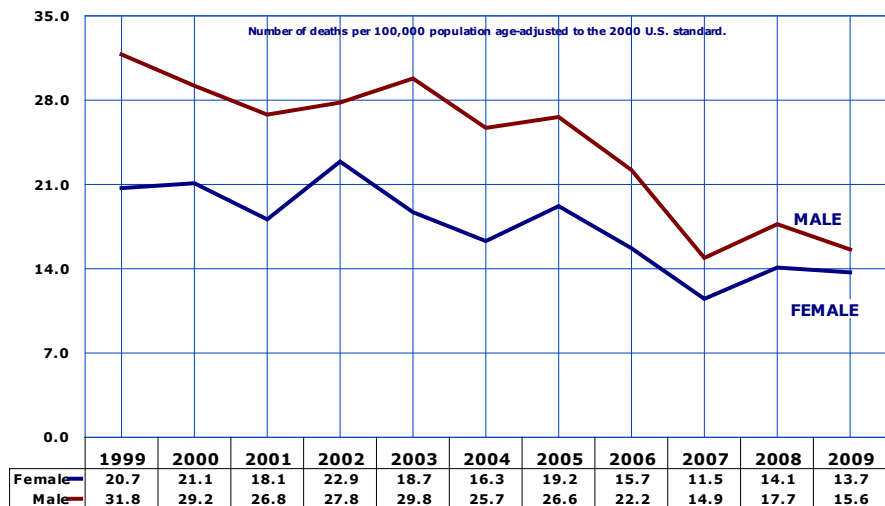
Among the 15 Arizona counties, in 2009 Apache (40.4/100,000), Greenlee (41.4/100,000), and Graham (37.2 /100,000) had the highest mortality rates for diabetes (**Table 5E-11**).



Number of deaths per 100,000 population age-adjusted to the 2000 U.S. standard.

## 2B. LEADING CAUSES OF DEATH Influenza and pneumonia

**Figure 2B-20**  
**Age-adjusted Mortality Rates for Influenza and Pneumonia by Gender and Year, Arizona, 1999-2009**



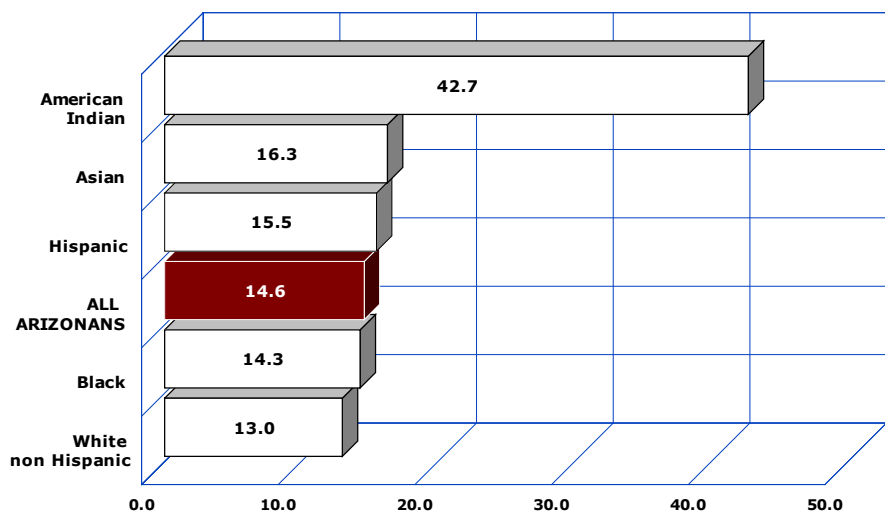
The number of deaths from influenza and pneumonia decreased by 6.3 percent from 1,075 in 2008 to 1,007 in 2009 (**Table 2B-1**). In 2009, influenza and pneumonia were ranked the 8<sup>th</sup> leading cause of death in Arizona. Among the 1,007 deaths, influenza was identified as the underlying cause for 19 of them, while pneumonia was listed as the underlying cause on 1,041 death certificates (**Table 2B-6**).

The mortality rate for influenza and pneumonia decreased for females from 14.1 deaths per 100,000 in 2008 to 13.7 deaths in 2009 (**Figure 2 B-20, Table 2 B-2**). The mortality rate for influenza and pneumonia also decreased for males from 17.7 deaths per 100,000 in 2008 to 15.6/100,000 in 2009.

In 2008, Arizona males were 13.9 percent more likely to die from influenza and pneumonia than females.

Note: The rate for 1999 is based on the number of deaths according to ICD-9. The rates for 2000 and beyond are based on the number of deaths according to ICD-10. For comparability, the rate for 1999 was adjusted using the preliminary comparability ratio of 0.6982 from NCHS. Comparability ratio of 1.0 indicates that the same number of deaths was assigned to a cause of death whether ICD-9 or ICD-10 was used.

**Figure 2B-21**  
**Age-adjusted Mortality Rates for Influenza and Pneumonia by Race/Ethnicity, Arizona, 2009**



In 2009, American Indian residents of Arizona had the highest mortality rate for influenza and pneumonia (42.7 deaths per 100,000) among the race/ethnic groups. The age-adjusted mortality of 13.0/100,000 among White non-Hispanics was the lowest rate among race/ethnic groups in the State (**Figure 2B-21, Table 2B-4**).

Compared to the State death rate for influenza and pneumonia, Graham County's rate was 2.5 times greater (36.8/100,000). The mortality rates also were elevated in Apache (35.7/100,000) and Navajo (30.4) counties (**Table 5E-11**).

Number of deaths per 100,000 population age-adjusted to the 2000 U.S. standard.

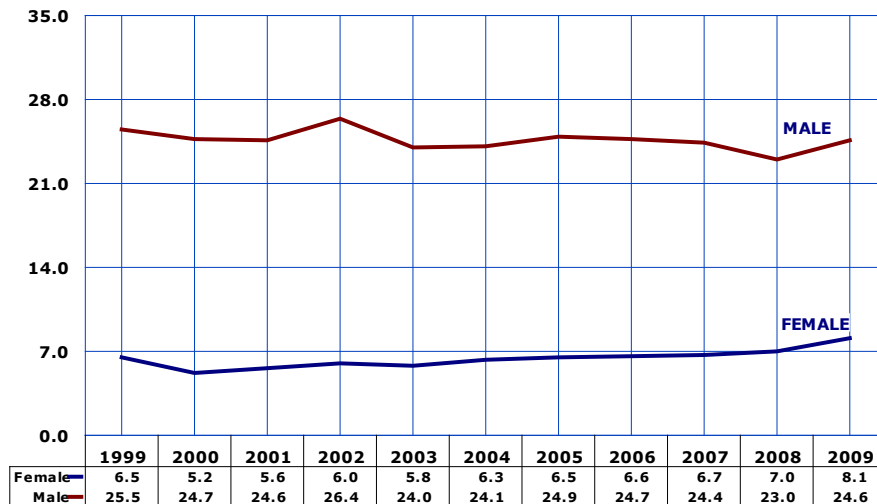
2B. LEADING CAUSES OF DEATH  
Suicide

**Figure 2B-22**  
Age-adjusted Mortality Rates for Suicide by Gender and Year,  
Arizona, 1999-2009

In 2009, suicide was the 6<sup>th</sup> leading cause of death among males. It ranked as the 9th cause of mortality for females. The age-adjusted suicide rate increased by 8.8 percent from 14.8 suicides per 100,000 residents of the State in 2008 to 16.1/100,000 in 2009; the highest suicide rate since 1998 (**Table 2B-3**).

The suicide rate increased for females from 7.0 suicides per 100,000 in 2008 to 8.1 in 2009 (**Figure 2B-22, Table 2B-3**). The male mortality risk for suicide also increased from the 2008 rate of 23.0/100,000 to 24.6/100,000 in 2009.

In 2009, suicide posed a 3 times greater mortality risk for males (24.6/100,000) than females (8.1/100,000).



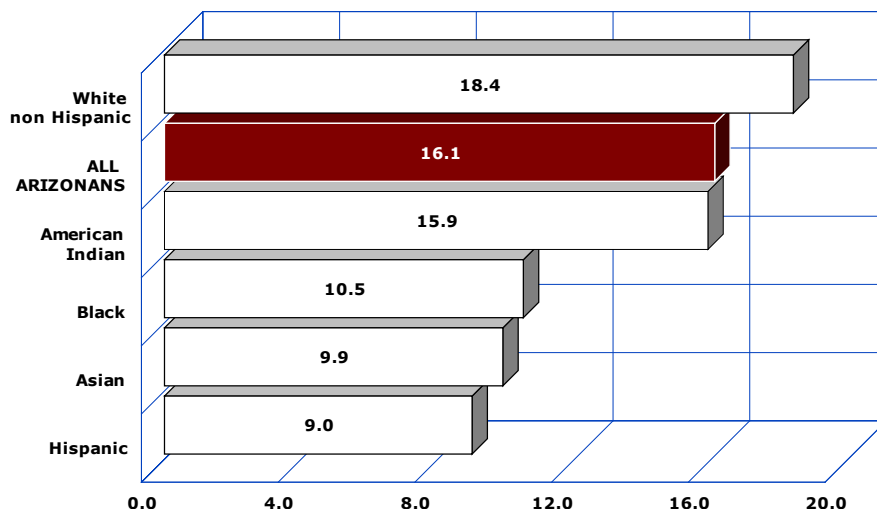
Number of deaths per 100,000 population age-adjusted to the 2000 U.S. standard.

**Figure 2B-23**  
Age-adjusted Mortality Rates for Suicide by Race/Ethnicity,  
Arizona, 2009

In 2009, White non-Hispanics (had the highest age-adjusted suicide rate (18.4 suicides per 100,000) among the race/ethnic groups (**Figure 2B-23, Table 2B-4**).

From 2008 to 2009 the suicide rates increased for each gender and race/ethnic group, except Asians (**Table 2 B-3**). The suicide rate more than doubled for Hispanic or Latino females (1.9 vs. 3.9), and it increased 1.9 times for Asian or Pacific Islander males (10.7 vs. 19.9; **Table 2B-3**).

The age-adjusted mortality rates varied in Arizona in 2009 from 8.1 suicides per 100,000 residents of Greenlee County to 29.2 suicides per 100,000 residents of Mohave County, and 45.3/100,000 among La Paz County residents (**Table 5E-11**).

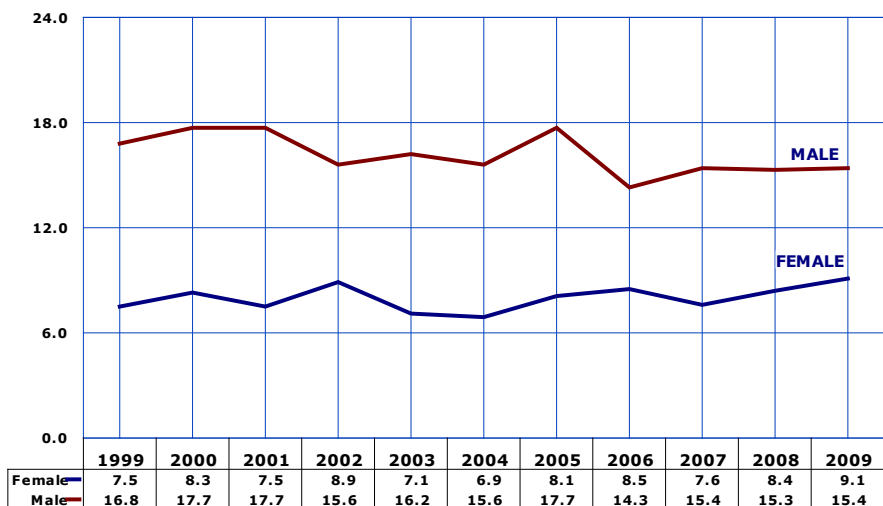


Number of deaths per 100,000 population age-adjusted to the 2000 U.S. standard.



2B. LEADING CAUSES OF DEATH  
Chronic liver disease and cirrhosis

**Figure 2B-24**  
Age-adjusted Mortality Rates for Chronic Liver Disease and Cirrhosis  
by Gender and Year, Arizona, 1999-2009



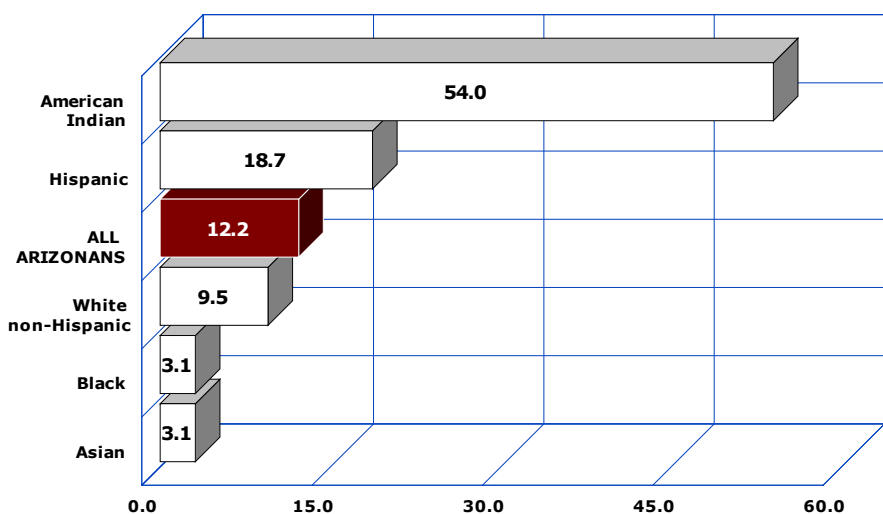
Chronic liver disease and cirrhosis was the 10<sup>th</sup> leading cause of death in Arizona in 2009 (**Figure 2 B-1, Table 2B-1**). Among the 818 deaths due to chronic liver disease and cirrhosis, 499 (61.0 percent) were males (**Table 2B-4**).

Among females the age-adjusted mortality rate for chronic liver disease and cirrhosis increased for the 2<sup>nd</sup> consecutive year from 7.6/100,000 in 2007 to 9.1/100,000 in 2009. Among males, the mortality remained unchanged in 2007-2009 (**Figure 2 B-24, Table 2B-3**).

In 2009, La Paz, Navajo, and Mohave counties had the highest mortality rates for chronic liver disease and cirrhosis (**Table 5E-11**).

The number of deaths per 100,000 population age-adjusted to the 2000 U.S. standard.

**Figure 2B-25**  
Age-adjusted Mortality Rates for Chronic Liver Disease and Cirrhosis  
by Race/Ethnicity, Arizona, 2009



The 2009 death rate for chronic liver disease and cirrhosis among American Indians (54.0 deaths per 100,000) was 17.4 times greater than the rate among Asians or Blacks (3.1/100,000) (**Figure 2B-25, Table 2B-4**). The rate for Hispanics (18.7 deaths per 100,000 population) was the second highest among race/ethnic groups in the State.

Compared to the median age at death from all causes (76 years), those who died from chronic liver disease and cirrhosis were 18 years younger (58 years, **Table 2 D-3**). In 2009, the median age at death of American Indians who died from chronic liver disease and cirrhosis was only 48 years (**Table 2D-3**).

Number of deaths per 100,000 population age-adjusted to the 2000 U.S. standard.

**TABLE 2B-1  
NUMBER OF DEATHS FOR THE LEADING CAUSES OF MORTALITY BY YEAR, ARIZONA, 1999-2009**

Rank in 1999	Rank in 2009	Cause of death	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
1	1	Diseases of heart	10,355	10,430	10,312	10,551	10,649	10,402	10,779	10,362	10,147	10,299	10,151
2	2	Malignant neoplasms	8,851	8,994	8,914	9,148	9,451	9,506	9,673	9,768	9,955	9,949	10,147
5	3	Accidents (unintentional injury)	2,192	2,087	2,430	2,416	2,466	2,641	3,006	3,156	3,014	2,951	2,887
4	4	Chronic lower respiratory diseases	2,499	2,493	2,463	2,530	2,522	2,392	2,778	2,771	2,651	2,896	2,808
9	6	Alzheimer's disease*	859	1,046	1,103	1,413	1,691	1,672	1,816	2,057	2,041	2,086	2,086
3	5	Cerebrovascular diseases	2,320	2,603	2,416	2,448	2,356	2,412	2,325	2,159	2,079	2,089	2,010
7	7	Diabetes	1,046	993	1,040	1,201	1,124	1,180	1,196	1,188	1,145	1,162	1,078
6	8	Influenza and pneumonia*	1,204	1,201	1,100	1,294	1,248	1,108	1,280	1,147	875	1,075	1,007
8	9	Intentional self-harm (suicide)	773	737	¶600-767	855	807	854	915	948	986	968	1,060
12	10	Chronic liver disease and cirrhosis	397	645	635	647	625	629	749	706	734	778	818
13	11	Septicemia*	399	346	372	445	463	456	496	539	547	539	528
10	12	Nephritis, nephrotic syndrome and nephrosis*	516	605	622	600	550	625	603	549	510	488	532
15	13	Parkinson's disease	355	342	366	397	402	390	492	489	455	487	446
14	14	Essential primary hypertension and hypertensive renal disease	431	275	298	293	339	405	390	420	389	475	475
11	15	Assault (homicide)	430	394	467	478	480	486	503	525	494	461	360
<b>ALL CAUSES</b>			39,673	40,202	40,851	42,320	42,830	42,736	45,115	45,415	44,640	45,128	45,065

Note: The cause-of-death titles are according to the Tenth Revision of the International Classification of Diseases (ICD-10). The causes of death for 2000-2009 re classified by ICD-10, replacing the Ninth Revision (ICD-9) used during 1979-1999. The group titles, such as Cardiovascular diseases, Infectious and parasitic diseases or Other cardiovascular diseases are not ranked to determine the leading causes of death. The ICD-10 code for the underlying cause of death was missing for as many as 970 death records in 2001, 704 in 2002 and 140 in 2008.

\*Comparability-modified number of deaths for 1999 is shown for the four causes of death for which the discontinuity in trend (resulting from implementation of ICD-10) is substantial. The comparability-modified data present the annual number of deaths for 1999 that would have been classified as Influenza and pneumonia, Alzheimer's disease, Nephritis, or Septicemia had the ICD-10 classification system and coding rules been in place. For the remaining causes of death, little or no change occurred in the number of deaths assigned using the different coding revisions. See **Technical Notes** for the measures of comparison between ICD-9 and ICD-10 –the “comparability ratios” - for the causes of death shown in this report.

¶ Unprecedented decline in the number of suicides from 773 in 1999 to 600, as originally published for 2001, signifies problems with the automated coding of the underlying cause of death by the National Center for Health Statistics. In 1999-2001, some firearm-suicides and suicides by drugs were classified as accidents because the "manner of death" was not indicated on a death certificate and the automated coding system defaulted to accidental injury. The more realistic number of 767 suicides used for 2001 in the above table is from the WISQARS site at [http://webappa.cdc.gov/sasweb/ncipc/mortrate10\\_sy.html](http://webappa.cdc.gov/sasweb/ncipc/mortrate10_sy.html). For more information also see <http://www.azdhs.gov/plan/report/im/im/im04/3/index.htm>.

**TABLE 2B-2  
AGE-ADJUSTED\* MORTALITY RATES BY GENDER AND YEAR FOR SELECTED LEADING CAUSES OF DEATH,  
ARIZONA, 1999-2009**

		1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
<b>TOTAL, ALL CAUSES</b>												
	<b>Total</b>	811.0	785.6	791.2	796.4	784.0	757.3	772.5	727.3	663.2	659.6	653.2
	<b>Male</b>	982.6	941.1	952.4	964.8	942.8	909.0	925.7	861.6	773.8	777.6	763.9
	<b>Female</b>	668.7	654.6	656.7	658.0	651.5	632.0	644.9	611.8	561.7	554.3	555.1
<b>CARDIOVASCULAR DISEASE</b>												
	<b>Total</b>	289.7	276.1	267.3	265.5	258.4	248.5	245.7	216.4	194.4	194.1	188.8
	<b>Male</b>	349.8	333.1	321.6	321.1	310.3	298.4	298.2	258.3	227.5	235.8	228.1
	<b>Female</b>	240.1	230.0	223.0	221.0	215.8	207.8	203.8	181.0	164.3	158.1	154.9
<b>-----DISEASES OF HEART</b>												
	<b>Total</b>	213.9	206.1	201.7	201.0	197.1	186.7	186.9	166.1	149.5	149.3	145.9
	<b>Male</b>	269.4	259.3	251.3	253.6	246.6	234.2	237.4	207.3	184.0	189.3	183.1
	<b>Female</b>	168.5	163.6	161.5	158.9	157.1	148.5	147.3	131.8	119.4	115.1	114.1
<b>-----CEREBROVASCULAR DISEASE</b>												
	<b>Total</b>	48.5	51.7	47.7	47.0	43.9	43.6	40.6	34.8	30.6	30.3	28.9
	<b>Male</b>	50.2	50.8	48.3	47.3	42.9	42.7	40.0	33.4	27.7	29.6	28.2
	<b>Female</b>	46.9	51.8	46.8	46.7	43.8	43.6	40.5	35.2	32.2	30.5	29.1
<b>MALIGNANT NEOPLASMS</b>												
	<b>Total</b>	176.7	170.4	169.2	168.6	169.4	164.7	161.8	154.7	148.0	145.5	147.2
	<b>Male</b>	212.6	204.0	199.8	209.1	208.3	201.2	197.1	187.0	176.7	173.8	174.9
	<b>Female</b>	150.5	145.8	147.5	139.1	141.3	138.6	136.1	131.0	125.6	123.0	125.8
<b>CHRONIC LOWER RESPIRATORY DISEASE</b>												
	<b>Total</b>	50.1	47.4	46.9	47.0	45.4	41.9	46.8	44.3	39.2	42.2	40.5
	<b>Male</b>	59.8	56.2	53.9	57.1	53.8	48.1	51.3	50.2	43.5	46.6	44.7
	<b>Female</b>	43.8	41.3	42.2	40.3	40.0	37.7	43.5	40.1	36.0	39.0	37.1
<b>ACCIDENTS (UNINTENTIONAL INJURIES)</b>												
	<b>Total</b>	44.4	41.1	46.6	45.2	44.8	46.0	51.1	51.2	46.6	44.7	43.1
	<b>Male</b>	62.5	58.0	66.5	62.8	61.6	61.1	68.7	68.5	60.6	59.0	56.6
	<b>Female</b>	27.0	24.9	27.7	28.8	28.8	31.7	34.4	34.3	32.3	30.6	29.8
<b>-----MOTOR VEHICLE ACCIDENTS</b>												
	<b>Total</b>	19.6	17.5	17.2	18.5	18.0	18.1	18.9	19.6	16.2	13.6	11.6
	<b>Male</b>	27.5	24.4	24.2	25.5	24.9	23.9	27.0	26.8	22.2	19.5	16.8
	<b>Female</b>	11.8	10.6	10.1	11.6	11.2	12.5	11.1	12.4	10.1	7.9	6.5
<b>INFLUENZA AND PNEUMONIA **</b>												
	<b>Total</b>	25.4	24.4	21.9	25.0	23.4	20.1	22.3	18.4	12.9	15.6	14.6
	<b>Male</b>	31.8	29.2	26.8	27.8	29.8	25.7	26.6	22.2	14.9	17.7	15.6
	<b>Female</b>	20.7	21.1	18.1	22.9	18.7	16.3	19.2	15.7	11.5	14.1	13.7

**TABLE 2B-2 (continued)  
AGE-ADJUSTED\* MORTALITY RATES BY GENDER AND YEAR FOR SELECTED LEADING CAUSES OF DEATH,  
ARIZONA, 1999-2009**

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
<b>ALZHEIMER'S DISEASE**</b>											
<b>Total</b>	18.4	21.8	22.5	28.0	32.5	31.3	32.7	33.4	29.6	29.8	29.5
<b>Male</b>	16.4	17.5	18.4	23.4	26.6	26.4	27.7	27.0	22.8	23.9	24.5
<b>Female</b>	19.8	24.2	25.1	30.5	35.9	34.2	35.7	47.4	34.1	33.6	32.8
<b>DIABETES</b>											
<b>Total</b>	21.1	19.0	19.9	22.3	20.3	20.7	20.1	18.9	17.0	17.0	15.7
<b>Male</b>	25.0	21.0	22.9	25.6	23.6	23.4	24.7	22.5	20.5	20.7	18.2
<b>Female</b>	18.3	17.2	17.5	19.7	17.5	18.4	16.7	15.9	13.9	13.9	13.5
<b>CHRONIC LIVER DISEASE AND</b>											
<b>Total</b>	12.0	12.8	12.3	12.1	11.5	11.1	12.7	11.4	11.3	11.7	12.2
<b>Male</b>	16.8	17.7	17.7	15.6	16.2	15.6	17.7	14.3	15.4	15.3	15.4
<b>Female</b>	7.5	8.3	7.5	8.9	7.1	6.9	8.1	8.5	7.6	8.4	9.1
<b>NEPHRITIS, NEPHROTIC SYNDROME, AND NEPHROSIS**</b>											
<b>Total</b>	10.6	11.7	12.0	11.3	10.1	11.0	10.4	8.8	7.6	7.1	7.7
<b>Male</b>	13.9	13.9	15.6	12.9	12.0	13.4	12.7	10.5	8.8	8.6	9.2
<b>Female</b>	8.5	10.4	9.7	10.4	8.8	9.4	8.8	7.4	6.6	5.9	6.5
<b>INTENTIONAL SELF-HARM (SUICIDE)</b>											
<b>Total</b>	15.7	14.6	14.9	15.9	14.6	14.9	15.4	15.4	15.4	14.8	16.1
<b>Male</b>	25.5	24.7	24.6	26.4	24.0	24.1	24.9	24.7	24.4	23.0	24.6
<b>Female</b>	6.5	5.2	5.6	6.0	5.8	6.3	6.5	6.6	6.7	7.0	8.1
<b>ASSAULT (HOMICIDE)</b>											
<b>Total</b>	8.5	7.6	8.7	8.6	8.3	8.2	8.2	8.5	7.7	7.1	5.5
<b>Male</b>	12.1	11.1	13.7	13.9	12.8	13.3	13.5	13.5	11.8	11.2	8.0
<b>Female</b>	4.7	3.8	3.6	3.0	3.6	2.9	2.6	3.1	3.2	2.7	2.9
<b>SEPTICEMIA **</b>											
<b>Total</b>	13.2	6.7	7.2	8.3	8.4	8.0	8.4	8.6	8.1	7.9	7.7
<b>Male</b>	15.8	7.3	8.0	9.6	9.4	9.4	9.7	9.4	8.4	9.4	8.2
<b>Female</b>	11.3	6.1	6.5	7.2	7.6	7.0	7.5	8.0	7.9	6.7	7.3

\* The number of deaths per 100,000 population adjusted to the 2000 U.S. standard. The cause-of-death titles are according to the Tenth Revision of the International Classification of Diseases (ICD-10). Beginning in 2000, the causes of death are classified by ICD-10. The causes of death for 1998-1999 are classified by the Ninth Revision (ICD-9). The rates for 1998-1999 were revised in this edition of the report for consistency with the newly recomputed mortality rates in Table 2B-3.

\*\* The rates for 1998-1999 are comparability-modified. In order to obtain comparability-modified data, the number of deaths or the death rate for a particular cause of death (such as Alzheimer's disease, Nephritis, Influenza and pneumonia, or Septicemia) classified by ICD-9 is adjusted by multiplying it by the comparability ratio for that cause. Comparability ratios are measures of comparison between ICD-9 and ICD-10. Comparability ratio of 1.0 indicates that the same number of deaths would be assigned to a cause-of-death when ICD-9 or ICD-10 was used. The comparability ratios for causes of death other than the four selected above are within 1.0-1.1 range (see **Technical Notes**).



**TABLE 2B-3  
AGE-ADJUSTED\* MORTALITY RATES FOR SELECTED CAUSES OF DEATH BY RACE/ETHNICITY  
AND GENDER, ARIZONA, 1980, 1990-2009**

	All groups			White non-Hispanic			Hispanic or Latino			Black or African American			American Indian or Alaska Native			Asian or Pacific Islander		
	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F
<b>-----Cerebrovascular diseases</b>																		
1980	74.9	75.9	73.8	76.4	76.0	75.8	72.5	79.8	68.2	89.3	105.8	77.0	36.2	50.0	23.5	42.4	0.0	74.9
1990	54.6	54.6	54.1	55.0	54.7	54.8	45.2	40.7	46.9	76.6	84.7	73.2	48.8	63.0	37.5	44.7	23.5	54.5
1991	53.9	54.1	52.4	53.3	53.3	51.9	47.3	42.6	49.0	71.6	74.4	68.0	59.9	66.2	56.1	66.9	83.7	53.6
1992	51.7	55.0	49.3	51.2	53.6	49.3	51.5	63.4	43.5	77.6	86.1	70.4	43.1	49.3	38.2	30.6	38.5	22.0
1993	55.0	51.9	56.0	54.8	51.8	55.6	52.4	59.3	48.1	51.8	29.9	66.0	52.8	36.6	65.1	68.0	70.9	64.0
1994	54.7	55.5	53.1	54.3	54.9	52.7	54.2	61.7	48.6	63.6	62.3	64.1	47.7	48.5	46.8	75.6	46.1	96.6
1995	53.9	52.8	54.0	53.1	51.2	53.7	57.3	58.5	56.6	64.6	73.8	58.4	54.3	64.7	47.3	54.2	79.5	35.4
1996	54.8	55.9	53.0	54.4	54.7	53.2	53.8	61.4	48.7	77.9	71.2	78.0	59.7	68.2	52.6	31.1	57.2	12.2
1997	54.9	52.5	55.8	54.1	50.2	56.0	64.6	77.6	55.3	64.3	72.7	58.7	37.2	37.3	37.8	33.9	20.2	45.5
1998	52.2	52.3	51.9	51.8	51.5	52.0	49.8	50.6	48.7	58.8	69.1	50.6	49.5	44.8	52.8	75.7	112.1	49.0
1999	48.5	50.2	46.9	47.6	49.0	46.0	52.5	60.8	47.2	63.8	70.8	56.3	39.7	32.2	44.5	36.7	35.0	37.5
2000	51.7	50.8	51.8	50.8	49.3	51.4	51.2	54.4	48.3	82.4	101.5	71.6	55.3	60.2	51.9	46.1	45.0	47.8
2001	47.7	48.3	46.8	46.2	47.1	45.0	55.4	50.8	57.7	79.6	80.0	76.2	44.3	46.6	42.9	51.1	49.2	52.1
2002	47.0	47.3	46.7	45.9	45.3	46.2	53.9	62.6	47.8	69.6	57.9	72.9	39.4	46.5	34.7	57.6	72.6	46.9
2003	43.9	42.9	43.8	41.7	40.1	42.1	61.9	65.7	59.2	69.0	60.6	73.5	36.4	45.8	29.9	35.9	42.5	31.1
2004	43.6	42.7	43.6	41.4	40.6	41.3	61.3	62.4	60.1	71.5	69.0	69.1	27.5	20.1	31.8	45.1	31.6	64.4
2005	40.6	40.0	40.5	38.8	38.1	38.8	51.0	59.8	44.3	66.0	40.3	94.1	32.3	29.9	33.7	64.6	49.0	78.3
2006	34.8	33.4	35.2	34.1	31.3	35.5	37.3	43.9	32.1	58.2	86.0	41.1	27.0	32.8	23.0	18.4	6.8	25.9
2007	30.6	27.7	32.2	29.7	26.9	31.2	34.9	30.0	37.8	34.1	30.9	36.5	22.0	23.9	20.3	37.7	85.6	40.0
2008	30.3	29.6	30.5	29.2	28.0	29.9	33.6	34.6	32.0	40.0	42.9	38.9	23.5	26.2	21.8	36.2	32.8	38.9
2009	28.9	28.2	29.1	27.5	26.6	27.9	33.8	34.3	32.7	42.8	31.4	54.5	24.7	33.5	20.0	39.2	43.6	35.9
<b>Malignant neoplasms</b>																		
1980	191.3	242.3	154.6	197.7	253.8	157.9	160.3	175.0	150.2	214.3	272.3	167.0	107.0	122.0	94.0	41.4	67.4	22.2
1990	190.4	238.8	156.2	195.1	245.9	160.0	162.6	185.3	143.4	244.2	360.7	155.6	122.1	123.1	121.0	109.3	132.4	86.1
1991	197.7	246.5	163.2	203.7	253.3	169.1	162.4	204.1	132.3	252.6	333.9	187.6	130.9	158.1	109.7	135.2	149.6	128
1992	194.0	244.5	157.7	198.8	250.0	161.9	170.7	210.8	142.6	258.2	378.8	168.9	116.1	126.7	108.4	118.6	155.9	86.1
1993	193.2	240.6	159.8	198.0	245.5	164.4	180.9	242.4	140.2	196.3	241.0	160.3	129.8	143.3	120.0	131.4	154.5	113.3
1994	190.9	238.2	157.5	196.9	246.3	161.8	156.3	184.7	137.7	224.1	310.8	164.6	108.5	121.2	98.9	170.5	254.3	109.9
1995	183.2	224.8	153.4	187.2	228.1	157.9	160.9	220.2	120.3	247.1	330.0	187.8	133.5	151.9	119.2	171.1	181.2	165.3
1996	183.6	228.5	151.2	188.8	234.7	155.7	160.6	206.7	129.1	228.5	304.6	175.2	139.8	146.3	135.6	77.0	102.1	59.2
1997	178.8	217.2	150.8	184.5	221.2	157.8	146.4	199.7	108.1	241.9	343.2	175.5	116.0	146.2	92.8	88.5	84.5	93.0
1998	174.5	211.2	147.8	179.2	216.0	152.4	150.8	184.9	124.8	222.4	293.1	183.4	117.0	134.2	104.1	114.0	110.0	115.2
1999	176.7	212.6	150.5	182.2	218.0	155.6	145.9	179.9	122.6	214.4	302.2	156.7	114.1	128.1	104.0	95.5	120.2	79.3
2000	170.4	204.0	145.8	174.8	208.1	150.0	156.9	201.5	126.0	216.1	274.7	178.0	123.0	142.7	107.2	103.4	103.6	103.1
2001	169.2	199.8	147.5	173.1	203.7	151.4	155.6	196.8	126.9	213.0	247.6	195.0	121.7	128.8	115.4	147.0	175.5	127.1
2002	168.6	209.1	139.1	172.4	213.2	142.5	156.3	211.2	118.0	222.7	290.3	176.0	117.6	125.8	112.5	116.5	126.5	108.5
2003	169.4	208.3	141.3	171.2	212.4	141.2	168.5	209.2	140.1	218.5	245.6	200.8	120.7	112.6	126.7	132.9	132.8	132.6
2004	164.7	201.2	138.6	165.4	202.9	138.1	161.6	218.1	123.6	227.7	274.2	200.5	139.3	150.9	131.8	111.0	72.9	165.2
2005	161.8	197.1	136.1	162.4	197.6	136.8	165.9	217.1	130.8	217.9	216.7	219.3	122.2	159.7	97.5	112.7	122.5	104.0
2006	154.7	187.0	131.0	162.8	195.5	138.4	124.7	160.9	98.7	163.5	216.0	127.7	83.1	93.9	79.5	82.0	113.2	64.1
2007	148.0	176.7	125.6	154.6	184.4	131.1	118.6	144.3	99.0	153.4	178.3	135.2	113.9	135.0	100.1	84.2	248.1	81.6
2008	145.5	173.8	123.0	150.4	179.7	127.0	123.8	151.9	101.5	149.2	150.1	146.3	106.7	126.4	93.2	104.4	149.4	74.0
2009	147.2	174.9	125.8	151.1	179.8	128.7	128.4	157.1	105.9	153.1	160.3	154.2	113.3	127.5	103.5	108.1	122.0	98.7
<b>-----Lung cancer</b>																		
1980	49.3	78.1	26.8	52.6	83.6	28.8	30.0	43.3	18.9	55.5	84.3	28.7	9.3	11.7	6.8	0.0	0.0	0.0
1990	51.7	71.9	36.5	55.1	75.9	39.6	31.5	41.9	22.7	66.2	123.1	19.9	8.7	12.7	5.4	30.5	53.6	8.8
1991	54.5	76.4	37.7	58.7	80.4	42.0	30.2	53.2	14.2	71.3	129.4	25.5	11.3	23.0	1.8	28.5	45.2	16.9
1992	54.5	76.4	37.8	58.5	81.1	41.3	33.6	52.4	19.7	67.0	102.0	36.8	7.1	10.2	4.7	26.3	18.5	32.2
1993	53.4	75.4	36.5	58.0	80.6	40.6	31.5	50.1	17.6	49.4	91.4	14.6	12.6	13.7	11.7	16.9	22.5	13.9
1994	52.2	71.5	37.2	56.3	76.3	40.8	28.9	40.1	20.3	64.9	107.1	34.0	8.8	15.3	3.6	28.5	65.4	0.0
1995	50.8	68.3	37.3	54.1	71.3	40.7	29.3	48.7	15.3	78.3	127.9	41.4	14.0	23.8	6.2	35.9	39.3	34.1
1996	51.4	69.3	37.2	55.3	73.4	40.8	29.1	50.9	14.1	62.7	92.7	39.2	11.2	16.4	6.7	14.5	16.3	13.6
1997	50.2	66.4	37.9	54.0	69.3	42.2	26.3	48.3	10.8	75.1	127.4	37.4	12.4	19.8	6.7	17.1	29.7	8.0
1998	48.4	62.4	37.6	52.0	65.8	41.2	29.2	45.4	17.5	58.3	81.2	43.6	11.3	12.2	10.4	33.2	48.9	20.0
1999	51.0	65.8	39.6	55.4	70.2	43.8	28.0	43.1	17.5	45.0	76.2	23.5	11.6	12.6	10.9	24.1	46.0	8.8
2000	46.1	59.2	35.8	49.1	61.9	39.1	31.6	49.6	18.1	65.8	79.8	52.1	8.9	13.1	5.5	29.6	29.0	29.8
2001	44.5	54.8	36.4	47.6	57.0	40.2	29.2	49.4	14.4	55.7	78.9	39.5	9.8	11.9	8.1	41.7	62.8	27.1
2002	46.6	58.6	37.1	50.1	62.4	40.4	27.7	40.0	18.3	61.2	74.7	49.5	13.1	13.4	13.0	24.7	24.5	24.6
2003	47.4	61.0	37.1	50.6	64.0	40.3	33.5	49.6	21.5	59.4	80.8	45.6	13.2	17.2	10.3	21.9	26.3	18.5
2004	45.4	57.3	36.3	48.2	59.6	39.3	29.4	49.4	14.7	61.4	74.4	53.0	17.3	21.5	14.2	21.5	15.7	30.3
2005	43.0	54.1	34.4	45.9	56.8	37.4	29.0	45.0	17.3	53.0	58.6	46.8	6.5	9.0	4.7	19.7	18.8	20.4
2006	42.7	53.5	34.2	47.4	58.6	38.5	21.4	31.6	13.8	45.9	65.9	33.9	4.7	4.3	4.9	18.4	32.5	9.2
2007	38.2	47.2	30.9	42.4	51.7	34.8	20.5	30.4	12.4	39.6	46.3	35.7	9.9	14.2	6.8	21.5	48.0	23.1
2008	38.5	47.7	31.2	42.3	51.7	34.8	20.0	27.7	13.7	37.1	45.4	27.8	11.2	10.1	11.7	32.7	49.1	21.8
2009	39.0	47.4	32.2	42.7	51.5	35.5	23.7	33.9	15.8	38.7	38.3	39.8	10.0	7.1	12.6	26.6	37.0	19.1

**TABLE 2B-3  
AGE-ADJUSTED\* MORTALITY RATES FOR SELECTED CAUSES OF DEATH BY RACE/ETHNICITY  
AND GENDER, ARIZONA, 1980, 1990-2009**

	All groups			White non-Hispanic			Hispanic or Latino			Black or African American			American Indian or Alaska Native			Asian or Pacific Islander		
	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F
<b>-----Colorectal cancer</b>																		
1980	22.9	26.7	19.9	24.4	28.6	21.0	15.3	18.0	13.0	14.1	12.4	14.7	3.6	2.4	4.5	13.4	33.3	0.0
1990	19.4	22.1	17.1	19.9	23.3	17.1	17.4	14.7	18.3	24.8	20.1	29.9	1.1	2.4	0.0	6.8	9.3	4.9
1991	19.1	23.0	16.2	19.4	23.5	16.4	20.2	21.2	19.1	18.1	12.7	22.0	9.2	16.4	3.4	13.3	15.6	13.0
1992	17.1	21.6	13.7	17.5	21.8	14.1	16.0	38.7	10.6	27.9	38.7	22.9	6.4	5.5	7.0	7.5	14.9	2.0
1993	18.3	22.4	15.1	18.7	23.0	15.4	16.9	20.7	13.7	23.5	33.9	16.2	5.8	1.5	9.1	14.0	4.0	21.5
1994	18.7	21.7	16.3	19.4	22.4	17.0	16.4	17.3	15.8	18.1	30.9	7.7	8.2	6.7	9.3	14.1	20.0	10.4
1995	18.8	20.7	17.1	19.3	21.4	17.5	13.7	15.5	11.7	26.4	25.1	27.5	13.2	7.8	17.4	15.2	32.4	2.7
1996	19.6	24.6	15.9	19.8	25.0	15.8	19.7	23.7	16.8	36.2	36.9	37.9	11.3	18.5	6.0	0.0	0.0	0.0
1997	18.3	22.0	15.4	18.8	22.4	16.0	14.5	19.8	10.3	27.2	27.1	26.4	6.9	9.1	5.1	20.3	7.5	30.7
1998	20.3	25.7	16.0	20.2	25.6	16.1	20.4	27.0	14.9	41.8	39.8	20.7	10.5	9.8	10.3	16.4	6.4	23.2
1999	19.1	23.5	15.6	19.2	23.7	15.8	17.3	20.3	14.4	31.2	38.1	24.3	6.8	4.3	8.5	3.6	5.0	2.6
2000	17.0	20.5	14.1	17.4	20.7	14.6	16.4	20.5	13.5	16.3	26.3	9.7	8.2	15.1	2.7	6.6	12.9	2.2
2001	16.7	19.0	14.8	16.9	19.0	15.2	16.6	22.1	12.9	27.4	26.2	25.2	7.2	7.8	6.3	10.6	15.3	7.2
2002	16.5	20.6	13.4	16.9	21.0	13.6	16.2	23.4	11.7	26.4	36.4	19.8	9.1	7.9	9.3	9.7	13.9	7.0
2003	17.9	21.8	14.7	17.9	22.0	14.4	21.2	25.5	17.9	26.3	22.3	28.2	6.3	10.2	3.7	3.0	4.8	1.8
2004	15.3	18.9	12.6	15.5	19.2	12.8	13.1	15.8	11.5	27.3	41.2	16.9	9.3	14.1	5.6	11.0	7.7	15.9
2005	15.4	18.9	12.8	15.2	18.8	12.5	17.6	21.5	14.8	27.0	23.7	30.6	7.5	10.0	6.0	12.5	18.7	7.1
2006	14.6	18.1	12.0	15.1	18.9	12.0	14.2	15.8	13.1	14.9	21.1	10.1	4.7	3.5	5.5	6.5	11.4	3.9
2007	14.4	17.7	11.5	15.0	18.1	12.3	12.0	16.5	8.6	15.7	19.3	11.8	8.0	10.6	5.3	9.4	28.7	9.8
2008	13.1	15.1	11.3	13.2	15.0	11.4	13.2	15.5	11.2	16.4	20.3	13.0	11.1	11.9	10.9	8.6	14.9	4.2
2009	12.9	14.9	11.2	12.9	15.1	11.0	13.8	16.7	11.5	14.1	14.0	14.9	8.5	7.4	9.1	13.8	16.4	12.5
<b>-----Female breast cancer</b>																		
1980	NA	NA	31.1	NA	NA	33.7	NA	NA	18.2	NA	NA	34.0	NA	NA	4.7	NA	NA	0.0
1990	NA	NA	29.5	NA	NA	31.3	NA	NA	27.5	NA	NA	16.3	NA	NA	3.2	NA	NA	0.0
1991	NA	NA	28.3	NA	NA	30.3	NA	NA	14.5	NA	NA	25.7	NA	NA	15.5	NA	NA	24.6
1992	NA	NA	28.0	NA	NA	30.3	NA	NA	16.6	NA	NA	22.9	NA	NA	8.8	NA	NA	3.9
1993	NA	NA	29.2	NA	NA	30.6	NA	NA	19.3	NA	NA	42.7	NA	NA	16.6	NA	NA	8.7
1994	NA	NA	28.6	NA	NA	29.2	NA	NA	23.1	NA	NA	41.3	NA	NA	9.2	NA	NA	25.5
1995	NA	NA	23.7	NA	NA	24.5	NA	NA	16.7	NA	NA	31.2	NA	NA	9.9	NA	NA	49.0
1996	NA	NA	24.1	NA	NA	24.8	NA	NA	19.9	NA	NA	39.0	NA	NA	18.2	NA	NA	4.8
1997	NA	NA	26.5	NA	NA	27.8	NA	NA	22.3	NA	NA	38.4	NA	NA	9.6	NA	NA	2.1
1998	NA	NA	24.8	NA	NA	26.3	NA	NA	20.1	NA	NA	28.9	NA	NA	7.7	NA	NA	7.0
1999	NA	NA	24.4	NA	NA	25.9	NA	NA	15.7	NA	NA	32.8	NA	NA	9.9	NA	NA	13.5
2000	NA	NA	25.4	NA	NA	26.2	NA	NA	20.7	NA	NA	29.5	NA	NA	12.1	NA	NA	12.8
2001	NA	NA	23.6	NA	NA	24.7	NA	NA	17.5	NA	NA	55.8	NA	NA	11.7	NA	NA	12.7
2002	NA	NA	22.2	NA	NA	22.5	NA	NA	18.7	NA	NA	42.3	NA	NA	9.6	NA	NA	17.7
2003	NA	NA	22.1	NA	NA	22.3	NA	NA	18.9	NA	NA	41.2	NA	NA	16.4	NA	NA	19.6
2004	NA	NA	21.4	NA	NA	21.4	NA	NA	18.0	NA	NA	32.2	NA	NA	18.4	NA	NA	35.2
2005	NA	NA	20.7	NA	NA	20.5	NA	NA	19.8	NA	NA	35.7	NA	NA	14.9	NA	NA	17.3
2006	NA	NA	21.6	NA	NA	23.2	NA	NA	14.0	NA	NA	25.7	NA	NA	6.9	NA	NA	7.5
2007	NA	NA	20.1	NA	NA	20.5	NA	NA	16.9	NA	NA	23.9	NA	NA	16.2	NA	NA	11.3
2008	NA	NA	19.8	NA	NA	20.6	NA	NA	15.1	NA	NA	38.0	NA	NA	11.6	NA	NA	7.1
2009	NA	NA	19.2	NA	NA	19.8	NA	NA	16.4	NA	NA	30.7	NA	NA	11.6	NA	NA	5.9
<b>-----Prostate cancer</b>																		
1980	NA	29.4	NA	NA	29.3	NA	NA	32.2	NA	NA	45.9	NA	NA	28.0	NA	NA	0.0	NA
1990	NA	34.0	NA	NA	34.1	NA	NA	28.3	NA	NA	94.9	NA	NA	20.4	NA	NA	13.9	NA
1991	NA	36.1	NA	NA	36.9	NA	NA	24.8	NA	NA	77.0	NA	NA	21.3	NA	NA	27.7	NA
1992	NA	33.0	NA	NA	32.7	NA	NA	32.5	NA	NA	89.0	NA	NA	20.2	NA	NA	12.7	NA
1993	NA	34.2	NA	NA	34.0	NA	NA	40.9	NA	NA	29.1	NA	NA	27.6	NA	NA	29.0	NA
1994	NA	32.4	NA	NA	32.9	NA	NA	29.3	NA	NA	45.0	NA	NA	14.9	NA	NA	17.2	NA
1995	NA	34.8	NA	NA	34.4	NA	NA	39.9	NA	NA	58.6	NA	NA	26.8	NA	NA	25.2	NA
1996	NA	31.0	NA	NA	31.4	NA	NA	30.7	NA	NA	57.8	NA	NA	10.3	NA	NA	22.9	NA
1997	NA	29.7	NA	NA	30.0	NA	NA	24.8	NA	NA	76.9	NA	NA	11.0	NA	NA	19.2	NA
1998	NA	26.5	NA	NA	25.4	NA	NA	28.9	NA	NA	82.6	NA	NA	20.4	NA	NA	20.2	NA
1999	NA	23.7	NA	NA	23.8	NA	NA	23.0	NA	NA	46.9	NA	NA	11.3	NA	NA	16.6	NA
2000	NA	28.4	NA	NA	28.0	NA	NA	30.0	NA	NA	74.8	NA	NA	27.1	NA	NA	8.9	NA
2001	NA	24.3	NA	NA	24.1	NA	NA	26.3	NA	NA	45.0	NA	NA	14.0	NA	NA	24.2	NA
2002	NA	24.8	NA	NA	24.1	NA	NA	35.3	NA	NA	48.6	NA	NA	12.5	NA	NA	8.4	NA
2003	NA	25.1	NA	NA	25.2	NA	NA	22.4	NA	NA	41.2	NA	NA	21.0	NA	NA	7.6	NA
2004	NA	24.0	NA	NA	22.6	NA	NA	35.0	NA	NA	54.6	NA	NA	31.2	NA	NA	6.1	NA
2005	NA	23.8	NA	NA	23.5	NA	NA	30.6	NA	NA	20.4	NA	NA	23.5	NA	NA	5.1	NA
2006	NA	20.1	NA	NA	19.2	NA	NA	25.9	NA	NA	34.9	NA	NA	16.9	NA	NA	24.0	NA
2007	NA	18.9	NA	NA	19.5	NA	NA	15.8	NA	NA	23.6	NA	NA	16.6	NA	NA	19.4	NA
2008	NA	19.1	NA	NA	18.9	NA	NA	20.3	NA	NA	20.5	NA	NA	14.7	NA	NA	25.5	NA
2009	NA	18.4	NA	NA	18.2	NA	NA	20.0	NA	NA	28.9	NA	NA	16.4	NA	NA	2.1	NA





**TABLE 2B-3**  
**AGE-ADJUSTED\* MORTALITY RATES FOR SELECTED CAUSES OF DEATH BY RACE/ETHNICITY**  
**AND GENDER, ARIZONA, 1980, 1990-2009**

	All groups			White non-Hispanic			Hispanic or Latino			Black or African American			American Indian or Alaska Native			Asian or Pacific Islander		
	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F
<b>Accidents (unintentional injuries)</b>																		
1980	57.9	86.0	31.8	52.2	75.8	30.1	58.8	91.3	28.6	51.5	72.2	29.6	186.1	313.2	71.2	45.5	72.0	20.9
1990	42.6	61.4	24.5	37.7	53.4	22.4	39.4	60.8	19.2	48.1	65.4	34.4	139.4	225.5	62.4	29.6	43.0	16.6
1991	38.5	53.5	24.3	32.5	44.2	21.3	48.4	69.6	29.3	36.1	53.4	20.2	123.3	204.1	52.9	19.1	22.1	16.4
1992	40.6	59.7	23.1	34.6	49.7	20.9	40.9	63.9	19.3	37.6	59.9	14.0	146.3	229.5	71.8	37.9	32.2	42.8
1993	42.6	61.8	24.4	36.5	52.0	21.9	46.8	75.7	20.5	41.3	52.9	29.3	143.4	234.9	64.9	26.4	7.7	40.3
1994	44.9	64.6	26.2	39.8	55.4	25.1	46.7	70.5	23.0	46.4	73.5	19.8	131.5	200.2	69.5	30.6	33.4	29.1
1995	45.1	64.4	26.2	41.3	56.8	26.2	44.1	66.0	22.7	52.9	80.9	28.4	113.2	181.8	50.2	20.6	32.3	10.5
1996	46.1	66.4	26.8	39.4	56.8	23.1	45.8	69.4	22.9	44.0	61.6	27.2	150.5	219.6	88.9	24.5	16.1	31.6
1997	44.9	63.8	26.5	39.9	56.5	24.0	43.7	64.8	23.7	50.3	63.5	36.9	146.4	219.1	80.1	14.9	14.8	13.6
1998	45.2	62.8	27.7	40.6	56.2	25.3	42.5	62.0	22.8	48.1	74.1	25.8	126.8	171.5	85.5	23.3	35.8	13.0
1999	44.4	62.5	27.0	38.0	52.8	23.9	46.8	68.6	24.9	39.7	52.6	24.5	127.0	181.0	77.7	27.2	42.2	15.3
2000	41.1	58.0	24.9	36.9	51.5	23.3	41.6	60.8	22.5	49.7	75.8	22.7	113.1	165.2	67.4	24.1	24.4	21.4
2001	46.6	66.5	27.7	42.5	59.5	26.8	45.6	63.9	25.9	52.6	83.2	22.4	112.7	177.5	53.9	29.9	41.3	46.6
2002	45.2	62.8	28.8	41.5	56.8	27.8	45.5	64.6	26.2	44.0	58.5	28.5	111.0	168.4	60.4	15.5	13.8	15.6
2003	44.8	61.6	28.8	40.9	55.2	27.6	44.7	63.3	26.3	52.4	69.8	35.0	108.6	153.5	66.3	25.3	35.2	17.8
2004	46.0	61.1	31.7	43.3	56.8	30.7	48.9	66.1	31.8	45.9	66.9	26.0	103.9	137.5	73.7	21.2	21.7	30.0
2005	51.1	68.7	34.4	46.2	62.4	31.4	54.8	71.5	37.2	64.3	80.3	46.9	117.8	174.1	67.4	34.2	41.2	28.1
2006	51.2	68.5	34.3	48.7	64.5	33.5	52.4	72.9	32.2	54.8	73.0	34.5	97.2	139.8	58.6	19.8	17.0	20.8
2007	46.6	60.6	32.3	44.9	57.7	32.2	40.6	53.5	27.5	48.1	62.8	29.6	95.0	143.9	50.3	20.3	72.6	20.3
2008	44.7	59.0	30.6	45.4	59.8	31.4	34.2	46.9	22.0	43.1	50.6	33.8	92.6	142.6	47.9	23.7	31.1	17.9
2009	43.1	56.6	29.8	43.3	56.6	30.4	35.3	48.2	23.3	36.5	42.1	30.0	92.6	144.4	46.4	24.5	27.6	21.1
<b>-----Motor vehicle accidents</b>																		
1980	31.9	47.1	17.4	28.2	41.2	15.7	34.6	49.8	19.8	23.3	31.7	13.7	103.6	162.5	50.4	27.6	32.4	20.9
1990	23.6	33.1	14.3	20.1	27.9	12.6	21.1	31.7	10.9	27.4	34.7	20.9	82.2	130.6	38.8	18.2	26.3	11.7
1991	20.6	27.8	13.4	16.2	22.3	10.1	27.9	36.2	20.2	9.4	13.9	4.0	73.8	112.7	38.5	6.1	0.0	10.8
1992	20.3	29.1	12.2	16.8	24.4	10.0	21.9	31.4	12.9	16.0	26.0	5.5	74.9	104.8	47.3	21.3	9.3	31.2
1993	20.1	27.8	12.6	15.8	21.7	10.1	22.3	35.2	10.0	15.0	19.2	9.2	80.4	115.8	49.3	15.8	5.8	22.7
1994	21.1	30.0	12.5	18.1	25.0	11.7	21.4	31.3	11.1	15.4	25.7	5.2	69.4	102.8	39.0	10.1	17.7	4.4
1995	23.1	32.0	14.4	19.9	25.8	14.2	21.8	30.5	12.4	28.1	41.1	16.5	69.0	114.1	27.7	15.4	23.1	8.2
1996	22.9	32.1	13.9	17.8	25.3	10.7	23.3	34.1	12.7	13.2	14.5	10.2	94.1	129.3	61.6	16.3	14.8	17.9
1997	20.5	28.2	12.7	16.9	23.6	10.3	20.9	29.0	12.9	23.9	36.7	13.7	79.4	109.8	50.6	7.9	8.3	6.7
1998	20.4	27.3	13.6	16.9	23.1	10.9	19.0	25.8	12.1	23.0	30.6	16.4	75.9	93.3	58.8	14.6	26.3	5.6
1999	19.6	27.5	11.8	14.6	20.4	9.2	24.4	34.9	13.8	16.3	23.8	8.2	68.4	100.4	39.1	15.3	20.7	11.1
2000	17.5	24.4	10.6	13.8	18.5	9.2	18.2	28.5	7.5	19.3	33.1	6.8	74.2	106.4	46.3	15.3	11.6	12.8
2001	17.2	24.2	10.1	13.5	18.5	8.5	18.2	26.3	9.4	19.1	28.8	7.2	63.2	88.8	38.3	8.6	7.7	9.9
2002	18.5	25.5	11.6	14.7	20.3	9.3	21.1	27.4	14.0	11.9	15.9	7.5	65.9	100.2	35.3	10.1	8.2	11.1
2003	18.0	24.9	11.2	14.6	20.3	9.0	21.3	29.1	13.6	15.2	23.3	8.1	59.0	78.0	40.4	11.8	14.1	9.9
2004	18.1	23.9	12.5	15.3	20.3	10.6	23.2	30.0	16.0	14.8	18.2	10.8	54.1	63.9	44.1	11.3	13.7	13.9
2005	18.9	27.0	11.1	15.0	21.9	8.4	22.7	33.1	12.6	24.9	31.4	17.8	62.6	91.3	36.4	10.2	14.5	6.3
2006	19.6	26.8	12.4	16.6	22.8	10.7	21.9	29.9	13.3	15.3	22.9	7.7	56.9	76.5	38.5	5.9	5.3	6.1
2007	16.2	22.2	10.1	13.1	18.3	8.0	17.6	22.6	12.2	13.6	18.2	7.6	49.0	72.8	27.2	9.9	37.6	10.6
2008	13.6	19.5	7.9	12.0	17.7	6.5	13.1	18.5	7.7	11.5	16.8	5.6	41.9	55.0	29.3	4.4	6.9	2.0
2009	11.6	16.8	6.5	10.1	15.2	5.1	10.6	14.4	6.7	12.4	14.2	10.3	36.9	51.0	23.3	6.5	11.2	3.0
<b>Assault (homicide)</b>																		
1980	10.4	15.0	5.8	7.3	9.4	5.3	15.9	25.2	6.2	48.3	71.3	21.4	25.3	40.6	11.6	2.8	6.7	0.0
1990	8.1	12.2	4.0	5.7	7.8	3.6	10.4	18.6	2.2	31.3	48.1	12.1	17.7	27.8	8.7	4.8	4.1	6.0
1991	8.6	12.7	4.5	5.4	7.5	3.2	13.0	20.0	5.8	22.3	38.3	4.3	24.2	34.7	14.3	24.8	32.9	19.1
1992	8.8	13.2	4.2	5.7	7.2	4.1	13.9	23.7	3.5	22.5	33.7	9.4	15.6	26.8	4.5	5.9	10.7	2.5
1993	9.2	13.5	4.9	5.9	7.7	4.1	15.1	24.8	5.3	30.8	50.4	10.6	16.5	25.8	7.4	3.7	2.0	4.7
1994	10.9	17.2	4.5	6.3	9.1	3.4	16.4	27.9	4.6	55.2	83.6	23.0	19.2	32.3	7.0	1.8	3.5	0.0
1995	11.6	18.0	5.0	7.3	10.2	4.3	17.5	28.6	5.3	36.0	54.8	13.6	19.6	33.3	6.7	1.7	3.3	0.0
1996	9.9	15.6	3.9	5.1	7.0	3.1	17.7	30.1	4.2	30.5	49.4	12.0	25.4	41.5	10.2	0.0	0.0	0.0
1997	9.2	14.3	3.8	5.0	6.9	3.2	16.2	29.1	3.1	23.4	39.7	4.2	17.4	23.8	11.3	5.4	5.1	5.9
1998	9.0	13.7	4.0	5.5	7.5	3.5	13.2	21.1	4.6	25.1	40.0	7.7	18.9	32.4	6.3	3.3	4.7	1.7
1999	8.5	12.1	4.7	4.4	5.4	3.5	14.0	22.9	4.3	23.2	31.9	14.2	19.9	26.9	13.6	4.2	3.3	5.1
2000	7.6	11.1	3.8	3.9	5.4	2.3	13.0	19.2	6.1	22.7	32.3	11.0	14.9	22.1	7.5	7.6	5.1	9.7
2001	8.7	13.7	3.6	4.3	6.1	2.6	15.5	24.8	5.0	22.2	35.7	6.8	17.2	24.8	10.0	4.9	9.7	1.2
2002	8.6	13.9	3.0	4.4	6.8	2.0	15.1	25.8	3.4	21.3	32.5	7.1	20.3	29.0	11.8	3.3	0.0	5.8
2003	8.3	12.8	3.6	3.7	5.1	2.2	14.7	23.7	4.8	24.9	38.7	9.0	18.8	31.5	6.9	5.4	2.5	5.8
2004	8.2	13.3	2.9	4.8	7.0	2.6	13.6	23.2	3.0	22.3	35.5	7.4	14.7	25.9	4.5	1.4	2.3	0.0
2005	8.2	13.5	2.6	3.5	5.6	1.3	14.6	24.2	3.9	27.4	45.7	7.5	14.0	22.4	5.8	5.1	8.0	2.5
2006	8.5	13.5	3.1	4.6	6.8	2.4	13.0	21.6	3.3	19.6	30.5	7.5	13.2	23.7	3.2	2.4	1.5	3.5
2007	7.7	11.8	3.2	3.9	5.5	2.2	12.0	19.5	3.7	23.4	32.3	12.7	13.1	21.7	4.8	2.6	16.0	1.6
2008	7.1	11.2	2.7	3.7	5.6	1.7	10.6	16.9	3.7	20.7	32.7	6.4	12.8	20.6	5.2	3.2	4.3	2.1
2009	5.5	8.0	2.9	3.2	4.9	1.5	8.1	12.1	4.0	14.2	18.5	9.1	13.2	18.0	8.5	0.9	0.0	1.5

**TABLE 2B-3  
AGE-ADJUSTED\* MORTALITY RATES FOR SELECTED CAUSES OF DEATH BY RACE/ETHNICITY  
AND GENDER, ARIZONA, 1980, 1990-2009**

	All groups			White non-Hispanic			Hispanic or Latino			Black or African American			American Indian or Alaska Native			Asian or Pacific Islander		
	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F
<b>Intentional self-harm (suicide)</b>																		
<b>1980</b>	17.5	27.9	8.1	18.5	28.7	9.3	11.3	21.1	2.0	10.9	16.8	4.5	18.6	33.1	5.6	8.7	19.6	0.0
<b>1990</b>	19.0	32.6	6.5	20.9	36.1	7.2	9.4	16.6	2.8	12.5	17.2	7.7	20.1	39.1	2.6	7.9	4.6	10.1
<b>1991</b>	18.0	30.8	6.4	19.1	32.8	6.7	12.1	20.3	4.6	17.8	23.6	12.3	18.9	35.1	4.0	2.5	5.5	0.0
<b>1992</b>	17.3	29.0	6.5	18.8	31.1	7.5	10.4	19.2	2.6	10.3	17.8	2.4	19.6	34.7	5.6	4.8	10.5	0.0
<b>1993</b>	18.9	32.2	6.9	21.2	35.7	8.2	8.8	14.9	2.4	8.0	12.4	3.0	21.7	39.1	5.5	5.2	7.7	3.2
<b>1994</b>	19.4	32.2	7.4	21.2	34.9	8.3	11.1	19.6	2.2	8.7	13.9	2.9	20.8	33.0	8.8	16.7	18.9	15.4
<b>1995</b>	19.5	31.1	8.6	22.2	35.1	10.2	9.7	15.8	3.4	14.4	24.6	5.8	16.3	30.0	3.5	4.1	5.0	4.0
<b>1996</b>	16.9	28.4	6.2	19.1	31.8	7.5	9.0	16.2	1.8	7.3	11.7	2.2	15.9	25.6	6.8	4.7	9.9	0.0
<b>1997</b>	17.2	28.7	6.3	19.4	31.8	7.7	8.8	16.3	1.3	12.3	21.5	3.5	18.7	30.5	7.4	11.0	18.2	5.7
<b>1998</b>	17.5	28.7	7.1	20.1	32.2	8.9	9.5	18.4	0.8	6.5	8.7	3.9	16.1	28.1	5.0	6.8	9.1	3.9
<b>1999</b>	15.7	25.5	6.5	16.7	27.1	7.0	10.5	17.8	3.7	12.8	26.1	0.0	16.6	27.6	6.4	6.4	10.3	3.4
<b>2000</b>	14.6	24.7	5.2	16.7	27.6	6.8	7.2	12.7	1.4	6.5	12.2	0.0	16.2	29.7	3.7	5.7	12.3	0.0
<b>2001</b>	14.9	24.6	5.6	12.8	21.0	5.1	5.9	9.9	1.6	9.2	15.2	2.4	15.4	26.4	5.2	9.4	15.4	4.7
<b>2002</b>	15.9	26.4	6.0	18.3	30.0	7.4	8.3	14.2	2.5	6.2	11.4	0.0	17.9	31.7	4.9	4.1	9.1	0.0
<b>2003</b>	14.6	24.0	5.8	16.4	27.1	6.4	8.2	11.8	4.2	11.3	16.6	4.8	15.2	27.4	3.6	6.0	7.0	5.9
<b>2004</b>	14.9	24.1	6.3	16.6	26.4	7.5	9.8	17.5	2.2	12.1	17.3	5.1	17.0	28.5	6.5	4.0	7.0	2.7
<b>2005</b>	15.4	24.9	6.5	16.6	26.7	7.3	10.5	17.8	3.0	3.3	4.7	1.8	17.5	28.7	6.8	11.7	8.9	14.1
<b>2006</b>	15.4	24.7	6.6	17.8	27.9	8.5	8.2	14.2	2.0	8.3	13.9	2.3	13.7	23.4	4.5	8.4	13.2	4.3
<b>2007</b>	15.4	24.4	6.7	18.7	29.4	8.3	9.2	14.7	3.6	6.2	10.1	1.7	9.8	16.3	3.6	6.1	49.2	2.4
<b>2008</b>	14.8	23.0	7.0	17.6	27.3	8.5	6.5	10.8	1.9	7.5	10.3	4.2	13.5	21.2	5.9	9.9	10.7	8.8
<b>2009</b>	16.1	24.6	8.1	18.4	28.0	9.5	9.0	14.0	3.9	10.5	12.7	7.7	15.9	22.9	9.3	9.9	19.9	2.3

\* Adjusted to the 2000 standard U.S. population.

\*\* Chronic obstructive pulmonary diseases in 1980 and 1990.

Note: Beginning in 2000, when the new standard for the age-adjustment of mortality rates was implemented, all previously published rates for 1979-1999 became obsolete. With the 2008 edition of this report we have added the recomputed age-adjusted mortality rates for 1991-1999. In order to compute these rates, we have used the population denominators consistent with both the 1990 and 2000 census. The mortality rates for 1989-1999 in Table 2B-2 also were revised for consistency.

The denominators are available at:

<http://www.azdhs.gov/plan/menu/info/pop/pop19/popsets19.htm>

**TABLE 2B-4  
NUMBER OF DEATHS AND AGE-ADJUSTED\* MORTALITY RATES FOR SELECTED CAUSES OF DEATH BY RACE/ETHNICITY AND  
GENDER, ARIZONA, 2009**

	NUMBER OF DEATHS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
	All groups**						White non-Hispanic						Hispanic or Latino						Black or African American						American Indian or Alaska Native						Asian or Pacific Islander																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
<b>Total, all causes</b>	45,065	23,535	21,530	35,829	18,476	17,353	5,401	2,978	2,423	1,334	697	637	1,871	1,028	843	469	241	228	13,138	6,906	6,232	10,875	5,673	5,202	1,351	741	610	409	206	203	320	177	143	134	71	63	10,151	5,558	4,593	8,493	4,612	3,881	987	564	423	292	161	131	249	138	111	88	48	40	8,070	4,573	3,497	6,763	3,819	2,944	776	449	327	231	128	103	186	104	82	75	41	34	10,147	5,432	4,715	8,393	4,510	3,883	1,105	605	500	266	135	131	241	117	124	119	56	63	2,691	1,480	1,211	2,391	1,309	1,082	181	114	67	67	34	33	21	6	15	27	16	11	887	463	424	715	376	339	110	60	50	25	12	13	20	8	12	14	6	8	716	8	708	585	8	577	82	0	82	28	0	28	15	0	15	5	0	5	551	551	0	456	456	0	60	60	0	21	21	0	12	12	0	1	1	0	226	160	66	215	153	62	10	6	4	1	1	0	0	0	0	0	0	0	64	0	64	39	0	39	13	0	13	2	0	2	6	0	6	3	0	3	2,887	1,817	1,070	2,015	1,210	805	462	318	144	85	52	33	276	205	71	29	17	12	887	573	314	652	404	248	133	95	38	34	19	15	59	49	10	1	0	1	771	554	217	430	318	112	173	122	51	30	18	12	125	86	39	11	8	3	731	343	388	619	280	339	69	37	32	5	3	2	29	19	10	9	4	5	99	80	19	52	40	12	26	22	4	5	4	1	12	10	2	3	3	0	2,808	1,353	1,455	2,593	1,225	1,368	116	62	54	44	27	17	33	21	12	15	11	4	2,086	697	1,389	1,854	627	1,227	160	50	110	38	10	28	18	5	13	13	4	9	2,010	843	1,167	1,608	658	950	252	119	133	70	26	44	44	23	21	34	16	18	1,078	569	509	669	381	288	230	111	119	54	25	29	107	43	64	16	8	8	1,060	792	268	811	602	209	144	114	30	27	18	9	56	38	18	15	13	2	1,007	471	536	743	348	395	127	61	66	27	11	16	89	38	51	15	8	7	818	499	319	479	308	171	181	108	73	7	4	3	147	76	71	3	2	1	532	279	253	356	201	155	107	50	57	29	13	16	39	14	25	1	1	0	528	253	275	359	172	187	72	37	35	24	11	13	63	27	36	8	4	4	475	244	231	354	186	168	63	28	35	33	14	19	15	11	4	8	5	3	446	282	164	393	251	142	34	21	13	6	4	2	11	4	7	2	2	0	360	267	93	126	96	30	144	108	36	40	29	11	47	33	14	1	0	1
<b>Human immunodeficiency virus (HIV) disease</b>	105	94	11	45	43	2	30	26	4	20	17	3	10	8	2	0	0	0	843	685	158	579	470	109	178	142	36	45	38	7	31	25	6	5	5	0	1,093	656	437	846	488	358	155	108	47	35	19	16	42	29	13	3	3	0	795	563	232	479	343	136	117	92	25	16	10	6	176	111	65	3	3	0																																																																																																																																																																																																																																																																																																																																																																																																																																																

**TABLE 2B-4 (continued)  
NUMBER OF DEATHS AND AGE-ADJUSTED\* MORTALITY RATES FOR SELECTED CAUSES OF DEATH BY RACE/ETHNICITY AND GENDER, ARIZONA, 2009**

	AGE-ADJUSTED MORTALITY RATES:**																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
	All groups**						White non-Hispanic				Hispanic or Latino				Black or African American				American Indian or Alaska Native				Asian or Pacific Islander																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
<b>Total, all causes</b>	653.2	763.9	555.1	647.3	761.9	546.8	614.9	712.3	528.4	736.8	728.4	736.1	823.5	972.5	695.0	472.8	561.7	408.7	188.8	228.1	154.9	188.3	229.4	152.9	179.8	211.3	151.9	245.7	228.8	252.2	164.2	209.1	130.0	150.8	182.3	127.9	145.9	183.1	114.1	147.5	186.5	114.2	130.5	159.6	105.4	171.3	176.1	160.4	125.8	156.1	100.5	96.7	118.1	80.9	115.9	150.2	86.8	117.3	154.0	86.4	103.7	128.6	82.2	137.3	142.3	128.5	94.6	119.2	74.2	81.0	95.9	69.2	147.2	174.9	125.8	151.1	179.8	128.7	128.4	157.1	105.9	153.1	160.3	154.2	113.3	127.5	103.5	108.1	122.0	98.7	39.0	47.4	32.2	42.7	51.5	35.5	23.7	33.9	15.8	38.7	38.3	39.8	10.0	7.1	12.6	26.6	37.0	19.1	12.9	14.9	11.2	12.9	15.1	11.0	13.8	16.7	11.5	14.1	14.0	14.9	8.5	7.4	9.1	13.8	16.4	12.5	10.5	0.3	19.2	10.8	0.3	19.8	8.8	0.0	16.4	14.6	0.0	30.7	6.4	0.0	11.6	3.3	0.0	5.9	NA	18.4	NA	NA	18.2	NA	NA	20.0	NA	NA	28.9	NA	NA	NA	16.4	NA	2.1	NA	3.3	5.2	1.8	4.1	6.3	2.2	1.2	1.4	0.9	0.6	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	1.8	NA	NA	1.5	NA	NA	2.1	NA	NA	2.2	NA	NA	NA	NA	NA	2.9	43.1	56.6	29.8	43.3	56.6	30.4	35.3	48.2	23.3	36.5	42.1	30.0	92.6	144.4	46.4	24.5	27.6	21.1	13.7	17.5	9.8	16.2	20.4	12.0	8.5	11.6	5.1	14.2	14.5	14.0	18.9	33.2	5.8	1.3	0.0	2.1	11.6	16.8	6.5	10.1	15.2	5.1	10.6	14.4	6.7	12.4	14.2	10.3	36.9	51.0	23.3	6.5	11.2	3.0	10.4	11.6	9.4	10.5	11.4	9.7	9.9	12.3	8.3	3.8	4.4	2.9	15.3	23.4	9.3	10.8	11.0	10.5	1.5	2.4	0.6	1.3	2.0	0.5	1.4	2.3	0.5	2.0	3.0	0.9	3.7	6.6	1.2	1.6	3.0	0.0	40.5	44.7	37.1	45.0	48.7	42.1	16.4	20.2	13.4	26.8	34.1	20.8	19.2	29.5	12.3	18.0	33.4	8.1	29.5	24.5	32.8	30.4	25.6	33.5	26.9	21.5	30.5	29.6	17.5	39.1	10.9	6.9	12.9	18.1	14.8	20.1	28.9	28.2	29.1	27.5	26.6	27.9	33.8	34.3	32.7	42.8	31.4	54.5	24.7	33.5	20.0	39.2	43.6	35.9	16.1	24.6	8.1	18.4	28.0	9.5	9.0	14.0	3.9	10.5	12.7	7.7	15.9	22.9	9.3	9.9	19.9	2.3	15.7	18.2	13.5	12.2	15.5	9.4	28.1	29.2	27.2	31.1	28.6	34.9	54.2	46.6	59.9	16.2	18.5	14.4	14.6	15.6	13.7	13.0	14.2	12.1	15.5	15.6	15.3	14.3	10.9	18.1	42.7	38.3	44.0	16.3	20.1	13.6	12.2	15.4	9.1	9.5	12.8	6.4	18.7	21.4	15.7	3.1	3.4	2.7	54.0	57.9	49.9	3.1	6.4	1.1	7.7	9.2	6.5	6.2	8.1	4.7	14.1	14.5	13.8	16.2	13.5	18.3	19.6	16.9	21.9	1.5	4.2	0.0	7.7	8.2	7.3	6.5	7.1	6.0	8.0	9.3	7.2	13.2	12.2	15.0	31.4	30.9	31.7	9.2	11.2	8.1	6.8	8.2	5.7	6.1	7.5	4.9	9.0	8.9	8.9	22.0	16.1	25.1	7.0	12.6	3.2	10.6	16.2	7.0	6.4	9.6	4.1	6.6	10.1	4.1	5.1	7.5	3.4	4.1	6.9	2.7	6.8	6.1	7.4	2.4	6.3	0.0	5.5	8.0	2.9	3.2	4.9	1.5	8.1	12.1	4.0	14.2	18.5	9.1	13.2	18.0	8.5	0.9	0.0	1.5	1.6	3.0	0.3	1.0	2.0	0.1	2.1	3.7	0.5	8.9	14.2	2.9	3.7	5.6	1.9	0.0	0.0	0.0
<b>Human immunodeficiency virus (HIV) disease</b>	12.8	21.1	4.8	13.0	21.7	5.1	10.4	15.9	4.4	16.0	25.1	5.2	8.3	13.1	3.5	4.4	10.5	0.0	16.8	20.1	13.5	20.6	24.3	16.8	9.9	13.0	6.6	14.8	15.0	14.8	13.2	19.1	7.7	1.8	3.6	0.0	12.0	17.4	6.9	10.0	14.7	5.7	10.1	16.4	4.2	7.0	8.5	5.3	62.1	81.8	44.0	2.8	6.7	0.0																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				

\*The number of deaths per 100,000 resident population age-adjusted to the 2000 U.S. standard. The causes of death for 2007 are classified by the Tenth Revision of the International Classification of Diseases (ICD-10). The rates for breast cancer and cervical cancer are per 100,000 females. The rate for prostate cancer is per 100,000 males.  
\*\*Includes other and unknown racial/ethnic groups.

**TABLE 2B-5  
AGE-ADJUSTED\* MORTALITY RATES FOR SELECTED CAUSES OF DEATH BY URBAN/RURAL AREA AND GENDER,  
ARIZONA, 2009**

	Arizona			Urban			Rural		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
<b>Total, all causes</b>	653.2	763.9	555.1	639.4	744.5	547.6	709.1	841.2	586.6
<b>Cardiovascular diseases</b>	188.8	228.1	154.9	184.7	221.5	153.3	204.7	252.8	161.2
<b>Diseases of heart</b>	145.9	183.1	114.1	141.5	176.5	112.1	163.2	208.5	122.7
<b>Coronary heart disease</b>	115.9	150.2	86.8	114.0	146.9	86.6	123.2	163.1	87.4
<b>Malignant neoplasms</b>	147.2	174.9	125.8	145.1	172.3	124.6	153.9	182.6	129.3
<b>Lung cancer</b>	39.0	47.4	32.2	38.1	46.9	31.1	42.0	48.0	36.8
<b>Colorectal cancer</b>	12.9	14.9	11.2	12.4	14.2	10.9	14.9	17.9	12.1
<b>Breast cancer</b>	10.5	0.3	19.2	10.6	0.2	19.4	9.9	0.5	18.3
<b>Prostate cancer</b>	NA	18.4	NA	NA	18.0	NA	NA	19.5	NA
<b>Malignant melanoma of skin</b>	3.3	5.2	1.8	3.4	5.4	1.7	3.1	4.2	2.1
<b>Cervical cancer</b>	NA	NA	1.8	NA	NA	1.8	NA	NA	1.9
<b>Accident (unintentional injuries)</b>	43.1	56.6	29.8	40.3	52.0	28.8	56.3	78.4	34.9
<b>Motor vehicle accidents</b>	11.6	16.8	6.5	9.8	14.1	5.6	20.7	30.2	11.3
<b>Falls</b>	10.4	11.6	9.4	10.9	11.9	10.0	8.5	10.6	6.7
<b>Accidental poisoning</b>	13.7	17.5	9.8	13.1	16.7	9.4	16.5	20.9	12.1
<b>Accidental drowning</b>	1.5	2.4	0.6	1.4	2.3	0.5	1.7	2.7	0.6
<b>Chronic lower respiratory diseases</b>	40.5	44.7	37.1	39.3	43.2	36.3	44.9	49.8	40.5
<b>Cerebrovascular diseases</b>	28.9	28.2	29.1	29.0	28.3	29.2	28.6	28.1	28.5
<b>Alzheimer's disease</b>	29.5	24.5	32.8	31.7	26.2	35.2	20.1	17.5	22.0
<b>Influenza and pneumonia</b>	14.6	15.6	13.7	13.8	14.7	12.9	18.5	19.4	17.7
<b>Diabetes</b>	15.7	18.2	13.5	15.2	17.8	13.1	17.7	20.2	15.5
<b>Intentional self-harm (suicide)</b>	16.1	24.6	8.1	14.4	22.1	7.2	24.6	37.0	12.9
<b>Chronic liver disease and cirrhosis</b>	12.2	15.4	9.1	10.7	14.0	7.7	18.6	21.5	15.8
<b>Nephritis</b>	7.7	9.2	6.5	6.8	8.3	5.7	11.2	12.4	10.1
<b>Parkinson's disease</b>	6.4	9.6	4.1	6.6	9.8	4.3	5.4	8.5	2.9
<b>Septicemia</b>	7.7	8.2	7.3	7.3	7.7	7.0	8.7	9.6	8.0
<b>Assault (homicide)</b>	5.5	8.0	2.9	5.5	8.1	2.8	5.0	7.0	3.1
<b>Essential (primary) hypertension</b>	6.8	8.2	5.7	7.1	8.3	6.0	5.8	7.4	4.4
<b>(HIV) disease</b>	1.6	3.0	0.3	1.6	2.9	0.3	1.8	3.3	0.3
<b>Injury by firearms</b>	12.8	21.1	4.8	12.1	20.2	4.4	15.6	24.9	6.9
<b>Drug-induced deaths</b>	16.8	20.1	13.5	16.2	19.4	12.9	19.8	22.5	16.9
<b>Alcohol-induced deaths</b>	12.0	17.4	6.9	10.5	15.3	6.0	19.1	27.2	11.5

\*The number of deaths per 100,000 population in specified group age-adjusted to the 2000 standard U.S. The causes of death for 2007 are classified by the Tenth Revision of the International Classification of Diseases (ICD-10). The rates for breast cancer and cervical cancer are per 100,000 females. The rates for prostate cancer is per 100,000 males.

**TABLE 2B-6  
DEATHS AND DEATH RATES BY GENDER FOR SELECTED CAUSES,  
ARIZONA RESIDENTS, 2009**

Cause of death (Tenth Revision, International Statistical Classification of Diseases)	Number of deaths:			Crude death rate per 100,000 persons:		
	Total	Male	Female	Total	Male	Female
<b>Total, all causes</b>	45,065	23,535	21,530	683.2	712.8	653.6
Salmonella infections	0	0	0	0.0	0.0	0.0
Shigellosis and amebiasis	1	1	0	0.0	0.0	0.0
Certain other intestinal infections	218	86	132	3.3	2.6	4.0
Enterocolitis due to Clostridium difficile	161	64	97	2.4	1.9	2.9
Tuberculosis	8	6	2	0.1	0.2	0.1
Respiratory tuberculosis	8	6	2	0.1	0.2	0.1
Other tuberculosis	0	0	0	0.0	0.0	0.0
Whooping cough	2	1	1	0.0	0.0	0.0
Scarlet fever and erysipelas	0	0	0	0.0	0.0	0.0
Meningococcal infection	0	0	0	0.0	0.0	0.0
Septicemia	528	253	275	8.0	7.7	8.3
Syphilis	0	0	0	0.0	0.0	0.0
Acute poliomyelitis	0	0	0	0.0	0.0	0.0
Arthropod-borne encephalitis	0	0	0	0.0	0.0	0.0
Measles	0	0	0	0.0	0.0	0.0
Viral hepatitis	239	150	89	3.6	4.5	2.7
Human immunodeficiency virus (HIV) disease	105	94	11	1.6	2.8	0.3
Malaria	0	0	0	0.0	0.0	0.0
Other and unspecified infectious and parasitic diseases	175	82	93	2.7	2.5	2.8
Malignant neoplasms	10,147	5,432	4,715	153.8	164.5	143.1
Malignant neoplasm of lip, oral cavity and pharynx	125	89	36	1.9	2.7	1.1
Malignant neoplasm of esophagus	266	214	52	4.0	6.5	1.6
Malignant neoplasm of stomach	179	105	74	2.7	3.2	2.2
Malignant neoplasm of colon, rectum, and anus	887	463	424	13.4	14.0	12.9
Malignant neoplasm of liver and intrahepatic bile ducts	371	246	125	5.6	7.5	3.8
Malignant neoplasm of pancreas	622	304	318	9.4	9.2	9.7
Malignant neoplasm of larynx	66	59	7	1.0	1.8	0.2
Malignant neoplasm of trachea, bronchus and lung	2,691	1,480	1,211	40.8	44.8	36.8
Malignant melanoma of skin	226	160	66	3.4	4.8	2.0
Malignant neoplasm of breast	716	8	708	10.9	0.2	21.5
Malignant neoplasm of cervix uteri	64	0	64	1.0	0.0	1.9
Malignant neoplasm of corpus uteri and uterus, part unspecified	108	0	108	1.6	0.0	3.3
Malignant neoplasm of ovary	271	0	271	4.1	0.0	8.2
Malignant neoplasm of prostate	551	551	0	8.4	16.7	0.0
Malignant neoplasm of kidney and renal pelvis	240	161	79	3.6	4.9	2.4
Malignant neoplasm of bladder	264	206	58	4.0	6.2	1.8
Malignant neoplasm of meninges, brain and other parts of CNS	275	151	124	4.2	4.6	3.8
Malignant neoplasm of lymphoid, hematopoietic and related tissue	1,019	575	444	15.4	17.4	13.5
Hodgkin's disease	16	9	7	0.2	0.3	0.2
Non-Hodgkin's lymphoma	388	212	176	5.9	6.4	5.3
Leukemia	425	246	179	6.4	7.5	5.4
Multiple myeloma and immunoproliferative neoplasms	189	107	82	2.9	3.2	2.5
Other and unspecified malignant neoplasms of lymphoid tissue	1	1	0	0.0	0.0	0.0
All other and unspecified malignant neoplasm	1,206	660	546	18.3	20.0	16.6
In situ neoplasms	490	253	237	7.4	7.7	7.2
Anemias	49	22	27	0.7	0.7	0.8
Diabetes	1,078	569	509	16.3	17.2	15.5

**TABLE 2B-6 (continued)**  
**DEATHS AND DEATH RATES BY GENDER FOR SELECTED CAUSES,**  
**ARIZONA RESIDENTS, 2009**

Cause of death (Tenth Revision, International Statistical Classification of Diseases)	Number of deaths:			Crude death rate per 100,000 persons:		
	Total	Male	Female	Total	Male	Female
Nutritional deficiencies	53	26	27	0.8	0.8	0.8
Malnutrition	52	26	26	0.8	0.8	0.8
Other nutritional deficiencies	1	0	1	0.0	0.0	0.0
Obesity	84	47	37	1.3	1.4	1.1
Meningitis	14	10	4	0.2	0.3	0.1
Parkinson's disease	446	282	164	6.8	8.5	5.0
Alzheimer's disease	2,086	697	1,389	31.6	21.1	42.2
Major cardiovascular diseases	13,138	6,906	6,232	199.2	209.2	189.2
Diseases of heart	10,151	5,558	4,593	153.9	168.3	139.4
Acute rheumatic fever and chronic rheumatic heart disease	51	16	35	0.8	0.5	1.1
Hypertensive heart disease	698	340	358	10.6	10.3	10.9
Hypertensive heart and renal disease	35	18	17	0.5	0.5	0.5
Ischemic heart disease	7,372	4,233	3,139	111.8	128.2	95.3
Acute myocardial infarction	1,640	933	707	24.9	28.3	21.5
Other acute ischemic heart disease	31	17	14	0.5	0.5	0.4
Other forms of chronic ischemic heart disease	5,701	3,283	2,418	86.4	99.4	73.4
Atherosclerotic cardiovascular disease	1,825	1,159	666	27.7	35.1	20.2
All other forms of chronic ischemic heart disease	3,876	2,124	1,752	58.8	64.3	53.2
Other heart diseases	1,995	951	1,044	30.2	28.8	31.7
Acute and subacute endocarditis	22	14	8	0.3	0.4	0.2
Diseases of pericardium and acute myocarditis	12	9	3	0.2	0.3	0.1
Heart failure	583	256	327	8.8	7.8	9.9
All other forms of heart disease	1,378	672	706	20.9	20.4	21.4
Essential (primary) hypertension and hypertensive renal disease	475	244	231	7.2	7.4	7.0
Cerebrovascular diseases	2,010	843	1,167	30.5	25.5	35.4
Atherosclerosis	157	69	88	2.4	2.1	2.7
Other diseases of circulatory system	345	192	153	5.2	5.8	4.6
Aortic aneurysm and dissection	198	125	73	3.0	3.8	2.2
Other disease of arteries, arterioles and capillaries	147	67	80	2.2	2.0	2.4
Other disorders of circulatory system	118	60	58	1.8	1.8	1.8
Influenza and pneumonia	1,007	471	536	15.3	14.3	16.3
Influenza	39	22	17	0.6	0.7	0.5
Pneumonia	968	449	519	14.7	13.6	15.8
Other acute lower respiratory infections	7	3	4	0.1	0.1	0.1
Acute bronchiolitis	6	3	3	0.1	0.1	0.1
Unspecified acute lower respiratory infection	1	0	1	0.0	0.0	0.0
Chronic lower respiratory diseases	2,808	1,353	1,455	42.6	41.0	44.2
Bronchitis, chronic and unspecified	5	0	5	0.1	0.0	0.2
Emphysema	207	109	98	3.1	3.3	3.0
Asthma	52	16	36	0.8	0.5	1.1
Other chronic lower respiratory diseases	2,544	1,228	1,316	38.6	37.2	39.9
Pneumoconioses and chemical effects	11	10	1	0.2	0.3	0.0
Pneumonitis due to solids and liquids	297	163	134	4.5	4.9	4.1
Other disease of respiratory system	538	304	234	8.2	9.2	7.1
Peptic ulcer	67	31	36	1.0	0.9	1.1
Diseases of appendix	15	10	5	0.2	0.3	0.2
Hernia	33	16	17	0.5	0.5	0.5

**TABLE 2B-6 (continued)**  
**DEATHS AND DEATH RATES BY GENDER FOR SELECTED CAUSES,**  
**ARIZONA RESIDENTS, 2009**

Cause of death (Tenth Revision, International Statistical Classification of Diseases)	Number of deaths:			Crude death rate per 100,000 persons:		
	Total	Male	Female	Total	Male	Female
Chronic liver disease and cirrhosis	818	499	319	12.4	15.1	9.7
Alcoholic liver disease	510	336	174	7.7	10.2	5.3
Other chronic liver disease and cirrhosis	308	163	145	4.7	4.9	4.4
Cholelithiasis and other disorders of gallbladder	55	30	25	0.8	0.9	0.8
Nephritis, nephrotic syndrome and nephrosis	532	279	253	8.1	8.5	7.7
Acute and rapidly progressive nephritic and nephrotic syndrome	4	2	2	0.1	0.1	0.1
Chronic glomerulonephritis	60	34	26	0.9	1.0	0.8
Renal failure	468	243	225	7.1	7.4	6.8
Others disorders of kidney	0	0	0	0.0	0.0	0.0
Infections of kidney	15	6	9	0.2	0.2	0.3
Hyperplasia of prostate	8	8	0	0.1	0.2	0.0
Inflammatory diseases of female pelvic organs	2	0	2	0.0	0.0	0.1
Pregnancy, childbirth and the puerperium	7	0	7	0.1	0.0	0.2
Pregnancy with abortive outcome	0	0	0	0.0	0.0	0.0
Other complications of pregnancy, childbirth and the puerperium	7	0	7	0.1	0.0	0.2
Perinatal conditions	263	145	118	4.0	4.4	3.6
Congenital malformations	211	116	95	3.2	3.5	2.9
Symptoms, signs, abnormal findings	802	346	456	12.2	10.5	13.8
Total accidents	2,887	1,817	1,070	43.8	55.0	32.5
Transport accidents	844	610	234	12.8	18.5	7.1
Motor vehicle accidents	771	554	217	11.7	16.8	6.6
Other land transport accidents	20	17	3	0.3	0.5	0.1
Water, air, space	53	39	14	0.8	1.2	0.4
Nontransport accidents	2,043	1,207	836	31.0	36.6	25.4
Falls	731	343	388	11.1	10.4	11.8
Accidental discharge of firearms	7	7	0	0.1	0.2	0.0
Accidental drowning and submersion	99	80	19	1.5	2.4	0.6
Accidental exposure to smoke, fire and flames	31	22	9	0.5	0.7	0.3
Accidental poisoning	887	573	314	13.4	17.4	9.5
Other and unspecified nontransport accidents	288	182	106	4.4	5.5	3.2
Intentional self-harm (suicide)	1,060	792	268	16.1	24.0	8.1
By discharge of firearms	596	492	104	9.0	14.9	3.2
By other means	464	300	164	7.0	9.1	5.0
Assault (homicide)	360	267	93	5.5	8.1	2.8
By discharge of firearms	224	174	50	3.4	5.3	1.5
By other means	136	93	43	2.1	2.8	1.3
Legal intervention	7	6	1	0.1	0.2	0.0
Events of undetermined intent	119	72	47	1.8	2.2	1.4
Discharge of firearms	9	6	3	0.1	0.2	0.1
Other and unspecified events of undetermined intent	110	66	44	1.7	2.0	1.3
Operations of war	3	3	0	0.0	0.1	0.0
Complications of medical and surgical care	50	26	24	0.8	0.8	0.7
<b>INJURY BY FIREARMS</b>	<b>843</b>	<b>685</b>	<b>158</b>	<b>12.8</b>	<b>20.7</b>	<b>4.8</b>
<b>DRUG-INDUCED DEATHS</b>	<b>1,093</b>	<b>656</b>	<b>437</b>	<b>16.6</b>	<b>19.9</b>	<b>13.3</b>
<b>ALCOHOL-INDUCED DEATHS</b>	<b>795</b>	<b>563</b>	<b>232</b>	<b>12.1</b>	<b>17.1</b>	<b>7.0</b>

Note: The list of Causes of Death was developed for the general analysis of ICD-10 mortality statistics and for ranking of leading causes of death. It is similar in structure and content and replaces the list of 72 Selected Causes of Death used for ICD-9 mortality statistics.



**TABLE 2B-7  
NUMBER OF DEATHS FROM DISEASES OF THE HEART BY CATEGORY, GENDER AND YEAR, ARIZONA, 1999-2009**

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
<b>ALL FORMS OF HEART DISEASE</b>											
<b>TOTAL</b>	10,355	10,430	10,312	10,551	10,649	10,402	10,779	10,362	10,147	10,052	10,151
<b>Male</b>	5,580	5,594	5,469	5,642	5,649	5,543	5,789	5,538	5,455	5,535	5,558
<b>Female</b>	4,775	4,836	4,843	4,909	5,000	4,859	4,990	4,834	4,692	4,517	4,593
<b>Acute rheumatic fever and chronic rheumatic heart disease</b>											
<b>TOTAL</b>	51	32	37	46	63	46	55	57	38	57	51
<b>Male</b>	19	13	16	14	25	18	16	15	15	24	16
<b>Female</b>	32	19	21	32	38	28	39	42	23	33	35
<b>Hypertensive heart and renal disease*</b>											
<b>TOTAL</b>	3	*30	26	31	33	32	39	24	29	48	35
<b>Male</b>	1	13	11	14	20	9	18	13	15	22	18
<b>Female</b>	2	17	15	17	13	23	21	11	14	26	17
<b>Ischemic heart disease</b>											
<b>TOTAL</b>	6,383	7,949	7,656	7,962	8,037	7,836	8,060	7,628	7,163	7,326	7,372
<b>Male</b>	3,537	4,386	4,245	4,449	4,402	4,344	4,509	4,202	4,005	4,225	4,233
<b>Female</b>	2,846	3,563	3,411	3,513	3,635	3,492	3,551	3,426	3,158	3,101	3,139
<b>Hypertensive heart disease</b>											
<b>TOTAL</b>	229	261	355	431	440	463	487	506	646	636	698
<b>Male</b>	99	136	164	197	215	223	226	256	332	322	340
<b>Female</b>	130	125	191	234	225	240	261	250	314	314	358
<b>Other heart diseases</b>											
<b>TOTAL</b>	3,689	2,158	2,238	2,104	2,076	2,025	2,138	2,147	2,271	1,985	1,995
<b>Male</b>	1,924	1,046	1,033	968	987	949	1,020	1,052	1,088	942	951
<b>Female</b>	1,765	1,112	1,205	1,136	1,089	1,076	1,118	1,095	1,183	1,043	1,044

Note: Beginning in 2000, the causes of death are classified by ICD-10, replacing the Ninth Revision (ICD-9) used during 1979-1999.

\* The comparability ratio for hypertensive heart and renal disease is 1.5, indicating a 50 percent increase in hypertensive heart and renal disease deaths when classified by ICD-10.

**TABLE 2B-8  
NUMBER OF DEATHS FOR SELECTED SUBCATEGORIES OF MALIGNANT NEOPLASMS BY GENDER AND YEAR,  
ARIZONA, 1999-2009**

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
<b>ALL CANCERS</b>	<b>TOTAL</b>	8,850	8,994	8,914	9,148	9,451	9,506	9,768	9,955	9,941	10,147
	<b>Male</b>	4,707	4,756	4,627	4,982	5,088	5,107	5,233	5,364	5,363	5,432
	<b>Female</b>	4,143	4,238	4,287	4,166	4,363	4,399	4,535	4,591	4,578	4,715
<b>ICD-9 140-149/ICD-10 C00-C14</b>	<b>TOTAL</b>	102	108	116	122	114	127	140	133	151	125
<b>Malignant neoplasm of lip, oral cavity and pharynx (oropharyngeal cancer)</b>	<b>Male</b>	71	65	80	91	85	87	95	80	91	89
	<b>Female</b>	31	43	36	31	29	40	45	42	50	36
<b>ICD-9 150/ICD-10 C15</b>	<b>TOTAL</b>	167	192	202	239	239	240	222	252	262	266
<b>Malignant neoplasm of esophagus</b>	<b>Male</b>	132	145	151	191	196	190	188	206	212	214
	<b>Female</b>	35	47	51	48	43	50	34	46	50	52
<b>ICD-9 151/ICD-10 C16</b>	<b>TOTAL</b>	196	180	183	197	177	189	200	186	200	179
<b>Malignant neoplasm of stomach</b>	<b>Male</b>	125	112	115	132	106	110	113	106	121	105
	<b>Female</b>	71	68	68	65	71	79	87	80	79	74
<b>ICD-9 153, 154/ICD-10 C18-C21</b>	<b>TOTAL</b>	808	888	871	887	995	870	915	966	896	887
<b>Malignant neoplasm of colon, rectum, rectosigmoid junction and anus</b>	<b>Male</b>	435	469	434	484	535	466	490	535	466	463
	<b>Female</b>	373	419	437	403	460	404	425	431	430	424
<b>ICD-9 157/ICD-10 C25</b>	<b>TOTAL</b>	453	472	519	477	474	551	579	629	636	622
<b>Malignant neoplasm of pancreas</b>	<b>Male</b>	236	242	260	244	240	306	305	362	340	304
	<b>Female</b>	217	230	259	233	234	245	274	267	296	318
<b>ICD-9 162/ICD-10 C33-C34</b>	<b>TOTAL</b>	2,589	2,489	2,381	2,565	2,682	2,656	2,607	2,573	2,632	2,691
<b>Malignant neoplasm of trachea, bronchus and lung</b>	<b>Male</b>	1,485	1,428	1,312	1,439	1,530	1,490	1,461	1,443	1,477	1,480
	<b>Female</b>	1,104	1,061	1,069	1,126	1,152	1,166	1,146	1,130	1,155	1,211
<b>ICD-9 172/ICD-10 C43</b>	<b>TOTAL</b>	96	143	128	156	150	152	169	188	168	226
<b>Malignant melanoma of skin</b>	<b>Male</b>	60	99	93	101	105	104	133	124	115	160
	<b>Female</b>	36	44	35	55	45	48	36	64	53	66
<b>ICD-9 174,175/ICD-10 C50</b>	<b>TOTAL</b>	664	719	680	656	672	664	677	724	734	716
<b>Malignant neoplasm of breast</b>	<b>Male</b>	7	8	13	10	5	1	7	6	9	8
	<b>Female</b>	657	711	667	646	667	663	670	718	725	708

**TABLE 2B-8 (continued)  
NUMBER OF DEATHS FOR SELECTED SUBCATEGORIES OF MALIGNANT NEOPLASMS BY GENDER AND YEAR,  
ARIZONA, 1999-2009**

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
<b>ICD-9 180/ICD-10 C53</b>											
<b>Malignant neoplasm of cervix uteri</b>											
<b>TOTAL</b>	51	80	74	63	63	64	65	54	62	60	64
<b>Female</b>	51	80	74	63	63	64	65	54	62	60	64
<b>ICD-9 179, 182/ ICD-10 C54-C55</b>											
<b>Malignant neoplasm of body of uterus and of uterus, part unspecified</b>											
<b>TOTAL</b>	72	63	91	75	81	98	107	97	97	115	108
<b>Female</b>	72	63	91	75	81	98	107	97	97	115	108
<b>ICD-9 185/ICD-10 C61</b>											
<b>Malignant neoplasm of prostate</b>											
<b>TOTAL</b>	486	600	501	533	544	544	564	522	548	568	551
<b>Male</b>	486	600	501	533	544	544	564	522	548	568	551
<b>ICD-9 188/ICD-10 C67</b>											
<b>Malignant neoplasm of bladder</b>											
<b>TOTAL</b>	199	221	216	209	229	238	244	238	270	258	264
<b>Male</b>	138	161	154	152	164	157	180	175	206	192	206
<b>Female</b>	61	60	62	57	65	81	64	63	64	66	58
<b>ICD-9 189/ICD-10 C64-C65</b>											
<b>Malignant neoplasm of kidney and other and unspecified urinary organs</b>											
<b>TOTAL</b>	230	184	215	230	215	227	248	238	231	247	240
<b>Male</b>	156	113	135	152	137	149	150	156	147	154	161
<b>Female</b>	74	71	80	78	78	78	98	82	84	93	79
<b>ICD-9 191, 192/ICD-10 C70-C72</b>											
<b>Malignant neoplasm of brain</b>											
<b>TOTAL</b>	161	222	211	210	214	224	276	248	248	268	275
<b>Male</b>	93	129	101	127	126	115	153	133	141	152	151
<b>Female</b>	68	93	110	83	88	109	123	115	107	116	124
<b>ICD-9 201/ICD-10 81</b>											
<b>Hodgkin's disease</b>											
<b>TOTAL</b>	20	20	20	26	16	17	17	19	30	17	16
<b>Male</b>	14	10	14	15	10	12	9	14	19	10	9
<b>Female</b>	6	10	6	11	6	5	8	5	11	7	7
<b>ICD-9 200, 202/ICD-10 C82-C85</b>											
<b>Malignant lymphoma other than Hodgkin's disease</b>											
<b>TOTAL</b>	407	366	384	409	386	370	381	373	362	434	388
<b>Male</b>	219	192	211	207	204	208	218	213	200	230	212
<b>Female</b>	188	174	173	202	182	162	163	160	162	204	176
<b>ICD-9 203/ICD-10 C88, C90</b>											
<b>Multiple myeloma and immunoproliferative neoplasms</b>											
<b>TOTAL</b>	152	146	166	192	169	202	201	199	213	203	189
<b>Male</b>	81	79	93	124	89	119	107	110	118	123	107
<b>Female</b>	71	67	73	68	80	83	94	89	95	80	82
<b>Other malignant neoplasms</b>											
<b>TOTAL</b>	1,776	2,901	1,956	1,902	2,031	2,073	2,061	2,080	2,243	2,092	2,340
<b>Male</b>	968	904	960	912	1,012	1,049	1,011	1,056	1,112	1,093	1,212
<b>Female</b>	808	997	996	990	1,019	1,024	1,050	1,024	1,131	999	1,128

Note: Beginning with the 2000 data year, the causes of death are classified by ICD-10, replacing the Ninth Revision (ICD-9) used during 1979-1999.

**TABLE 2B-9  
NUMBER OF DEATHS FROM UNINTENTIONAL INJURIES IN ACCIDENTS BY CATEGORY AND YEAR AMONG  
ARIZONA RESIDENTS, 1999-2009**

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
<b>Total unintentional injury deaths</b>	2,192	2,087	2,430	2,416	2,466	2,641	3,006	3,156	3,014	2,951	2,887
<b>Railway accident</b>	6	13	9	3	10	11	10	17	12	9	8
<b>Motor vehicle accident</b>	980	896	908	1,003	1,005	1,060	1,137	1,220	1,035	891	771
<b>Water transport accident</b>	7	6	6	4	1	4	5	3	1	4	2
<b>Accident involving aircraft</b>	16	20	9	19	23	21	9	32	17	32	15
<b>Poisoning by drugs/medicaments</b>	383	230	414	458	447	517	549	624	669	689	802
<b>Poisoning by gases and vapors</b>	31	20	32	24	18	16	14	22	52	77	85
<b>Falls</b>	404	374	445	448	469	526	685	702	720	748	731
<b>Fire, flames, smoke</b>	45	46	49	41	42	30	56	43	31	50	31
<b>Excessive natural heat</b>	35	23	21	35	40	34	74	62	28	33	39
<b>Excessive natural cold</b>	15	15	20	15	15	17	28	17	20	25	24
<b>Contact with venomous snakes and lizards</b>	1	1	0	0	0	1	0	0	0	1	0
<b>Contact with venomous spiders</b>	0	0	0	0	0	1	2	0	1	0	0
<b>Contact with scorpions</b>	0	1	1	1	0	0	0	0	0	0	0
<b>Contact with hornets, wasps, bees</b>	0	0	0	0	0	0	0	0	0	0	0
<b>Bitten or struck by dog</b>	1	1	1	0	1	2	1	2	2	1	4
<b>Lightning</b>	5	2	0	0	2	0	3	2	1	0	1
<b>Storms and floods</b>	0	0	3	0	4	0	0	1	1	0	0
<b>Accidental drowning and submersion</b>	83	94	80	65	83	97	83	87	85	78	99
<b>Choked on food</b>	38	35	20	18	41	36	27	30	22	35	43
<b>Choked on other objects</b>	22	34	32	54	59	48	62	48	61	53	49
<b>Mechanical suffocation</b>	28	19	57	23	25	21	27	26	43	29	25
<b>Accidental discharge of firearms</b>	7	11	*NA	26	13	13	15	9	13	10	7
<b>Exposure to electric current</b>	6	7	5	6	4	9	15	4	11	6	7
<b>Overexertion</b>	0	0	0	0	1	0	0	0	0	0	0
<b>Adverse effects of drugs in therapeutic use</b>	3	3	6	9	6	2	4	5	5	7	8
<b>Misadventures to patients during medical/surgical care</b>	17	43	44	46	49	46	39	51	44	40	42

Note: Beginning in 2000, the data are classified by the Tenth Revision of the International Classification of Diseases (ICD-10), replacing the Ninth Revision (ICD-9) used in Arizona during 1979-1999.

\*Approximately 100 firearm fatalities that would have been classified as suicide, had the manual system of coding the underlying cause of death been in place, were misclassified as accidents in 2001. For more information see footnote on Table 3-1, Intentional Self-Harm (suicide), Arizona, 1996-2006, Injury Mortality Among Arizona Residents.

**TABLE 2B-10  
NUMBER OF DEATHS FROM MOTOR VEHICLE-RELATED INJURIES BY PERSON INJURED, GENDER AND YEAR,  
ARIZONA RESIDENTS, 1999-2009**

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
<b>TOTAL</b>											
<b>Total</b>	980	896	908	1,003	1,005	1,060	1,137	1,220	1,035	891	771
<b>Male</b>	680	617	638	684	689	693	801	831	710	632	554
<b>Female</b>	300	279	270	319	316	367	336	389	325	259	217
<b>Motorcyclist</b>											
<b>Total</b>	68	71	61	81	76	89	113	115	103	113	99
<b>Male</b>	60	62	54	75	68	72	101	99	92	106	94
<b>Female</b>	8	9	7	6	8	17	12	16	11	7	5
<b>Pedestrian</b>											
<b>Total</b>	162	122	142	147	124	143	182	169	155	136	122
<b>Male</b>	131	97	101	103	88	99	141	123	103	101	90
<b>Female</b>	31	25	41	44	36	44	41	46	52	35	32
<b>Pedal cyclist</b>											
<b>Total</b>	23	20	26	8	14	21	39	30	18	12	22
<b>Male</b>	22	18	25	8	12	18	36	29	17	11	19
<b>Female</b>	1	2	1	0	2	3	3	1	1	1	3
<b>Other person</b>											
<b>Total</b>	727	683	679	767	791	807	803	906	759	630	528
<b>Male</b>	467	440	458	498	521	504	523	580	498	414	351
<b>Female</b>	260	243	221	269	270	33	280	326	261	216	177

Note: Beginning in 2000, the data are classified by the Tenth Revision of the International Classification of Diseases (ICD-10), replacing the Ninth Revision (ICD-9) used in Arizona during 1979-1999. The comparability ratio for motor vehicle accidents is 0.85, a decrease by 15 percent due to ICD-10.

**TABLE 2B-11  
LEADING CAUSES OF DEATH BY PLACE OF DEATH AND DECEDENT STATUS, ARIZONA, 2009**

Causes of death	TOTAL	IN HOSPITAL				NOT IN HOSPITAL				
		In-patient	Out-patient*	Died on arrival	Subtotal	Nursing home**	Residence	Other***	Unspecified	Subtotal
<b>TOTAL, ALL CAUSES</b>	45,065	10,925	2,320	84	13,329	14,354	12,857	4,143	382	31,736
Diseases of heart	10,151	2,385	882	21	3,288	2,654	3,362	768	79	6,863
Coronary heart disease	8,070	1,720	749	15	2,484	2,067	2,821	633	65	5,586
Malignant neoplasms	10,147	1,755	119	4	1,878	3,851	3,740	596	82	8,269
Malignant neoplasm of trachea, bronchus and lung	2,691	465	46	1	512	977	1,008	169	25	2,179
Malignant neoplasm of colon, rectum, and anus	887	136	9	0	145	337	328	66	11	742
Malignant neoplasm of breast	716	113	6	1	120	275	254	63	4	596
Malignant neoplasm of prostate	551	48	4	0	52	223	234	38	4	499
Malignant neoplasm of cervix uteri	64	11	1	0	12	29	18	4	1	52
Accident (unintentional injury)	2,887	620	422	21	1,063	457	620	711	36	1,824
Accidental poisoning	887	89	143	4	236	14	476	155	6	651
Motor vehicle accidents	771	143	167	9	319	29	5	402	16	452
Falls	731	259	31	4	294	358	44	30	5	437
Accidental drowning and submersion	99	16	26	1	43	2	19	31	4	56
Chronic lower respiratory diseases	2,808	568	88	5	661	1,141	803	186	17	2,147
Alzheimer's disease	2,086	70	10	1	81	1,246	420	318	21	2,005
Cerebrovascular diseases	2,010	578	48	1	627	917	301	153	12	1,383
Diabetes	1,078	221	74	10	305	284	403	80	6	773
Intentional self-harm (suicide)	1,060	68	89	3	160	15	645	232	8	900
Influenza and pneumonia	1,007	562	32	1	595	264	98	40	10	412
Chronic liver disease and cirrhosis	818	268	29	0	297	279	191	47	4	521
Nephritis, nephrotic syndrome and nephrosis	532	228	18	0	246	160	84	39	3	286
Septicemia	528	397	21	0	418	82	8	17	3	110
Essential (primary) hypertension & hypertensive renal disease	475	84	21	2	107	211	116	35	6	368
Parkinson's disease	446	22	9	0	31	228	111	75	1	415
Assault (homicide)	360	42	73	2	117	9	92	141	1	243
<b>Human immunodeficiency virus (HIV) disease</b>	105	47	2	0	49	32	19	4	1	56
<b>Injury by firearms</b>	843	58	104	2	164	7	455	213	4	679
<b>Drug-induced deaths</b>	1,093	123	158	3	284	30	607	163	9	809
<b>Alcohol-induced deaths</b>	795	198	40	4	242	212	251	86	4	553

\* Includes Emergency Room.

\*\* Includes other long-term care facilities.

\*\*\* Includes hospices.



## 2C.

### AGE-SPECIFIC MORTALITY

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Six age-specific profiles of mortality are given on the following pages. The six developmental periods in the life span are:

- **Infants** less than one year of age
- **Children** 1 to 14 years old
- **Adolescents** or persons 15 to 19 years old
- **Young adults** or persons 20 to 44 years old
- **Middle-aged adults** or persons 45 to 64 years old
- **Elderly** or persons 65 years or older.

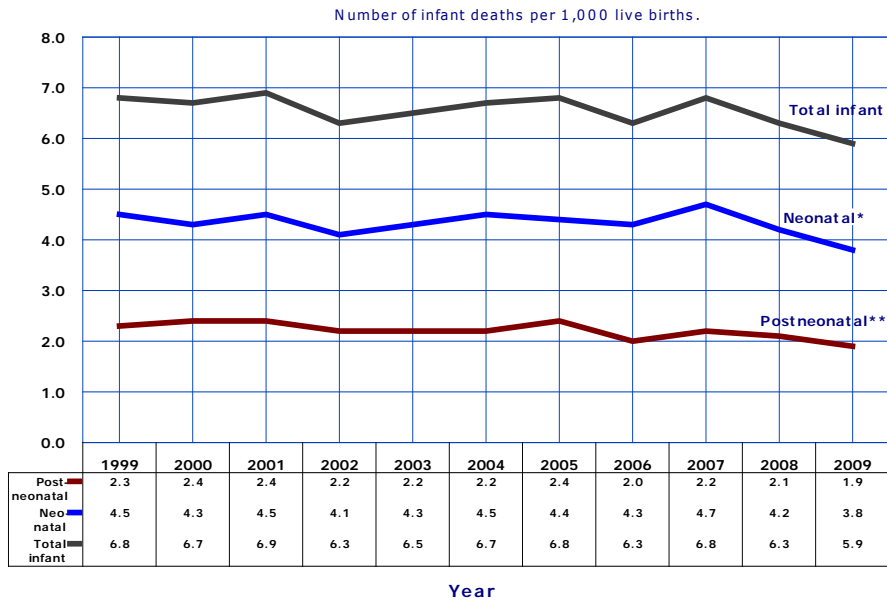
For each age group, cause-specific mortality is compared between urban (i.e., Maricopa, Pima, Pinal and Yuma counties) and rural (all other counties) regions and between genders. Urban and rural regions also are compared in gender-specific total mortality.

A comparison of age-specific mortality for the 113 causes of death is provided in **Table 2C-28**. A comparison of age-specific mortality rates is in **Table 2C-29**.

## 2C. AGE-SPECIFIC MORTALITY

### Infant mortality

**Figure 2C-1**  
**Infant Mortality Rates by Neonatal/Postneonatal Age and Year,**  
**Arizona, 1999-2009**



Deaths to infants age 0-27 days.  
 \*\*Deaths to infants age 28 days-1 year.

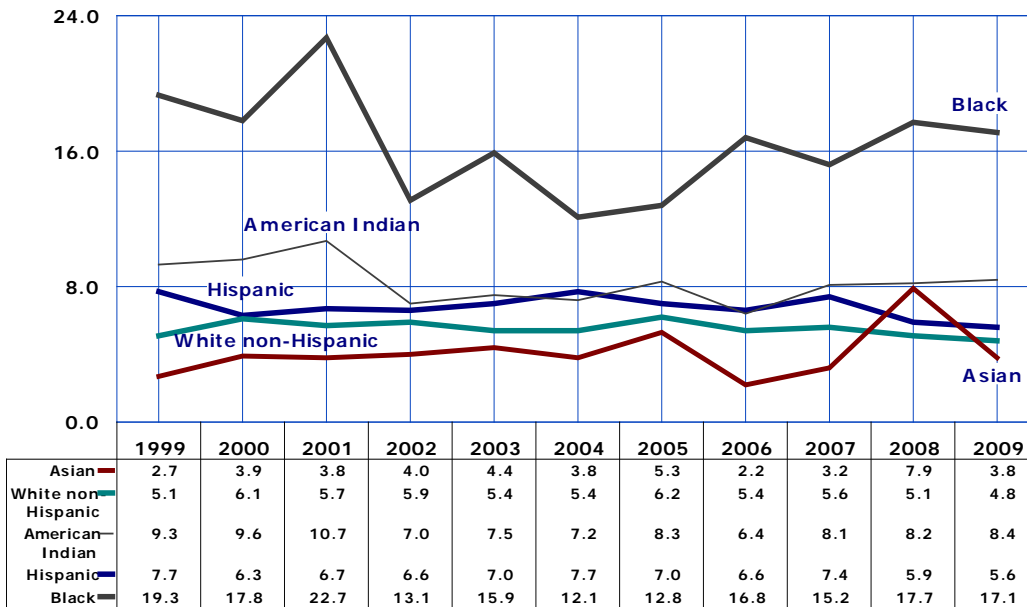
Infant mortality is defined as the number of deaths within the first year of life. The infant mortality rate (IMR) is computed as the number of infant deaths in a calendar year per 1,000 live births recorded for the same period.

In 2009, 547 Arizona infants died before reaching their first birthday, 154 fewer than in 2007. Even if the risk of infant mortality remained the same as it was in 2007, 68 fewer infant deaths can be attributed to the absolute reduction in the number of births by 10,071 from 2007 to 2009  $((10,071 \times 6.8)/1,000) = 68.5$ .

Based on the actual number of infant deaths and live births in 2009, the infant mortality rate decreased to 5.9/1,000; the lowest IMR ever recorded in the State's history (**Figure 2C-1**)

More-detailed infant mortality data from the linked birth/infant death data set are used below to analyze some of the factors contributing to the decrease. In the linked file, the information from the death certificate is linked to information from the birth certificate for each resident infant less than 1 year of age who died in Arizona in 2009.

**Figure 2C-2**  
**Infant Mortality Rates by Race/Ethnicity and Year,**  
**Arizona, 1999-2009**



Number of infant deaths per 1,000 live births in specified group.

In 2009, 96.5 percent\* of all infant death records were successfully matched to their corresponding birth records. Among the 547 infants who died in 2009, 61 were born in 2008.

The mortality risk for infants varies by race/ethnicity. Infants of Asian or Pacific Islander mother, followed by babies of White non-Hispanic and Hispanic or Latino mothers had the lowest infant mortality rates among the race/ethnic groups in 2009 (**Figure 2C-2, Table 2C-2**)

In 2009, Black infants continued to have the worst survival chances among the ethnic groups (**Figure 2C-2**). The Black IMR slightly decreased from 17.7/1,000 in 2008 to 17.1/1,000 in 2009.

\*Infant death records that were not linked to their corresponding birth certificates include unrecorded home births (i.e., no birth certificates was issued) and out-of-State births (i.e., the State issuing the certificate of birth did not send a copy to Arizona).



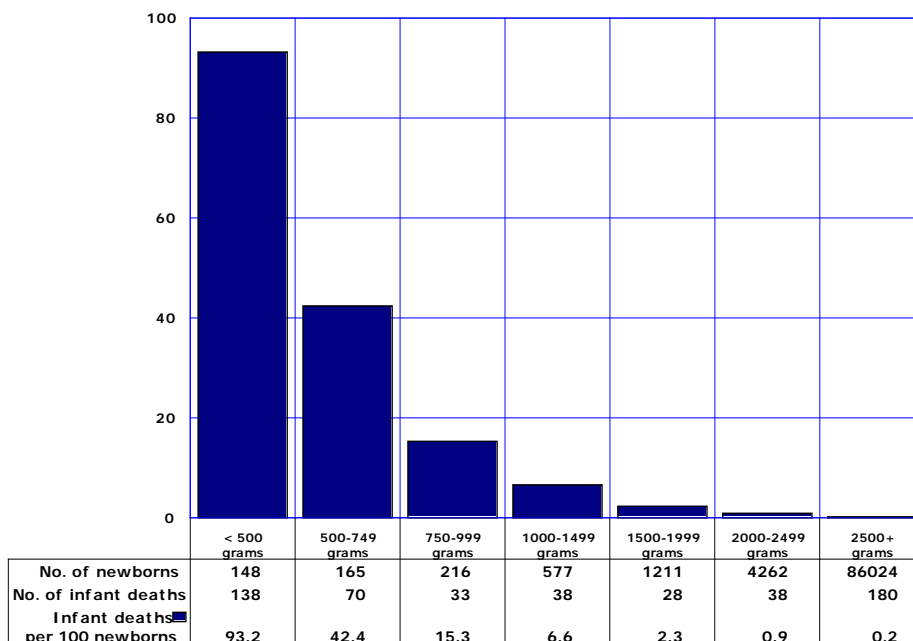
2C. AGE-SPECIFIC MORTALITY  
**Infant mortality**

**Figure 2C-3**  
**Proportion of Infant Deaths by Birthweight, Arizona, 2009**

Newborn weight at birth is one of the most important predictors of an infant's survival chances. In 2009, the infant mortality rate for low birthweight infants (LBW: less than 2,500 grams) was 52.4 deaths per 1,000 live births. Similarly, the infant mortality rate for very low birthweight infants (VLBW: less than 1,500 grams) was 252.3 deaths per 1,000 live births.

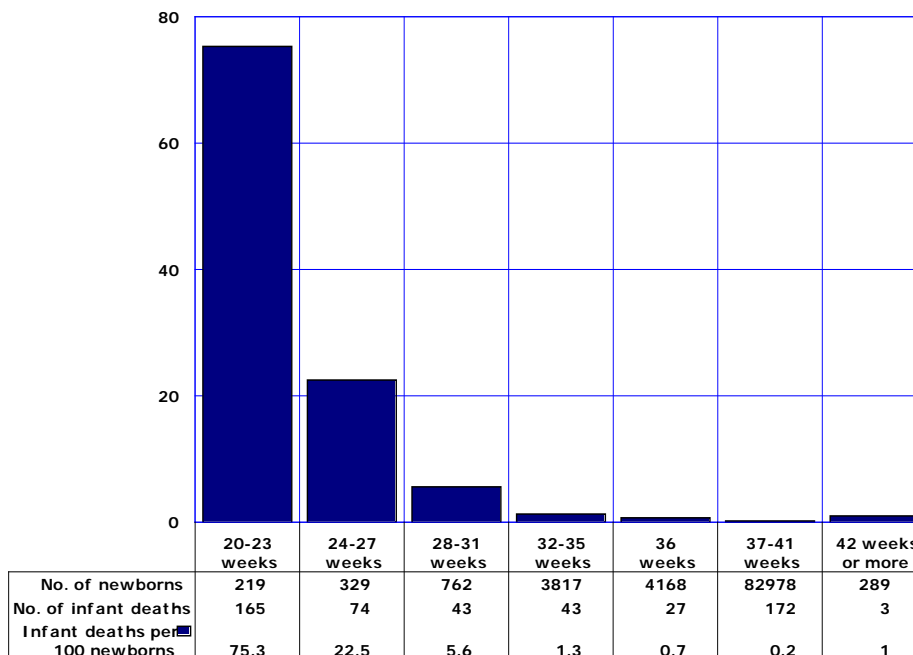
The absolute number of low birthweight births actually declined for the second consecutive year from 7,285 in 2007 to 7,026 in 2008, and 6,573 in 2009. However, the proportion of babies whose weight at birth was less than 1,000 grams increased from 7.7 percent of all low birthweight births in 2008 to 8.0 percent in 2009 (**Table 1B-3**).

Together, births of infants weighing less than 1,000 grams accounted for 0.6 percent of births, and 44.1 percent of all infant deaths. Infants weighing less than 500 grams in 2009 had a very high mortality rate of 93.2 percent (**Figure 2C-3**).



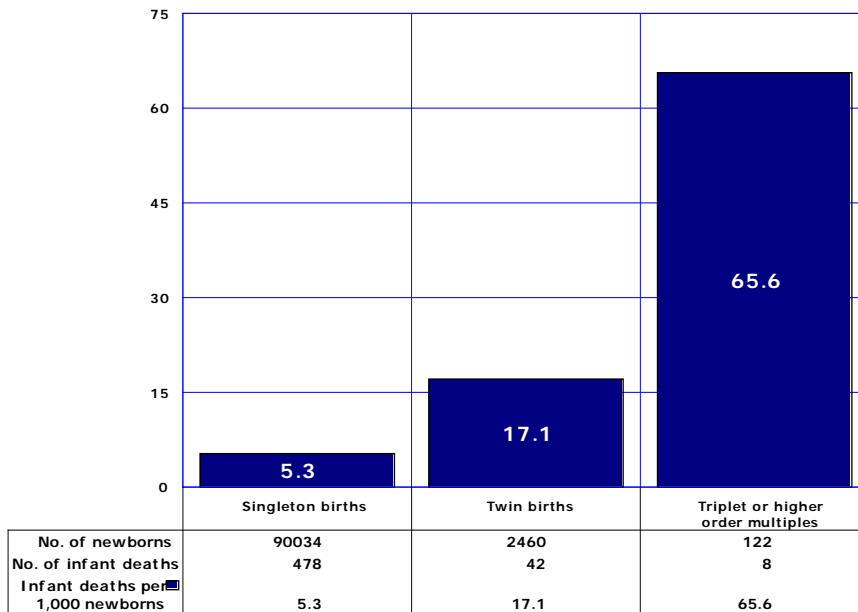
**Figure 2C-4**  
**Proportion of Infant Deaths by Gestational Age, Arizona, 2009**

As with low birthweight, preterm and very preterm infants have a large impact on the total infant mortality rate because of their much higher risk of infant mortality. For example, births at less than 27 weeks of gestation accounted for only 0.6 percent of all births but 43.7 percent of infant deaths in Arizona in 2009. Births at less than 24 weeks of gestation have a very high infant mortality rate of 75.3 percent (**Figure 2C-4**). Overall, preterm infants (those born at less than 37 weeks of gestation) accounted for 10.0 percent of births (**Table 1B-2**) and 64.4 percent of all infant deaths.



2C. AGE-SPECIFIC MORTALITY  
**Infant mortality**

**Figure 2C-4.2**  
**Infant Mortality Rates for Single and Multiple Births, Arizona, 2009**

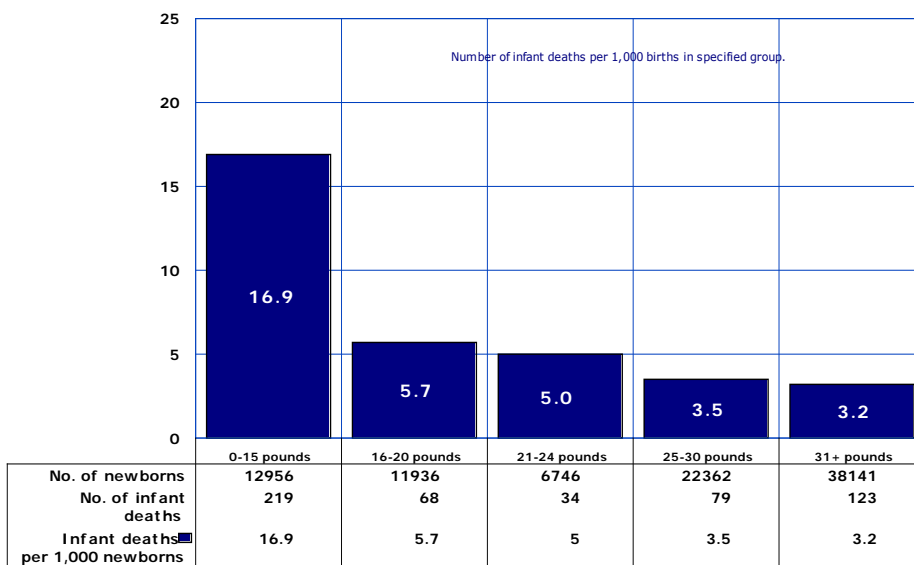


As already noted in Section 1B, infants born in multiple deliveries tend to be born at shorter gestations and smaller than those in singleton deliveries. In 2009, infants born in multiple deliveries were 12.5 times more likely (47.6 vs. 3.8 percent) to be born earlier than expected (at less than 37 completed weeks of gestation) and smaller (at less than 2,500 grams) than singleton births (Figure 1B-10).

The infant mortality rate for single births was 5.3 in 2009 (Figure 2C-4.2). The infant mortality rate for twin births was 17.1, and for triplets or higher order multiples it was 65.6 (the latter rate, based on only 8 infant deaths, is not statistically reliable).

Babies born in multiple deliveries accounted for 2.8 percent of births (Table 1B-2), but 9.1 percent of all infant deaths in Arizona in 2009.

**Figure 2C-4.3**  
**Infant Mortality Rates by Maternal Weight Gain during Pregnancy, Arizona, 2009**

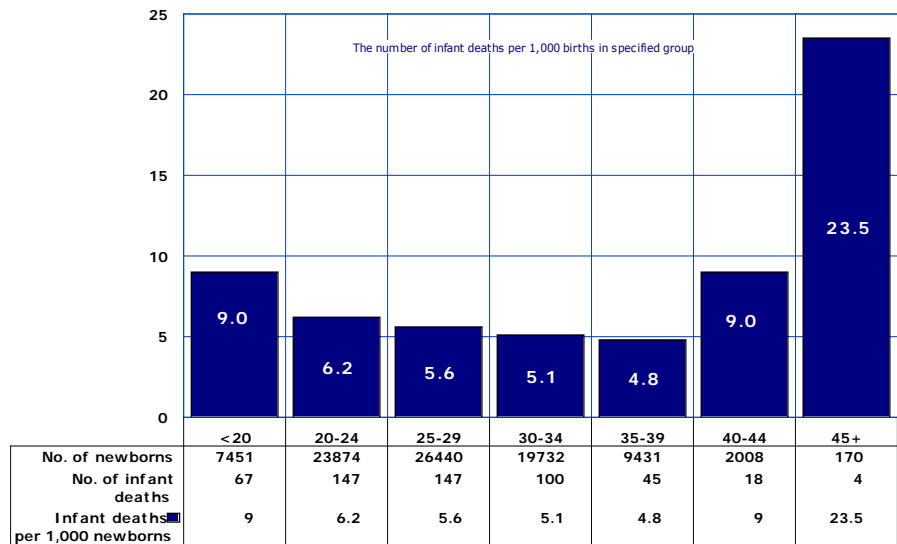


Infant mortality rates vary with maternal weight gain during pregnancy. Insufficient or excessive weight gain during pregnancy can negatively impact both maternal and pregnancy outcome. In 2009, as in previous years, the risk of infant death decreased with increasing maternal weight gain, including maternal weight gain of 31 or more pounds (Figure 2C-4.3). Among the 38,141 women giving birth in 2009 who gained 31 or more pounds, 41.9 percent had weight gains of more than 40 pounds, considered excessive for all women regardless of their body mass index.

There is no coincidence that mother's weight gain has been shown to have a positive correlation with infant birthweight (Figure 1B-22).

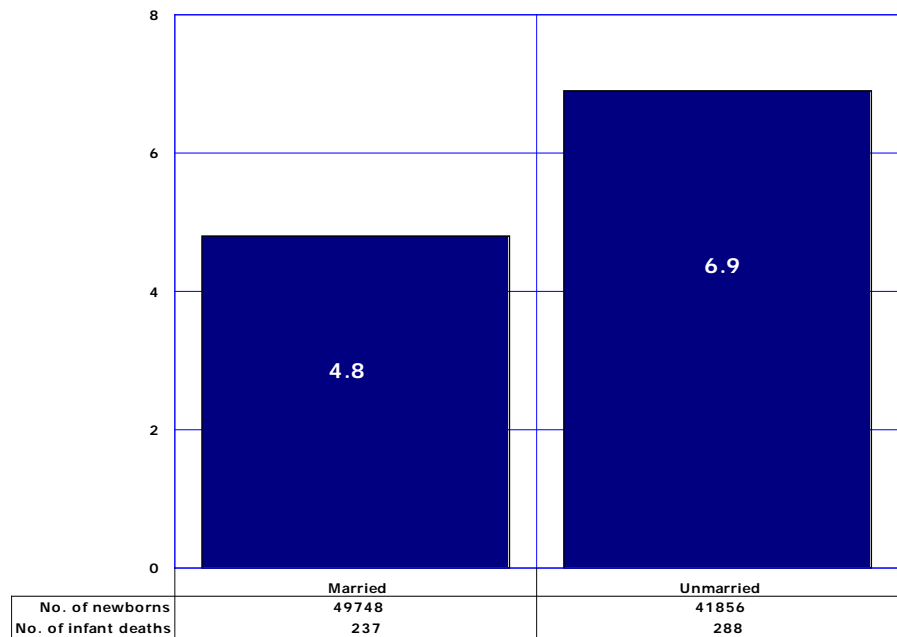
2C. AGE-SPECIFIC MORTALITY  
**Infant mortality**

**Figure 2C-4.4**  
**Infant Mortality Rates by Mother's Age Group, Arizona, 2009**



Infant mortality rates vary with maternal age. In 2009, infant mortality decreased with increasing maternal age through 35-39 years of age but increased for infants born to women 40 years of age or older. (Figure 2C-4.4). The number of births to women 45 years or older increased by 27.8 percent from 133 in 2008 to 170 in 2009.

**Figure 2C-4.5**  
**Infant Mortality Rates by Mother's Marital Status, Arizona, 2009**



Infants born to unmarried mothers accounted for the absolute majority of infant deaths in 2009 (288 vs. 237); while the number of births to married mothers exceeded by 18.9 percent the number of births to unmarried mothers (49,748 vs. 41,856; Table 1B-26). In 2009, infants of married mothers had an infant mortality rate of 4.8 deaths per 1,000 live births, 30.4 percent lower than the rate for infants of unmarried mothers (6.9 infant deaths per 1,000 live births; Figure 2C-4.5). The effect of marital status on infant mortality suggests that marital status is a proxy measure of factors traditionally related to infant mortality such as poverty conditions, access to health care or social support. Mother's marital status may signify the presence or absence of emotional, social, and financial resources.

Additional information is available in our special report on "Marital Status and Health, Arizona Residents, 2006" at [www.azdhs.gov/plan/report/ms/ms06/index.htm](http://www.azdhs.gov/plan/report/ms/ms06/index.htm)

**TABLE 2C-1  
 INFANT, NEONATAL AND POSTNEONATAL MORTALITY RATES AND PERCENT POSTNEONATAL DEATHS,  
 UNITED STATES, ARIZONA AND URBAN/RURAL COUNTIES OF ARIZONA, 1999-2009**

UNITED STATES	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Infant mortality <sup>1</sup>	7.1	6.9	6.8	7.0	6.9	6.7	6.9	6.7	6.7	6.5	6.6
Neonatal mortality <sup>1</sup>	4.7	4.6	4.6	4.7	4.6	4.5	4.6	4.5	4.4	NA	NA
Postneonatal mortality <sup>1</sup>	2.3	2.3	2.3	2.3	2.3	2.2	2.3	2.2	2.3	NA	NA
Percent postneonatal mortality <sup>2</sup>	33.0	33.3	33.3	33.8	33.3	32.8	33.3	32.8	34.3	NA	NA
<b>ARIZONA, STATEWIDE TOTAL</b>											
Infant mortality <sup>1</sup>	6.8	6.7	6.9	6.3	6.5	6.7	6.8	6.3	6.8	6.3	5.9
Neonatal mortality <sup>1</sup>	4.5	4.3	4.5	4.1	4.3	4.5	4.4	4.3	4.7	4.2	3.9
Postneonatal mortality <sup>1</sup>	2.3	2.4	2.4	2.2	2.2	2.2	2.4	2.0	2.2	2.1	2.0
Percent postneonatal mortality <sup>2</sup>	33.8	35.9	34.8	35.0	33.8	32.8	35.3	31.5	32.4	33.3	34.0
<b>URBAN COUNTIES</b>											
Infant mortality <sup>1</sup>	6.8	6.5	6.9	6.4	6.4	6.7	6.5	6.3	6.6	6.3	5.9
Neonatal mortality <sup>1</sup>	4.5	4.2	4.7	4.2	4.4	4.7	4.3	4.3	4.6	4.3	4.0
Postneonatal mortality <sup>1</sup>	2.3	2.3	2.2	2.2	2.0	2.0	2.2	2.0	2.0	2.0	2.0
Percent postneonatal mortality <sup>2</sup>	33.8	35.4	31.9	34.4	31.5	29.9	33.8	31.3	30.3	31.8	33.0
<b>RURAL COUNTIES</b>											
Infant mortality <sup>1</sup>	6.7	7.7	6.3	6.2	7.1	6.9	8.6	6.3	8.0	6.2	5.5
Neonatal mortality <sup>1</sup>	4.6	4.6	3.4	3.8	3.8	3.8	5.0	4.3	4.8	3.5	3.9
Postneonatal mortality <sup>1</sup>	2.1	3.1	2.9	2.4	3.3	3.1	3.6	2.0	3.3	2.7	2.0
Percent postneonatal mortality <sup>2</sup>	31.3	40.3	46.0	38.7	46.2	44.9	41.9	32.6	41.3	43.6	38.7

<sup>1</sup>Rates per 1,000 live births. The U.S. rates are from the National Center for Health Statistics. The 2008 and 2009 U.S. rates are provisional.

<sup>2</sup>Total infant mortality = 100 percent.

Note: Urban = Maricopa, Pima, Pinal and Yuma Counties. The remaining counties comprise Arizona's rural areas. Records with unknown county of residence are included in the statewide totals, but are not distributed by urban/rural area.

**TABLE 2C-2  
NUMBER AND RATE<sup>1</sup> OF INFANT DEATHS BY RACE/ETHNICITY AND GENDER, ARIZONA, 1999-2009  
NUMBER OF INFANT DEATHS:**

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
<b>White non-Hispanic</b>											
<b>Total</b>	196	244	221	229	208	211	245	232	237	215	192
<b>Male</b>	115	149	138	147	124	129	140	119	135	114	109
<b>Female</b>	81	95	83	82	84	82	105	113	102	101	83
<b>Hispanic or Latino</b>											
<b>Total</b>	138	213	236	238	274	314	296	297	338	251	215
<b>Male</b>	138	105	119	139	148	168	161	173	186	142	115
<b>Female</b>	100	108	117	99	126	146	135	124	152	109	100
<b>Black or African American</b>											
<b>Total</b>	52	49	62	36	48	39	44	65	63	76	75
<b>Male</b>	29	28	36	18	26	26	30	36	42	42	41
<b>Female</b>	23	21	26	18	22	13	14	29	21	34	34
<b>American Indian or Alaska Native</b>											
<b>Total</b>	49	54	57	39	44	44	52	41	52	52	52
<b>Male</b>	25	33	29	22	22	24	25	28	29	27	28
<b>Female</b>	24	21	28	17	22	20	27	13	23	25	24
<b>Asian or Pacific Islander</b>											
<b>Total</b>	5	8	8	9	11	10	15	7	11	27	13
<b>Male</b>	4	5	4	6	6	4	7	5	7	15	6
<b>Female</b>	1	3	4	3	5	6	8	2	4	12	7
<b>All groups<sup>2</sup></b>											
<b>Total</b>	547	568	587	552	586	622	653	642	701	625	547
<b>Male</b>	315	320	327	332	326	353	364	361	399	343	299
<b>Female</b>	232	248	260	220	260	269	289	281	302	282	248

**INFANT MORTALITY RATES:**

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
<b>White non-Hispanic</b>											
<b>Total</b>	5.1	6.1	5.7	5.9	5.4	5.4	6.2	5.4	5.6	5.1	4.8
<b>Male</b>	5.8	7.3	6.9	7.3	6.2	6.4	6.9	5.4	6.3	5.3	5.4
<b>Female</b>	4.3	4.9	4.4	4.4	4.4	4.3	5.5	5.4	4.9	4.9	4.3
<b>Hispanic or Latino</b>											
<b>Total</b>	7.7	6.3	6.7	6.6	7.0	7.7	7.0	6.6	7.4	5.9	5.6
<b>Male</b>	8.7	6.0	6.7	7.5	7.4	8.0	7.5	7.5	7.9	6.5	5.8
<b>Female</b>	6.6	6.5	6.8	5.6	6.6	7.3	6.6	5.7	6.8	5.2	5.3
<b>Black or African American</b>											
<b>Total</b>	19.3	17.8	22.7	13.1	15.9	12.1	12.8	16.8	15.1	17.7	17.1
<b>Male</b>	20.0	20.0	26.8	12.6	16.6	15.7	17.2	18.3	19.5	18.7	18.0
<b>Female</b>	18.4	15.4	18.7	13.6	15.1	8.3	8.2	15.3	10.5	16.6	16.2
<b>American Indian or Alaska Native</b>											
<b>Total</b>	9.3	9.6	10.7	7.0	7.5	7.2	8.3	6.4	8.1	8.2	8.4
<b>Male</b>	9.4	11.6	10.9	7.9	7.6	7.7	7.8	8.8	9.0	8.5	9.0
<b>Female</b>	9.1	7.6	10.5	6.2	7.4	6.7	8.7	4.1	7.2	7.9	7.8
<b>Asian or Pacific Islander</b>											
<b>Total</b>	2.7	3.9	3.8	4.0	4.4	3.8	5.3	2.2	3.2	7.9	3.8
<b>Male</b>	4.3	4.9	3.8	5.2	4.7	2.9	4.9	3.1	3.9	8.5	3.4
<b>Female</b>	1.1	3.0	3.8	2.7	4.0	4.8	5.8	1.3	2.5	7.2	4.3
<b>All groups<sup>2</sup></b>											
<b>Total</b>	6.8	6.7	6.9	6.3	6.5	6.7	6.8	6.3	6.8	6.3	5.9
<b>Male</b>	7.6	7.4	7.5	7.4	7.0	7.4	7.4	6.9	7.6	6.8	6.3
<b>Female</b>	5.9	6.0	6.2	5.2	5.9	5.9	6.2	5.6	6.0	5.8	5.5

<sup>1</sup>Number of infant deaths per 1,000 live births in specified ethnic/gender group. Infant deaths are by the race/ethnicity of the decedent. For consistency with the national data, the denominators used to calculate infant mortality rates were changed from race/ethnicity of parents to race/ethnicity of mother as stated on the birth certificate. The change in the basis for calculating infant mortality rates results in lower rates for white infants and higher rates for most minority infants than when they are computed by the previous method.

<sup>2</sup>Includes records with other and unknown ethnic group.

**TABLE 2C-3  
NUMBER AND RATE<sup>1</sup> OF INFANT DEATHS BY RACE/ETHNICITY AND AGE GROUP, 1999-2009  
NUMBER OF INFANT DEATHS:**

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
<b>White non-Hispanic</b>											
Total	196	244	221	229	208	211	245	232	237	215	192
Neonatal	143	153	156	151	143	155	163	161	161	138	129
Postneonatal	53	91	65	78	65	56	82	71	76	77	63
<b>Hispanic or Latino</b>											
Total	238	213	236	238	274	314	296	297	338	251	215
Neonatal	151	144	159	165	190	209	205	213	239	175	150
Postneonatal	87	69	77	73	84	105	91	84	99	76	65
<b>Black or African American</b>											
Total	52	49	62	36	48	39	44	65	63	76	75
Neonatal	31	27	41	16	31	25	19	37	43	51	46
Postneonatal	21	22	21	20	17	14	25	28	20	25	29
<b>American Indian or Alaska Native</b>											
Total	49	54	57	39	44	44	52	41	52	52	52
Neonatal	29	36	22	20	18	21	27	26	27	29	26
Postneonatal	20	18	35	19	26	23	25	15	25	23	26
<b>Asian or Pacific Islander</b>											
Total	5	8	8	9	11	10	15	7	11	27	13
Neonatal	3	4	5	7	5	7	9	3	9	22	10
Postneonatal	2	4	3	2	6	3	6	4	2	5	3
<b>All groups<sup>2</sup></b>											
Total	547	568	587	552	586	622	653	642	701	625	547
Neonatal	363	364	386	360	388	421	424	440	479	419	361
Postneonatal	184	204	201	192	198	201	229	202	222	206	186

**INFANT MORTALITY RATES:**

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
<b>White non-Hispanic</b>											
Total	5.1	6.1	5.7	5.9	5.4	5.4	6.2	5.4	5.6	5.1	4.8
Neonatal	3.7	3.8	4.0	3.9	3.7	3.9	4.1	3.7	3.8	3.3	3.2
Postneonatal	1.4	2.3	1.7	2.0	1.7	1.4	2.1	1.7	1.8	1.8	1.6
<b>Hispanic or Latino</b>											
Total	7.7	6.3	6.7	6.6	7.0	7.7	7.0	6.6	7.4	5.9	5.6
Neonatal	4.9	4.2	4.5	4.6	4.9	5.1	4.9	4.7	5.2	4.1	3.9
Postneonatal	2.8	2.0	2.2	2.0	2.1	2.6	2.1	1.9	2.2	1.8	1.7
<b>Black or African American</b>											
Total	19.3	17.8	22.7	13.1	15.9	12.1	12.8	16.8	15.1	17.7	17.1
Neonatal	11.5	9.8	15.0	5.8	10.3	7.8	5.5	9.6	10.3	11.9	10.5
Postneonatal	7.8	8.0	7.7	7.3	5.6	4.4	7.3	7.2	4.8	5.8	6.6
<b>American Indian or Alaska Native</b>											
Total	9.3	9.6	10.7	7.0	7.5	7.2	8.3	6.4	8.1	8.2	8.4
Neonatal	5.5	6.4	4.1	3.6	3.1	3.4	4.3	4.0	4.2	4.6	4.2
Postneonatal	3.8	3.2	6.6	3.4	4.4	3.8	4.0	2.4	3.9	3.6	4.2
<b>Asian or Pacific Islander</b>											
Total	2.7	3.9	3.8	4.0	4.4	3.8	5.3	2.2	3.2	7.9	3.8
Neonatal	1.6	2.0	2.4	3.1	2.0	2.7	3.2	1.0	2.6	6.4	2.9
Postneonatal	1.1	2.0	1.4	0.9	2.4	1.1	2.1	1.2	0.6	1.5	0.9
<b>All groups<sup>2</sup></b>											
Total	6.8	6.7	6.9	6.3	6.5	6.7	6.8	6.3	6.8	6.3	5.9
Neonatal	4.5	4.3	4.5	4.1	4.3	4.5	4.4	4.3	4.7	4.2	3.9
Postneonatal	2.3	2.4	2.4	2.2	2.2	2.2	2.4	2.0	2.2	2.1	2.0

<sup>1</sup>Number of infant deaths per 1,000 live births in specified ethnic/gender group. Infant deaths are by the race/ethnicity of the decedent. For consistency with the national data, the denominators used to calculate infant mortality rates were changed from race/ethnicity of parents to race/ethnicity of mother as stated on the birth certificate. The change in the basis for calculating infant mortality rates results in lower rates for white infants and higher rates for most minority infants than when they are computed by the previous method.

<sup>2</sup>Includes records with other and unknown ethnic group.

**TABLE 2C-4  
NEONATAL, POSTNEONATAL AND TOTAL INFANT MORTALITY BY CHILD'S GENDER AND MOTHER'S RACE/ETHNICITY,  
ARIZONA, 2009**

	NUMBER OF DEATHS BY AGE			MORTALITY RATES <sup>1</sup>		
	Total	Neonatal	Postneonatal	Total	Neonatal	Postneonatal
<b>TOTAL, ALL GROUPS</b>	547	361	186	5.9	3.9	2.0
<b>Male</b>	299	195	104	6.3	4.1	2.2
<b>Female</b>	248	166	82	5.5	3.7	1.8
<b>White non-Hispanic</b>	192	129	63	4.8	3.2	1.6
<b>Male</b>	109	70	39	5.4	3.4	1.9
<b>Female</b>	83	59	24	4.3	3.0	1.2
<b>Hispanic or Latino</b>	215	150	65	5.6	3.9	1.7
<b>Male</b>	115	77	38	5.9	3.9	1.9
<b>Female</b>	100	73	27	5.3	3.9	1.4
<b>Black or African American</b>	75	46	29	17.1	10.5	6.6
<b>Male</b>	41	29	12	18.0	12.7	5.3
<b>Female</b>	34	17	17	16.2	8.1	8.1
<b>American Indian or Alaska Native</b>	52	26	26	8.4	4.2	4.2
<b>Male</b>	28	15	13	9.0	4.8	4.2
<b>Female</b>	24	11	13	7.8	3.6	4.3
<b>Asian or Pacific Islander</b>	13	10	3	3.8	2.9	0.9
<b>Male</b>	6	4	2	3.4	2.3	1.1
<b>Female</b>	7	6	1	4.3	3.7	0.6

<sup>1</sup>Number of deaths per 1,000 live births in specified gender group by mother's race/ethnicity. Denominators are from Table 5B-8.  
Note: Rates based on fewer than 10 cases are not statistically reliable.

**TABLE 2C-5  
NUMBER OF DEATHS FOR SELECTED LEADING CAUSES OF INFANT MORTALITY BY YEAR, ARIZONA, 1999-2009**

Causes of death	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
<b>Congenital malformations, deformations and chromosomal abnormalities</b>	128	134	141	99	126	152	149	142	159	145	122
<b>of respiratory system</b>	23	21	14	11	10	14	15	9	9	5	5
<b>of brain, spinal cord or nervous system</b>	13	14	18	18	23	20	19	28	20	24	15
<b>Short gestation and low birth weight</b>	65	55	73	95	85	84	79	93	95	91	101
<b>Maternal complications</b>	23	15	27	34	31	36	47	42	30	53	31
<b>Sudden infant death syndrome</b>	38	24	34	36	28	25	32	37	43	21	42
<b>Accidents (unintentional injuries)</b>	26	15	25	21	23	19	24	17	30	19	18
<b>Influenza and pneumonia</b>	21	16	20	19	21	17	19	13	5	4	10
<b>Assault (homicide)</b>	0	6	5	3	11	5	8	11	12	4	2
<b>Intrauterine hypoxia or birth asphyxia</b>	4	15	7	15	10	14	12	7	11	11	4
<b>Respiratory distress syndrome</b>	5	8	14	6	8	8	12	12	8	11	8
<b>Total, all causes</b>	547	568	587	552	586	622	653	642	701	625	547

Note: Leading causes of infant mortality are based on the list of 130 causes of infant death according to the Tenth Revision, International Classification of Diseases (ICD-10).



**TABLE 2C-6  
INFANT MORTALITY RATES<sup>1</sup> FOR SELECTED LEADING CAUSES OF DEATH BY YEAR, ARIZONA, 1999-2009**

Causes of death	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
<b>Congenital malformations, deformations and chromosomal abnormalities</b>	1.6	1.6	1.7	1.1	1.4	1.6	1.6	1.4	1.5	1.5	1.3
<b>of respiratory system</b>	0.3	0.2	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1
<b>of brain, spinal cord or nervous system</b>	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.3	0.2	0.2	0.2
<b>Short gestation and low birth weight</b>	0.8	0.6	0.9	1.1	0.9	0.9	0.8	0.9	0.9	0.9	1.1
<b>Maternal complications</b>	0.3	0.2	0.3	0.4	0.3	0.4	0.5	0.4	0.3	0.5	0.3
<b>Sudden infant death syndrome</b>	0.5	0.3	0.4	0.4	0.3	0.3	0.3	0.4	0.4	0.2	0.4
<b>Accidents (unintentional injuries)</b>	0.3	0.2	0.3	0.2	0.3	0.2	0.3	0.2	0.3	0.2	0.2
<b>Influenza and pneumonia</b>	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.0	0.0	0.1
<b>Assault (homicide)</b>	0.0	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0
<b>Intrauterine hypoxia or birth asphyxia</b>	0.0	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0
<b>Respiratory distress syndrome</b>	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
<b>Total, all causes</b>	6.8	6.7	6.9	6.3	6.5	6.7	6.8	6.3	6.8	6.3	5.9

<sup>1</sup>Number of infant deaths per 1,000 live births.

Note: Leading causes of infant mortality are based on the list of 130 causes of infant death according to the Tenth Revision, International Classification of Diseases (ICD-10). Rates based on fewer than 10 infant deaths are not statistically reliable.

**TABLE 2C-7  
 INFANT MORTALITY RATES<sup>1</sup> FOR THE LEADING CAUSES OF DEATH BY AGE GROUP, GENDER, RACE/ETHNICITY AND AREA<sup>2</sup>,  
 ARIZONA, 2009**

Causes of death	Total	Age		Gender		Race/ethnicity						Area	
		Neonatal	Post-neonatal	Male	Female	White non Hispanic	Hispanic or Latino	Black or African American	American Indian or Alaska Native	Asian or Pacific Islander	Urban	Rural	
<b>Congenital malformations, deformations and chromosomal abnormalities</b>	1.3	0.9	0.4	1.3	1.3	1.3	1.1	2.5	2.1	1.5	1.3	1.4	
<b>of heart</b>	0.4	0.2	0.2	0.4	0.4	0.4	0.4	0.9	0.3	0.3	0.4	0.4	
<b>of respiratory system</b>	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	
<b>of brain, spinal cord or nervous system</b>	0.2	0.1	0.0	0.1	0.2	0.1	0.1	0.5	0.5	0.0	0.1	0.3	
<b>Short gestation and low birth weight</b>	1.1	1.1	0.0	1.2	1.0	0.8	1.3	3.0	0.5	0.6	1.2	0.7	
<b>Maternal complications</b>	0.3	0.3	0.0	0.4	0.3	0.3	0.3	1.4	0.5	0.0	0.3	0.3	
<b>Complications of placenta, cord and membrane</b>	0.3	0.3	0.0	0.4	0.2	0.3	0.3	1.4	0.2	0.6	0.3	0.3	
<b>Sudden infant death syndrome</b>	0.5	0.0	0.4	0.5	0.4	0.3	0.4	1.8	0.8	0.3	0.4	0.4	
<b>Accident (unintentional injury)</b>	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.5	0.3	0.0	0.2	0.3	
<b>Influenza and pneumonia</b>	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.5	0.3	0.0	0.1	0.2	
<b>Bacterial sepsis of newborn</b>	0.2	0.2	0.0	0.2	0.1	0.1	0.2	0.0	0.3	0.6	0.1	0.2	
<b>Intrauterine hypoxia or birth asphyxia</b>	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.2	0.0	0.1	0.0	
<b>Diseases of the circulatory system</b>	0.2	0.0	0.2	0.3	0.1	0.2	0.1	0.9	0.3	0.0	0.2	0.0	
<b>Respiratory distress syndrome</b>	0.1	0.1	0.0	0.0	0.2	0.1	0.1	0.2	0.0	0.0	0.1	0.0	
<b>Atelectasis</b>	0.1	0.1	0.0	0.1	0.1	0.1	0.2	0.0	0.0	0.0	0.1	0.3	
<b>Assault (homicide)</b>	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	
<b>Total, all causes</b>	5.9	3.9	2.0	6.3	5.5	4.8	5.6	17.1	8.4	3.8	5.9	5.5	

<sup>1</sup>Number of infant deaths per 1,000 live births. Infant mortality rates by race/ethnicity are by mother's race/ethnicity.

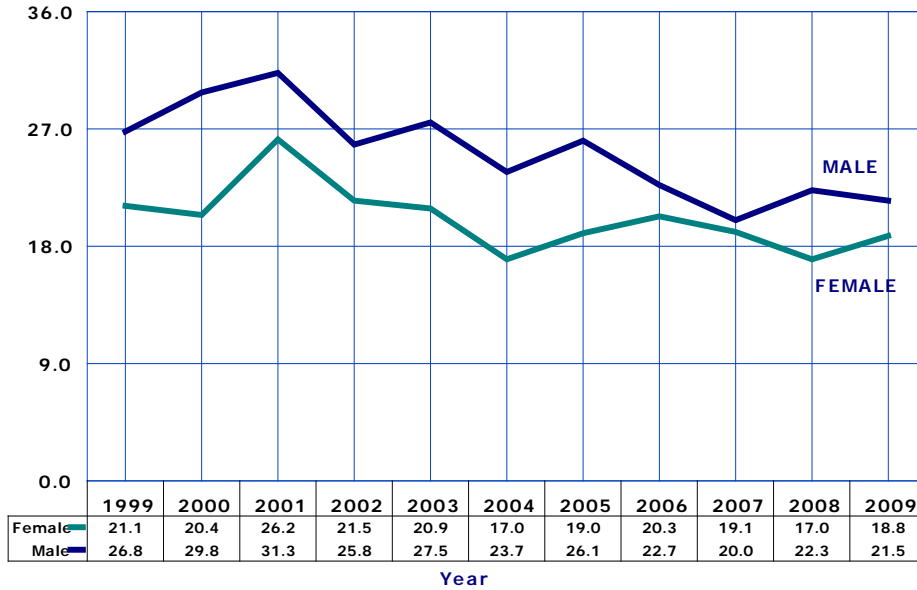
<sup>2</sup>Urban=Maricopa, Pima, Pinal and Yuma Counties. The remaining counties comprise Arizona's rural areas.

0.0 Quantity less than 0.05.

Note: Rates based on fewer than 10 infant deaths are not statistically reliable.

2C. AGE-SPECIFIC MORTALITY  
**Childhood mortality (ages 1-14 years)**

**Figure 2C-5**  
**Mortality Rates by Gender and Year among Children 1-14 Years,**  
**Arizona, 1999-2009**



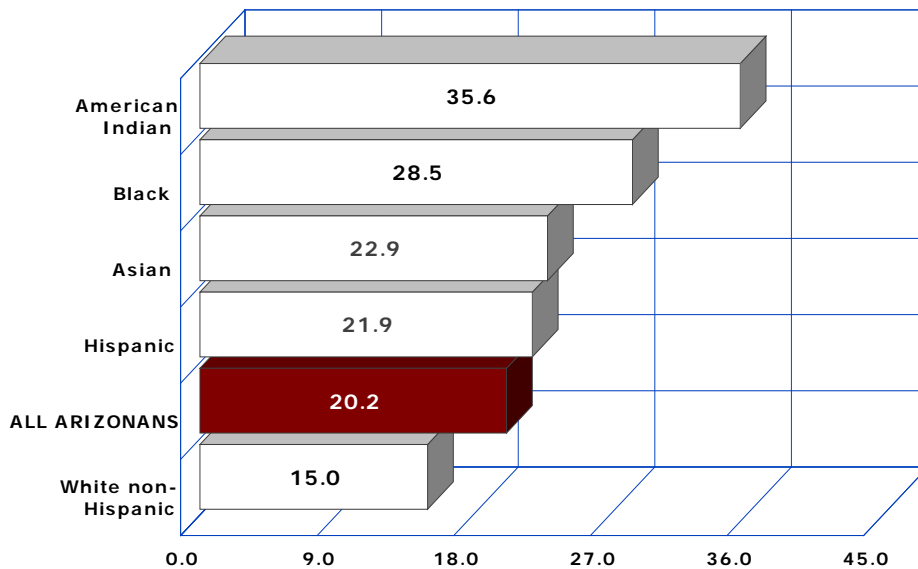
Death claimed the lives of 271 of the 1,342,722 children (1 to 14 years old) residing in Arizona in 2009. Their 2009 mortality rate of 20.2 per 100,000 was not significantly different from the rate of 19.7 in 2008 (Table 2C-8). Males but not females experienced a decrease in their total mortality rates from 2008 to 2009 (Figure 2C-5, Table 2C-8).

The five causes with the greatest number of deaths over the 1999-2009 period were *accidents* (unintentional injuries), *malignant neoplasms*, *congenital malformations*, *homicide* and *suicide* (Table 2C-8).

In 1999-2009 *diseases of heart* (66 deaths) replaced *suicide* (52 deaths) as the 5<sup>th</sup> leading cause of deaths among urban children 1-14 years old (Table 2C-9).

Number of deaths per 100,000 persons, 1-14 years old in specified group.

**Figure 2C-6**  
**Mortality Rates by Race/Ethnicity among Children 1-14 Years,**  
**Arizona, 2009**



American Indian children had the highest 2009 total mortality rate (35.6 deaths per 100,000) followed by Black or African American children had the (28.5/100,000) and Asian children (22.9 deaths per 100,000; Figure 2C-6). The mortality rate White non-Hispanic children was lower than the average rate for all groups.

It is important to note that the rate for Asian or Pacific Islander children is based on only 8 deaths (Table 2C-11), and it is not statistically reliable.

In 2009, there were 4 completed *suicides* of children aged 1-14 years. Three suicides were Hispanic and one was American Indian (Table 2C-11).

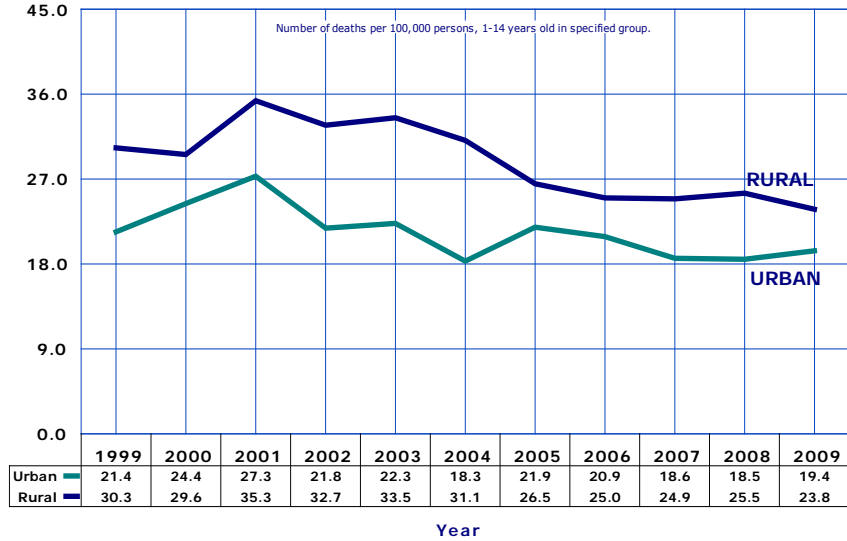
\*Number of deaths per 100,000 persons, 1-14 years old in specified group.

2C. AGE-SPECIFIC MORTALITY  
**Childhood mortality (ages 1-14 years)**

**Figure 2C-7**  
**Mortality Rates by Urban\*/Rural Area and Year among Children 1-14 Years, Arizona, 1999-2009**

From 2008 to 2009 the total mortality rates increased for urban children but they decreased for rural children (Figure 2C-7, Table 2C-9).

The temporal pattern underlying the changes in mortality between 1999 and 2009 differed by region. From 1999 to 2000, the mortality rate of rural children slightly decreased, while the urban children experienced an increase from 1999 to 2001 (Figure 2C-7). From 2001 to 2008, the total mortality rates decreased by 32.2 percent for urban children, 1.2 times as much as the decrease of 27.8 percent for rural children. In 1999, the mortality rate of rural children exceeded by 42 percent the mortality rate of urban children. In 2009, rural children had a 23 percent greater mortality rate than they urban peers.

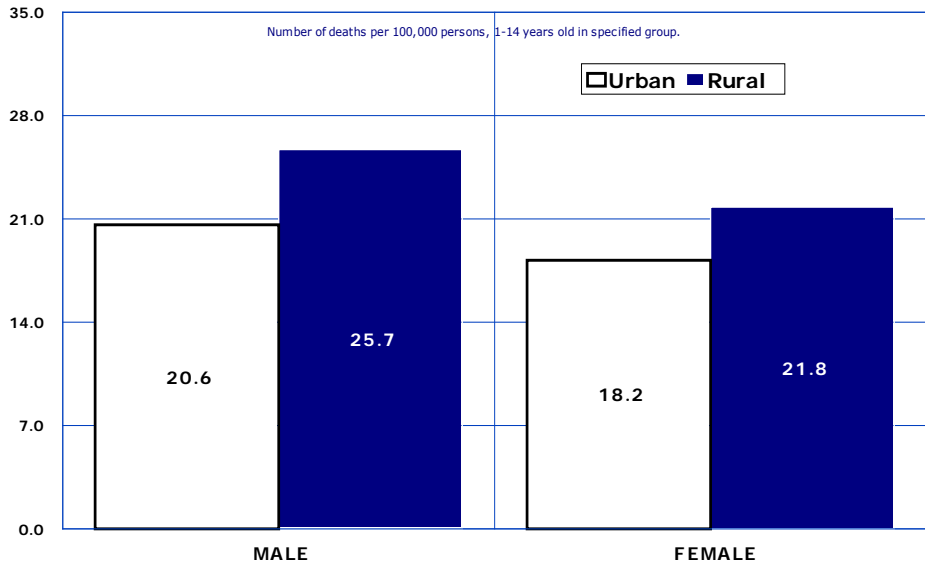


\*Maricopa, Pima, Pinal and Yuma Counties.

**Figure 2C-8**  
**Mortality Rates by Gender in Urban\*/Rural Areas among Children 1-14 Years, Arizona, 2009**

From 2008 to 2009, the mortality rate for unintentional injuries decreased for rural but not urban children (Table 2C-9). However, in 2009, the mortality rate for motor vehicle accidents among rural children (5.8/100,000) was 1.8 times the rate among urban children (3.2/100,000, Table 2C-9). Urban children, in contrast, had a 37 percent times greater mortality rate for cancer than rural children (2.6 deaths per 100,000 vs. 1.9 deaths per 100,000).

Urban females 1-14 years old had the lowest 2009 mortality risk among gender by area groups, followed by urban males, rural females and rural males.



\*Maricopa, Pima, Pinal and Yuma Counties.

**TABLE 2C-8  
MORTALITY RATES<sup>1</sup> FOR THE FIVE LEADING CAUSES<sup>2</sup> OF DEATH AMONG CHILDREN (1-14 YEARS) BY GENDER,  
ARIZONA, 1999-2009**

Gender/Cause	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	% change from 1999
<b>MALE</b>												
Accidents (unintentional injuries)	12.2	13.6	13.7	9.6	11.3	9.5	10.0	8.0	8.3	7.8	8.0	-34.4
Motor vehicle accidents	7.9	6.6	6.5	5.1	6.5	5.2	4.5	4.2	4.6	2.5	4.2	-46.8
Drowning	2.1	3.5	3.5	2.4	2.8	2.7	2.3	0.9	1.5	2.9	2.6	23.8
Other	2.2	3.5	3.7	2.1	2.0	1.6	3.2	2.9	2.2	2.4	1.2	-45.5
Malignant neoplasms	2.4	2.7	2.5	1.4	2.7	1.6	1.7	1.7	2.2	2.5	3.1	29.2
Congenital malformations	1.5	1.1	1.4	1.2	1.7	1.6	1.9	2.3	0.7	1.8	1.5	0.0
Assault (homicide)	0.9	1.1	1.9	1.9	0.7	2.3	2.0	1.5	1.3	1.2	0.9	0.0
Intentional self-harm (suicide)	1.1	0.9	1.6	1.0	1.2	0.3	1.1	0.5	0.4	0.9	0.4	-63.6
ALL CAUSES	26.8	29.8	31.3	25.8	27.5	23.7	26.1	22.7	20.0	22.3	21.5	-19.8
(Number of all deaths)	(143)	(164)	(178)	(151)	(166)	(147)	(168)	(150)	(134)	(152)	(148)	3.5
<b>FEMALE</b>												
Accidents (unintentional injuries)	7.0	7.8	9.4	7.3	6.8	6.6	7.8	7.8	6.3	4.6	5.5	-21.4
Motor vehicle accidents	3.5	5.0	4.1	4.5	4.2	4.1	4.6	4.1	3.6	2.8	2.9	-17.1
Drowning	2.3	2.1	2.6	1.4	1.2	1.2	1.6	2.1	0.8	0.9	0.6	-73.9
Other	1.2	0.7	2.7	1.4	1.4	1.0	1.6	1.6	1.9	0.9	2.0	66.7
Malignant neoplasms	3.1	2.7	2.2	2.5	2.6	2.0	2.1	0.9	4.2	2.0	1.8	-41.9
Assault (homicide)	1.2	0.6	2.4	1.3	1.0	0.7	0.8	0.8	1.4	0.9	1.8	50.0
Congenital malformations	1.8	1.0	2.4	1.8	1.9	1.4	1.8	2.1	1.3	1.5	1.4	-22.2
Influenza and pneumonia	0.6	0.6	0.7	0.4	0.5	0.7	0.5	0.9	0.2	0.6	0.5	-16.7
ALL CAUSES	21.1	20.4	26.2	21.5	20.9	17.0	19.0	20.3	19.1	17.0	18.8	-10.9
(Number of all deaths)	(103)	(107)	(142)	(120)	(120)	(101)	(117)	(128)	(122)	(110)	(123)	19.4
<b>TOTAL</b>												
Accidents (unintentional injuries)	9.7	10.8	11.6	8.5	9.1	8.1	8.9	7.9	7.3	6.2	6.8	-29.9
Motor vehicle accidents	5.8	5.8	5.3	4.8	5.4	4.6	4.5	4.2	4.1	2.6	3.6	-37.9
Drowning	2.2	2.8	3.1	1.9	2.0	2.0	2.0	1.5	1.1	2.0	1.6	-27.3
Other	1.8	2.2	3.2	1.8	1.7	1.5	2.4	2.2	2.1	1.6	1.6	-11.1
Malignant neoplasms	2.7	2.7	2.3	1.9	2.6	1.8	1.9	1.3	3.2	2.3	2.5	-7.4
Congenital malformations	1.7	1.0	1.9	1.5	1.8	1.5	1.8	2.2	1.0	1.7	1.4	-17.6
Assault (homicide)	1.1	0.8	2.2	1.6	0.8	1.5	1.4	1.2	1.4	1.1	1.3	18.2
Intentional self-harm (suicide)	0.7	0.6	0.8	1.0	0.7	0.2	0.9	0.9	0.4	0.6	0.3	-57.1
ALL CAUSES	24.1	25.3	28.8	23.7	24.3	20.4	22.7	21.5	19.5	19.7	20.2	-16.2
(Number of all deaths)	(246)	(271)	(320)	(271)	(286)	(248)	(285)	(278)	(256)	(262)	(271)	10.2

<sup>1</sup>Number of deaths per 100,000 children 1-14 years old.

<sup>2</sup>The five causes with the greatest number of deaths over the 1999-2009 period.

Note: The cause-of-death titles are according to the Tenth Revision of the International Classification of Diseases (ICD-10). The causes of death for 2000-2009 are classified by ICD-10, replacing the Ninth Revision (ICD-9) used during 1979-1999. Measures of comparison between ICD-9 and ICD-10 – the “comparability ratios” – for the causes of death shown in this report are provided in the **Technical Notes**.

**TABLE 2C-9  
MORTALITY RATES<sup>1</sup> FOR THE FIVE LEADING CAUSES<sup>2</sup> OF DEATH AMONG CHILDREN (1-14 YEARS)  
IN URBAN AND RURAL AREAS<sup>3</sup>, ARIZONA, 1999-2009**

Area/Cause	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	% change from 1999
<b>URBAN</b>												
Accidents (unintentional injuries)	8.1	10.0	11.3	7.1	7.3	6.8	9.2	7.1	6.5	5.4	6.4	-20.7
Motor vehicle accidents	4.9	5.6	4.8	3.4	4.2	3.7	4.2	3.9	3.2	2.0	3.2	-34.7
Drowning	2.2	3.0	3.5	2.2	2.2	2.1	2.3	1.4	1.3	1.8	1.8	-18.2
Other	1.1	1.4	3.0	1.5	0.9	1.0	2.7	1.8	2.0	1.7	1.5	36.4
Malignant neoplasms	2.6	2.9	2.6	2.0	2.8	1.6	2.2	1.5	3.4	2.6	2.6	0.0
Congenital malformations	1.6	1.2	2.0	1.6	1.6	1.5	1.7	2.4	0.8	1.7	1.3	-18.8
Assault (homicide)	1.3	1.0	2.4	1.6	0.9	1.4	1.3	1.1	1.4	1.1	1.3	0.0
Diseases of heart	0.8	0.7	0.7	0.7	0.5	0.8	0.4	1.0	0.4	0.4	0.3	-62.5
ALL CAUSES	21.4	24.4	27.3	21.8	22.4	18.3	21.9	20.9	18.6	18.5	19.4	-9.3
(Number of all deaths)	(179)	(216)	(251)	(207)	(219)	(184)	(229)	(228)	(206)	(210)	(221)	23.5
<b>RURAL</b>												
Accidents (unintentional injuries)	16.0	14.5	13.2	15.3	18.0	14.6	7.6	12.0	12.0	10.3	8.8	-45.0
Motor vehicle accidents	9.0	6.5	7.9	11.8	11.0	9.2	6.2	5.5	9.0	6.4	5.8	-35.6
Drowning	2.1	1.6	1.1	0.5	1.5	1.5	0.5	2.0	0.5	2.5	1.0	-52.4
Other	4.8	6.4	4.2	3.0	5.5	3.9	0.9	4.5	2.5	1.5	1.9	-60.4
Malignant neoplasms	2.7	1.6	1.1	1.5	2.0	2.9	0.5	0.5	2.0	0.5	1.9	-29.6
Congenital malformations	2.1	0.0	1.6	1.0	2.5	1.5	2.4	1.0	2.0	1.5	1.9	-9.5
Assault (homicide)	0.0	0.0	1.1	1.5	0.5	1.9	1.9	1.5	1.0	1.0	1.5	NA
Intentional self-harm (suicide)	2.1	1.1	1.6	2.0	1.0	0.5	2.8	2.0	0.5	1.5	0.5	-76.2
ALL CAUSES	30.3	29.6	35.3	32.7	33.5	31.1	26.5	25.0	24.9	25.5	23.8	-21.5
(Number of all deaths)	(57)	(55)	(67)	(64)	(67)	(64)	(56)	(50)	(50)	(52)	(49)	-14.0
<b>STATEWIDE</b>												
Accidents (unintentional injuries)	9.7	10.8	11.6	8.5	9.1	8.1	8.9	7.9	7.3	6.2	6.8	-29.9
Motor vehicle accidents	5.8	5.8	5.3	4.8	5.4	4.6	4.5	4.2	4.1	2.6	3.6	-37.9
Drowning	2.2	2.8	3.1	1.9	2.0	2.0	2.0	1.5	1.1	2.0	1.6	-27.3
Other	1.8	2.2	3.2	1.8	1.7	1.5	2.4	2.2	2.1	1.6	1.6	-11.1
Malignant neoplasms	2.7	2.7	2.3	1.9	2.6	1.8	1.9	1.3	3.2	2.3	2.5	-7.4
Congenital malformations	1.7	1.0	1.9	1.5	1.8	1.5	1.8	2.2	1.0	1.7	1.4	-17.6
Assault (homicide)	1.1	0.8	2.2	1.6	0.8	1.5	1.4	1.2	1.4	1.1	1.3	18.2
Intentional self-harm (suicide)	0.7	0.6	0.8	1.0	0.7	0.2	0.9	0.9	0.4	0.6	0.3	-57.1
ALL CAUSES	24.1	25.3	28.8	23.7	24.3	20.4	22.7	21.5	19.5	19.7	20.2	-16.2
(Number of all deaths)	(246)	(271)	(320)	(271)	(286)	(248)	(285)	(278)	(256)	(262)	(271)	10.2

<sup>1</sup>Number of deaths per 100,000 children 1-14 years old.

<sup>2</sup>The five causes with the greatest number of deaths over the 1999-2009 period. In 1999-2009 diseases of heart (66 deaths) replaced suicide (52 deaths) as the 5th leading cause of death among urban children 1-14 years old.

<sup>3</sup>Urban = Maricopa, Pima, Pinal, and Yuma counties. The remaining counties comprise Arizona's rural areas. See **Technical Notes** for more information.

Note: Records with unknown county of residence are included in the statewide totals, but are not distributed by urban/rural area. The cause-of-death titles are according to the Tenth Revision of the International Classification of Diseases (ICD-10). The causes of death for 2000-2009 are classified by ICD-10, replacing the Ninth Revision (ICD-9) used during 1979-1999. Measures of comparison between ICD-9 and ICD-10 - the "comparability ratios" - for the causes of death shown in this report are provided in the **Technical Notes**.

**TABLE 2C-10**  
**MORTALITY RATES<sup>1</sup> FOR THE FIVE LEADING CAUSES OF DEATH AMONG CHILDREN (1-14 YEARS) BY GENDER**  
**IN URBAN AND RURAL AREAS<sup>2</sup>, ARIZONA, 1999-2009**

Area/Gender	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	% change from 1999
<b>URBAN</b>												
Male	23.4	29.0	29.5	24.5	24.4	21.9	25.9	22.2	19.2	21.1	20.6	-12.0
Female	19.3	19.4	25.0	19.0	20.2	14.4	17.6	19.5	18.0	15.9	18.2	-5.7
TOTAL	21.4	24.4	27.3	21.8	22.3	18.3	21.9	20.9	18.6	18.5	19.4	-9.3
<b>RURAL</b>												
Male	37.0	37.7	39.2	32.0	42.1	31.8	27.0	25.5	24.4	27.9	25.7	-30.5
Female	23.2	27.1	31.2	33.4	24.5	30.3	26.1	24.4	25.4	23.0	21.8	-6.0
TOTAL	30.3	29.6	35.3	32.7	33.5	31.1	26.5	25.0	24.9	25.5	23.8	-21.5
<b>STATEWIDE</b>												
Male	26.8	29.8	31.3	25.8	27.5	23.7	26.1	22.7	20.0	22.3	21.5	-19.8
Female	21.1	20.4	26.2	21.5	20.9	17.0	19.0	20.3	19.1	17.0	18.8	-10.9
TOTAL	24.1	25.3	28.8	23.7	24.3	20.4	22.7	21.5	19.5	19.7	20.2	-16.2

<sup>1</sup>Rates are presented per 100,000 children 1-14 years old.

<sup>2</sup>Urban = Maricopa, Pima, Pinal, and Yuma counties. The remaining counties comprise Arizona's rural areas.

Note: Records with unknown county of residence are included in the statewide totals, but are not distributed by urban/rural area.

**TABLE 2C-11  
LEADING CAUSES OF DEATH AMONG CHILDREN (1-14 YEARS) BY GENDER, AREA AND RACE/ETHNICITY, ARIZONA, 2009**

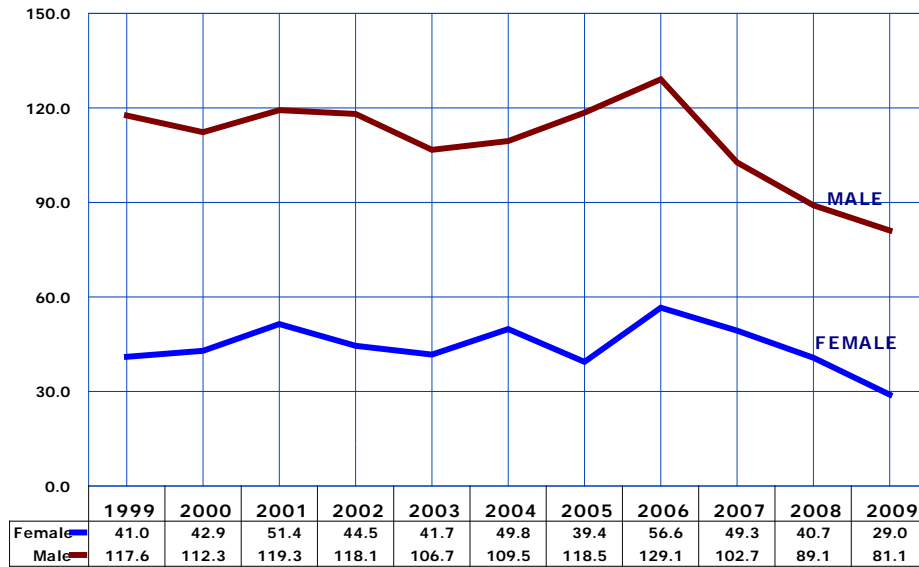
Cause of death	Total	Gender		Area*			Race/ethnicity					
		Male	Female	Urban	Rural	Unknown	White non-Hispanic	Hispanic or Latino	Black or African American	American Indian or Alaska Native	Asian or Pacific Islander	Other/Unknown
Accidents (unintentional injury)	91	55	36	73	18	0	35	31	6	13	5	1
Motor vehicle accidents	48	29	19	36	12	0	18	17	3	8	2	0
Accidental drowning and submersion	22	18	4	20	2	0	9	8	1	2	2	0
Falls	4	0	4	3	1	0	2	1	0	1	0	0
Malignant neoplasms	33	21	12	29	4	0	11	19	1	1	1	0
Leukemia	13	8	5	11	2	0	7	5	0	0	1	0
Congenital malformations	19	10	9	15	4	0	4	8	1	4	2	0
Assault (homicide)	18	6	12	15	3	0	7	6	3	2	0	0
By discharge of firearms	8	4	4	6	2	0	5	2	1	0	0	0
By other means	10	2	8	9	1	0	2	4	2	2	0	0
Influenza and pneumonia	9	6	3	7	2	0	3	4	1	1	0	0
Septicemia	6	3	3	5	1	0	1	2	1	2	0	0
Intentional self-harm (suicide)	4	3	1	3	1	0	0	3	0	1	0	0
Chronic lower respiratory diseases	4	2	2	2	2	0	0	2	1	1	0	0
Asthma	3	1	2	2	1	0	0	2	1	0	0	0
<b>Total, all causes</b>	<b>271</b>	<b>148</b>	<b>123</b>	<b>221</b>	<b>49</b>	<b>1</b>	<b>92</b>	<b>118</b>	<b>19</b>	<b>32</b>	<b>8</b>	<b>2</b>

\*Urban = Maricopa, Pima, Pinal and Yuma counties. The remaining counties comprise Arizona's rural areas.



2C. AGE-SPECIFIC MORTALITY  
Adolescent mortality (ages 15-19 years)

Figure 2C-9  
Mortality Rates by Gender and Year among Adolescents 15-19 Years,  
Arizona, 1999-2009

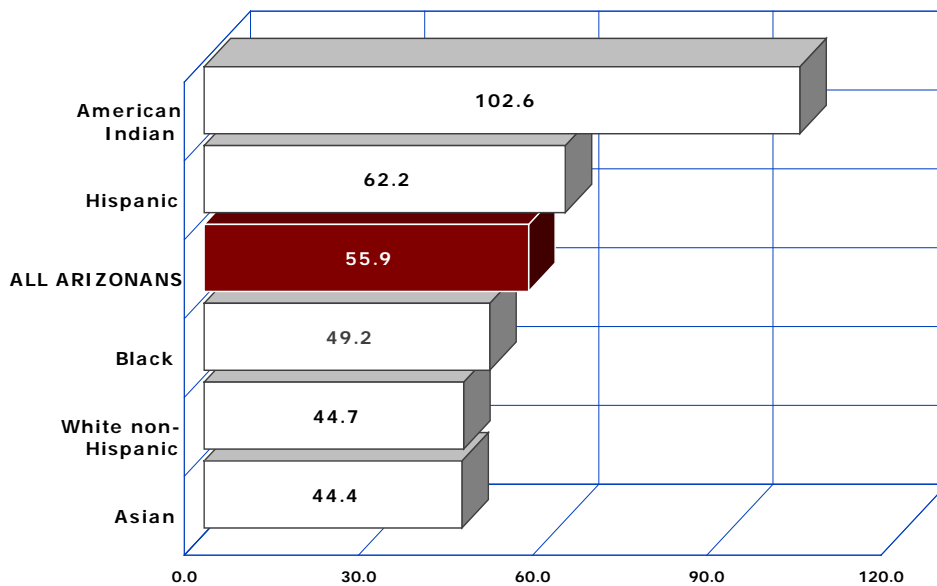


Number of deaths per 100,000 persons, 15-19 years old in specified group.

Adolescence refers to those individuals between the ages of 15 and 19, an important developmental period marking the transition from childhood to adulthood. In 2009, an estimated 456,079 adolescents resided in Arizona (Table 10C-1), comprising 6.9 percent of the State's population. The lives of 255 resident adolescents prematurely ended in 2009 (38.1 percent fewer than in 2006), resulting in a total mortality rate of 55.9 deaths per 100,000 adolescents. This mortality rate was 31.3 percent lower than the 1999 rate (Table 2C-12). In fact, the adolescent mortality rate in 2009 was the lowest rate since 1980.

The likelihood of dying was 2.8 times as high for adolescent boys as girls in 2009 (Figure 2C-9, Table 2C-12).

Figure 2C-10  
Mortality Rates by Race/Ethnicity among Adolescents 15-19 Years,  
Arizona, 2009



Number of deaths per 100,000 persons, 15-19 years old in specified group.

The five causes with the greatest number of deaths over the 1999-2009 period were *unintentional injuries in accidents, suicide, homicide, malignant neoplasms, and diseases of heart* (Table 2C-12).

From best to worst chances in 2009 of adolescents, 15-19 years old, in survival was Asian, White non-Hispanic, Black, Hispanic, and American Indian (Figure 2C-10). If the 2009 mortality risk of Asian adolescents (i.e., their mortality rate) applied to all adolescents, 202 would have died: 53 less than the 255 who actually did.

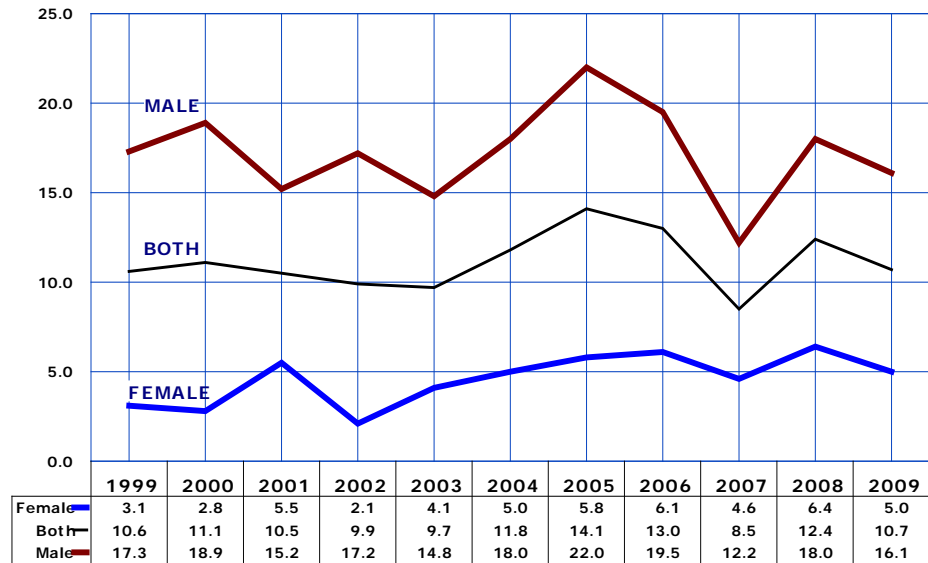
The number of deaths from accidental drug poisoning increased by 2.8 times from 14 in 2008 to 39 in 2009. In contrast the number of death from motor vehicle-related decreased from 76 in 2008 to 50 in 2009.

**2C. AGE-SPECIFIC MORTALITY**  
**Adolescent mortality (ages 15-19 years)**

In 2009, suicide was the 2<sup>nd</sup> leading cause of death among Arizona adolescents. Overall, the number of suicides decreased from 56 in 2008 to 49 in 2009. American Indian adolescents experienced a particularly steep decline from 17 suicides in 2008 to 7 in 2009 (Table 2C-15).

The suicide rate for adolescent females decreased by 21.2 percent from 6.4 suicides per 100,000 in 2008 to 5.0/100,000 in 2009 (Figure 2C-11, Table 2C-12). The suicide death rate for adolescent males decreased from 18.0 suicides per 100,000 in 2008 to 16.1/100,000 in 2009. The male to female ratio in suicide mortality rates decreased from 5.6:1 in 1999 to 3.2:1 in 2009. In other words, male adolescents were 3.2 times more likely to kill themselves in 2009 than female adolescents, compared to 5.6 times more likely in 1999.

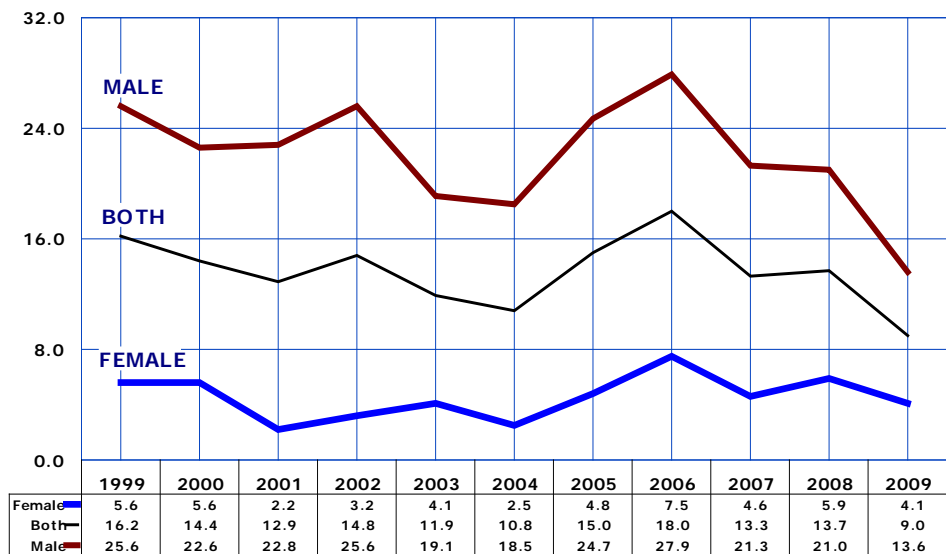
**Figure 2C-11**  
**Suicide Rates by Gender and Year among Adolescents 15-19 Years, Arizona, 1999-2009**



Number of suicides per 100,000 persons, 15-19 years old in specified group.

**Figure 2C-12**  
**Homicide Rates by Gender and Year among Adolescents 15-19 Years, Arizona, 1999-2009**

In 2009, homicide was the 3<sup>rd</sup> leading cause of death of 15 to 19 year olds. From 2004 to 2006, the homicide rates increased for both adolescent males and females (Figure 2C-12, Table 2C-12). In 2009, the homicide rate decreased by 35.2 percent for adolescent males, and by 30.5 percent for adolescent females. Overall, the homicide rate decreased by 34.3 percent from 13.7/100,000 in 2008 to 9.0/100,000 in 2009. The male to female mortality risk for homicide decreased from 4.6 times greater in 1999 to 3.3 times greater in 2009.



Number of homicides per 100,000 persons, 15-19 years old in specified group.

**TABLE 2C-12  
MORTALITY RATES<sup>1</sup> FOR THE FIVE LEADING CAUSES<sup>2</sup> OF DEATH AMONG ADOLESCENTS (15-19 YEARS) BY GENDER,  
ARIZONA, 1999-2009**

Gender/Cause	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	% change from 1999
<b>MALE</b>												
Accidents (unintentional injuries)	50.2	47.2	51.3	50.2	49.3	51.3	49.4	57.7	48.3	33.0	34.4	-31.5
Motor vehicle accidents	40.7	34.1	33.5	37.4	35.9	36.1	33.2	41.7	35.3	21.9	15.3	-62.4
Other than motor vehicle	9.5	13.1	17.8	12.8	13.4	15.3	16.2	16.0	13.0	11.1	19.1	101.1
Intentional self-harm (suicide)	17.3	18.9	15.2	17.2	14.8	18.0	22.0	19.5	12.2	18.0	16.1	-6.9
Assault (homicide)	25.6	22.6	22.8	25.6	19.1	18.5	24.7	27.9	21.3	21.0	13.6	-46.9
Malignant neoplasms	2.2	6.3	5.6	5.4	2.4	6.5	4.0	3.1	3.5	5.1	3.4	54.5
Diseases of heart	3.9	2.1	4.1	2.5	1.9	1.8	1.8	1.8	2.2	0.4	1.3	-66.7
ALL CAUSES	117.6	112.3	119.3	118.1	106.7	109.5	118.5	129.1	102.7	89.1	81.1	-31.0
(Number of all deaths)	(211)	(214)	(235)	(240)	(223)	(237)	(264)	(291)	(236)	(208)	(191)	-9.5
<b>FEMALE</b>												
Accidents (unintentional injuries)	19.9	23.7	22.9	22.2	19.1	28.9	18.3	28.1	23.7	18.3	9.1	-54.3
Motor vehicle accidents	16.8	20.3	18.6	18.0	15.5	24.9	16.3	26.2	17.7	12.4	6.3	-62.4
Other than motor vehicle	3.1	3.4	4.3	4.2	3.6	4.0	2.0	1.9	6.0	5.9	2.7	-12.9
Intentional self-harm (suicide)	3.1	2.8	5.5	2.1	4.1	5.0	5.8	6.1	4.6	6.4	5.0	61.3
Assault (homicide)	5.6	5.6	2.2	3.2	4.1	2.5	4.8	7.5	4.6	5.9	4.1	-26.8
Malignant neoplasms	5.0	1.1	4.9	3.2	2.6	2.5	1.4	3.7	4.2	4.1	3.2	-36.0
Diseases of heart	0.0	1.1	1.1	1.1	0.5	0.5	1.0	1.4	1.4	0.9	1.4	NA
ALL CAUSES	41.0	42.9	51.4	44.5	41.7	49.8	39.4	56.6	49.3	40.7	29.0	-29.3
(Number of all deaths)	(66)	(76)	(94)	(84)	(81)	(100)	(82)	(121)	(106)	(89)	(64)	-3.0
<b>TOTAL</b>												
Accidents (unintentional injuries)	35.8	35.9	37.6	36.7	34.7	40.5	34.3	43.3	36.4	25.9	22.1	-38.3
Motor vehicle accidents	29.4	27.5	26.3	28.1	26.0	30.7	25.0	34.2	26.8	17.3	11.0	-62.6
Other than motor vehicle	6.5	8.4	11.3	8.6	8.7	9.8	9.3	9.1	9.6	8.6	11.2	72.3
Intentional self-harm (suicide)	10.6	11.1	10.5	9.9	9.7	11.8	14.1	13.0	8.5	12.4	10.7	0.9
Assault (homicide)	16.2	14.4	12.9	14.8	11.9	10.8	15.0	18.0	13.3	13.7	9.0	-44.4
Malignant neoplasms	3.5	3.8	5.3	4.3	2.5	4.6	2.8	3.4	3.8	4.6	3.3	-5.7
Diseases of heart	2.1	1.6	2.6	1.8	1.2	1.2	1.4	1.6	1.8	0.9	1.3	-38.1
ALL CAUSES	81.4	78.9	86.6	82.7	75.4	80.8	80.1	93.8	76.9	65.7	55.9	-31.3
(Number of all deaths)	(277)	(290)	(329)	(324)	(304)	(337)	(346)	(412)	(342)	(297)	(255)	-7.9

<sup>1</sup>Number of deaths per 100,000 adolescents 15-19 years old.

<sup>2</sup>The five causes with the greatest number of deaths over the 1999-2009 period.

Note: The cause-of-death titles are according to the Tenth Revision of the International Classification of Diseases (ICD-10). The causes of death for 2000-2009 are classified by ICD-10, replacing the Ninth Revision (ICD-9) used during 1979-1999. Measures of comparison between ICD-9 and ICD-10 – the “comparability ratios” – for the causes of death shown in this report are provided in the **Technical Notes**.

**TABLE 2C-13  
MORTALITY RATES<sup>1</sup> FOR THE FIVE LEADING CAUSES<sup>2</sup> OF DEATH AMONG ADOLESCENTS (15-19 YEARS)  
IN URBAN AND RURAL AREAS<sup>3</sup>, ARIZONA, 1999-2009**

Area/Cause	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	% change from 1999
<b>URBAN</b>												
Accidents (unintentional injuries)	29.8	28.9	33.3	36.1	29.9	37.3	28.9	40.3	30.9	23.7	18.7	-37.2
Motor vehicle accidents	22.9	21.9	23.4	27.4	22.0	27.1	20.5	32.2	21.9	14.8	9.6	-58.1
Other than motor vehicle	7.0	7.0	9.9	8.7	7.9	10.2	8.4	8.1	9.0	8.9	9.1	30.0
Assault (homicide)	18.9	16.0	14.4	16.2	13.6	9.9	16.8	20.0	14.8	15.3	9.6	-49.2
Intentional self-harm (suicide)	8.4	12.3	7.4	9.3	9.1	11.4	13.2	10.6	8.2	9.4	9.6	14.3
Malignant neoplasms	3.3	4.3	5.1	4.4	2.4	4.1	2.8	2.8	3.8	4.6	3.2	-3.0
Diseases of heart	2.5	1.7	2.6	1.6	1.2	1.5	1.4	1.4	1.6	1.1	1.3	-48.0
ALL CAUSES	72.4	75.4	77.6	82.4	69.8	75.8	75.8	88.9	72.5	61.4	51.5	-28.9
(Number of all deaths)	(199)	(227)	(242)	(265)	(231)	(260)	(270)	(320)	(265)	(230)	(194)	-2.5
<b>RURAL</b>												
Accidents (unintentional injuries)	54.9	67.4	57.2	39.8	57.0	54.1	59.4	56.8	61.9	36.0	36.9	-32.8
Motor vehicle accidents	50.4	52.4	39.6	31.3	44.5	46.0	46.2	42.9	49.2	28.6	17.2	-65.9
Other than motor vehicle	4.5	15.0	17.6	8.5	12.5	8.1	13.2	13.9	12.7	7.4	19.7	337.8
Intentional self-harm (suicide)	16.8	6.0	24.9	12.8	12.5	13.5	18.5	24.0	10.1	26.1	16.0	-4.8
Assault (homicide)	4.6	7.5	5.9	8.5	4.2	14.9	6.6	8.8	6.3	7.5	6.1	32.6
Malignant neoplasms	4.6	1.5	5.9	4.3	2.8	6.8	2.6	6.3	3.8	6.2	3.7	-19.6
Diseases of heart	0.0	1.5	2.9	2.8	1.4	0.0	1.3	2.5	2.5	0.0	1.2	NA
ALL CAUSES	96.1	92.8	123.2	83.9	101.5	102.7	100.3	116.2	97.2	83.3	75.0	-22.0
(Number of all deaths)	(63)	(62)	(84)	(59)	(73)	(76)	(76)	(92)	(77)	(67)	(61)	-3.2
<b>STATEWIDE</b>												
Accidents (unintentional injuries)	35.8	35.9	37.6	36.7	34.7	40.5	34.3	43.3	36.4	25.9	22.1	-38.3
Motor vehicle accidents	29.4	27.5	26.3	28.1	26.0	30.7	25.0	34.2	26.8	17.3	11.0	-62.6
Other than motor vehicle	6.5	8.4	11.3	8.6	8.7	9.8	9.3	9.1	9.6	8.6	11.2	72.3
Intentional self-harm (suicide)	10.6	11.1	10.5	9.9	9.7	11.8	14.1	13.0	8.5	12.4	10.7	0.9
Assault (homicide)	16.2	14.4	12.9	14.8	11.9	10.8	15.0	18.0	13.3	13.7	9.0	-44.4
Malignant neoplasms	3.5	3.8	5.3	4.3	2.5	4.6	2.8	3.4	3.8	4.6	3.3	-5.7
Diseases of heart	2.1	1.6	2.6	1.8	1.2	1.2	1.4	1.6	1.8	0.9	1.3	-38.1
ALL CAUSES	81.4	78.9	86.6	82.7	75.4	80.8	80.1	93.8	76.9	65.7	55.9	-31.3
(Number of all deaths)	(277)	(290)	(329)	(324)	(304)	(337)	(346)	(412)	(342)	(297)	(255)	-7.9

<sup>1</sup>Number of deaths per 100,000 adolescents 15-19 years old.

<sup>2</sup>The five causes with the greatest number of deaths over the 1999-2009 period.

<sup>3</sup>Urban = Maricopa, Pima, Pinal, and Yuma counties. The remaining counties comprise Arizona's rural areas. See **Technical Notes** for more information.

Note: Records with unknown county of residence are included in the statewide totals, but are not distributed by urban/rural area. The cause-of-death titles are according to the Tenth Revision of the International Classification of Diseases (ICD-10). The causes of death for 2000-2009 are classified by ICD-10, replacing the Ninth Revision (ICD-9) used during 1979-1999. Measures of comparison between ICD-9 and ICD-10 - the "comparability ratios" - for the causes of death shown in this report are provided in the **Technical**

**TABLE 2C-14  
MORTALITY RATES<sup>1</sup> FOR THE FIVE LEADING CAUSES OF DEATH AMONG ADOLESCENTS (15-19 YEARS)  
BY GENDER IN URBAN AND RURAL AREAS<sup>2</sup>, ARIZONA, 1999-2009**

Area/Gender	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	% change from 1999
<b>URBAN</b>												
Male	103.8	110.9	110.1	121.8	98.4	105.1	112.7	121.7	97.9	84.3	73.8	-28.9
Female	37.4	37.3	42.6	40.0	38.9	44.2	36.1	54.2	45.3	36.8	27.6	-26.2
TOTAL	72.4	75.4	77.6	82.4	69.8	75.8	75.8	88.9	72.5	61.4	51.5	-28.9
<b>RURAL</b>												
Male	147.1	126.5	158.4	101.5	144.8	127.9	142.5	162.3	125.2	109.0	112.6	-23.5
Female	41.2	69.6	85.3	64.9	54.9	74.5	54.8	67.5	57.6	56.2	35.4	-14.1
TOTAL	96.1	92.8	123.2	83.9	101.5	102.7	100.3	116.2	97.2	83.3	75.0	-22.0
<b>STATEWIDE</b>												
Male	117.6	112.3	119.3	118.1	106.7	109.5	118.5	129.1	102.7	89.1	81.1	-31.0
Female	41.0	42.9	51.4	44.5	41.7	49.8	39.4	56.6	49.3	40.7	29.0	-29.3
TOTAL	81.4	78.9	86.6	82.7	75.4	80.8	80.1	93.8	76.9	65.7	55.9	-31.3

<sup>1</sup>Rates are presented per 100,000 children 15-19 years old.

<sup>2</sup>Urban = Maricopa, Pima, Pinal, and Yuma counties. The remaining counties comprise Arizona's rural areas. See **Technical Notes** for more information.

Note: Records with unknown county of residence are included in the statewide totals, but are not distributed by urban/rural area.

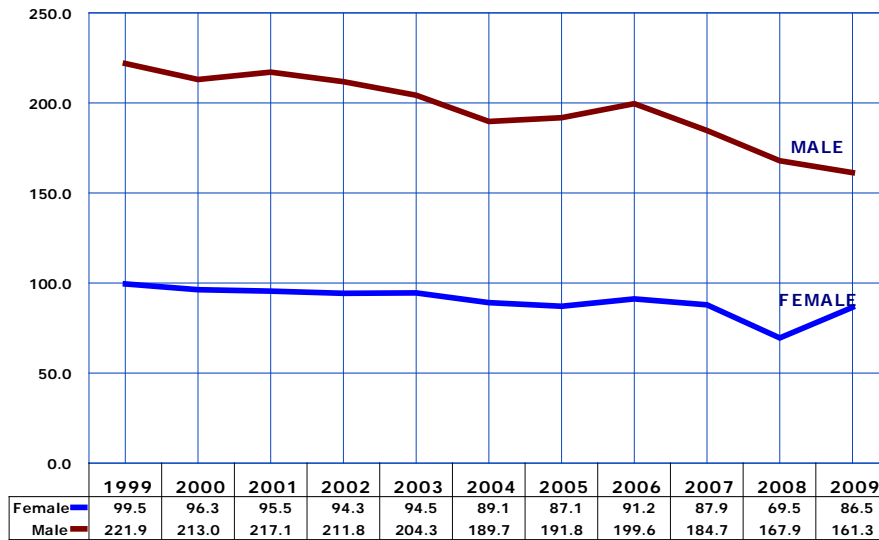
**TABLE 2C-15  
LEADING CAUSES OF DEATH AMONG ADOLESCENTS (15-19 YEARS) BY GENDER, AREA AND RACE/ETHNICITY,  
ARIZONA, 2009**

Cause of death	Total	Gender		Area*		Race/ethnicity					
		Male	Female	Urban	Rural	White non-Hispanic	Hispanic or Latino	Black or African American	American Indian or Alaska Native	Asian or Pacific Islander	Other/Unknown
Accidents (unintentional injury)	101	81	20	71	30	53	29	2	15	1	1
Motor vehicle accidents	50	36	14	36	14	21	20	1	7	1	0
Accidental poisoning	39	34	5	29	10	26	8	1	3	0	1
Accidental drowning and submersion	7	7	0	5	2	5	1	0	1	0	0
Intentional self-harm (suicide)	49	38	11	36	13	22	18	1	7	1	0
By discharge of firearms	21	16	5	18	3	13	8	0	0	0	0
By other means	28	22	6	18	10	9	10	1	7	1	0
Assault (homicide)	41	32	9	36	5	8	21	5	7	0	0
By discharge of firearms	27	20	7	25	2	5	15	3	4	0	0
By other means	14	12	2	11	3	3	6	2	3	0	0
Malignant neoplasms	15	8	7	12	3	3	9	0	1	1	1
Leukemia	6	2	4	5	1	1	5	0	0	0	0
Diseases of heart	6	3	3	5	1	3	1	0	2	0	0
Events of undetermined intent	5	3	2	5	0	2	2	0	1	0	0
<b>Total, all causes</b>	<b>255</b>	<b>191</b>	<b>64</b>	<b>194</b>	<b>61</b>	<b>104</b>	<b>95</b>	<b>11</b>	<b>38</b>	<b>5</b>	<b>2</b>

\*Urban = Maricopa, Pima, Pinal and Yuma counties. The remaining counties comprise Arizona's rural areas.

**2C. AGE-SPECIFIC MORTALITY**  
**Young adult mortality (ages 20-44 years)**

**Figure 2C-13**  
**Mortality Rates by Gender and Year among Young Adults 20-44 Years,**  
**Arizona, 1999-2009**

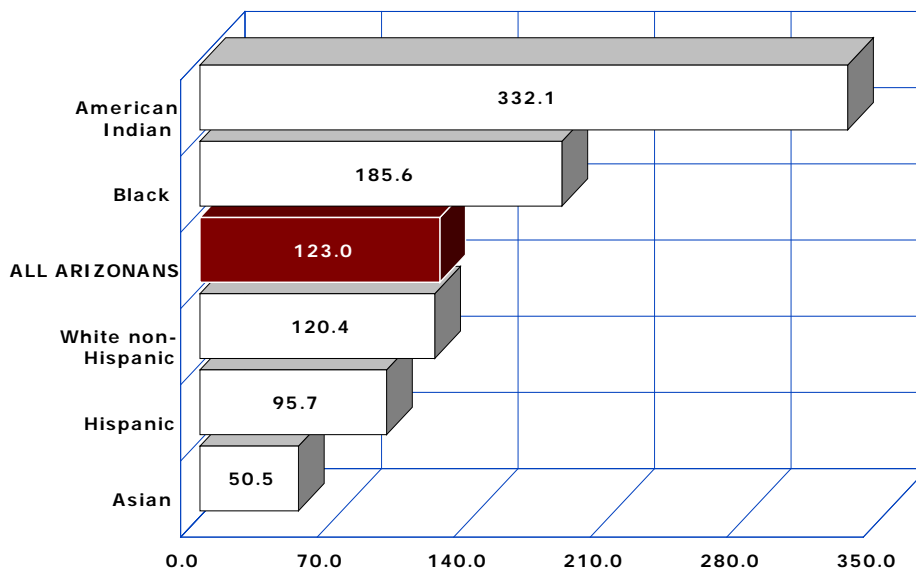


In 2009, 35.3 percent of Arizona residents were between 20 and 44 years of age. Among the six developmental periods examined in the life span, young adulthood, with an estimated 2.33 million individuals, easily represented the largest segment of the population. However, only one in fifteen deaths in Arizona (or 6.5 percent) occurred during young adulthood.

The number of deaths among young adults decreased from 2,929 in 2008 to 2,917 in 2009. The 2,917 premature deaths among 2,329,608 young adult Arizona residents produced a 2009 mortality rate of 125.2 deaths per 100,000, 22.7 percent lower than the 1999 rate of 162.0/100,000 (Table 2C-16). Young male but not female adults had an improvement in their survival chances from 2008 to 2009 (Figure 2C-13, Table 2C-16).

Number of deaths per 100,000 persons, 20-44 years old in specified group.

**Figure 2C-14**  
**Mortality Rates by Race/Ethnicity among Young Adults 20-44 Years,**  
**Arizona, 2009**



The rank order of survival chances of young adults from best to worse by race/ethnicity in 2009 was Asians, Hispanics or Latinos, White non-Hispanics, Black or African Americans and American Indians. If the 2009 mortality risk of Asians (i.e., their mortality rate of 50.5/100,000) was applied to all young adults in Arizona, 1,176 would have died, rather than the 2,971 who actually did.

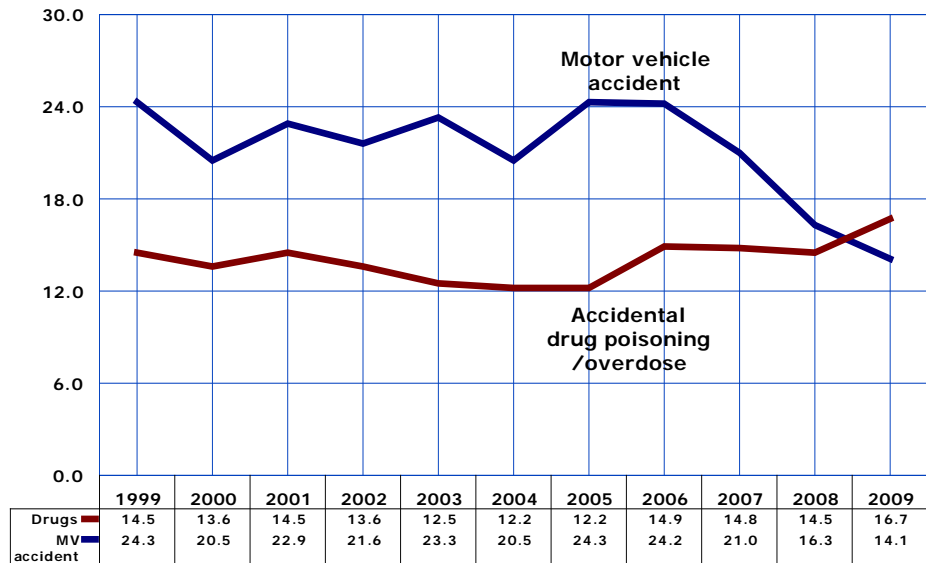
Number of deaths per 100,000 persons, 20-44 years old in specified group.

2C. AGE-SPECIFIC MORTALITY  
 Young adult mortality (ages 20-44 years)

Figure 2C-15  
 Mortality Rates for Motor Vehicle-related Injuries and Accidental Poisoning by Drugs by Year among Young Adults 20-44 Years, Arizona, 1999-2009

In the 2008 edition of this report we have reported that the number of accidental poisonings by drugs steeply declined from 2007 to 2008. This decline never happened. The underlying causes of death were misclassified on thousands of records. Corrections have been made for this report.

In 2009, 390 deaths of young adults were attributed to accidental poisoning by drugs (Table 2C-19), compared to 269 deaths in 1999. The mortality rate for drug overdoses among young adults (16.7/100,000) for the first time exceeded the mortality rate for motor vehicle-related injuries (14.1/100,000; Figure 2C-15).



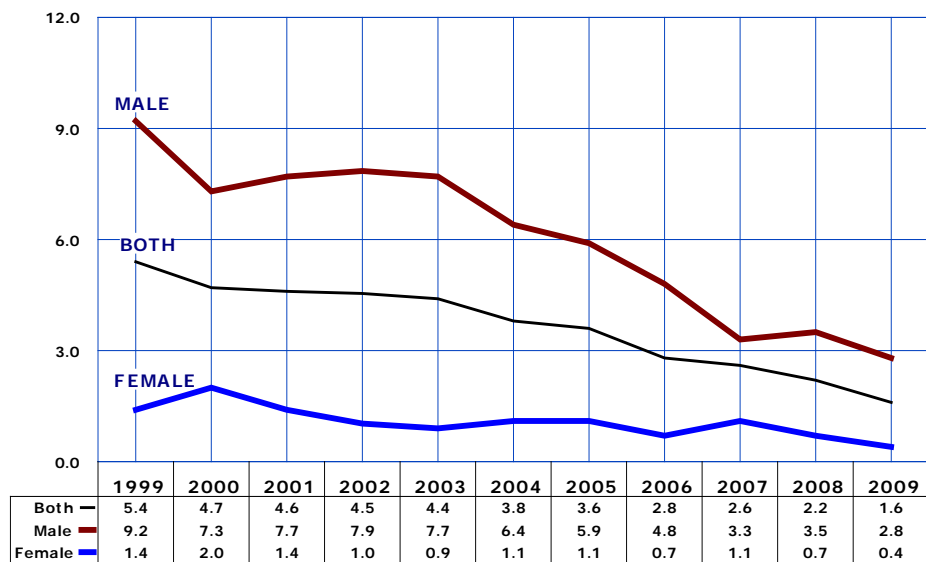
Number of deaths per 100,000 persons, 20-44 years old in specified group.

Figure 2C-16  
 Mortality Rates for HIV Disease by Gender and Year among Young Adults 20-44 Years, Arizona, 1999-2009

The *human immunodeficiency virus (HIV) disease* dropped from being the 5<sup>th</sup> leading cause of death among young adults in 1996 to 6<sup>th</sup> leading cause in 1997 and 7<sup>th</sup> leading cause in 1998 - 2008. In 2009, HIV disease was the 9<sup>th</sup> leading cause of death of young adults.

Of the 105 deaths from *HIV disease* in 2009, 538 or 36.2 percent occurred among Arizonans 20-44 years old (Table 2C-28). Males accounted for 34 (89.5 percent) of young adult deaths from *HIV disease* in 2009 (Table 2C-19).

The mortality rate for HIV disease among young male adults decreased from 2.2/100,000 in 2008 to 1.6/100,000 in 2009.



Number of deaths per 100,000 persons, 20-44 years old in specified group.



**TABLE 2C-16  
MORTALITY RATES<sup>1</sup> FOR THE FIVE LEADING CAUSES<sup>2</sup> OF DEATH AMONG YOUNG ADULTS (20-44 YEARS) BY GENDER,  
ARIZONA, 1999-2009**

Gender/Cause	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	% change from 1999
<b>MALE</b>												
Accidents (unintentional injuries)	70.5	57.3	72.5	61.8	63.3	54.8	63.2	69.2	60.6	54.4	53.7	-23.8
Motor vehicle accidents	34.1	30.2	34.5	30.7	33.6	27.8	34.2	34.5	29.2	23.8	20.2	-40.8
Other than motor vehicle	36.4	27.1	38.0	31.1	29.7	27.0	29.0	34.7	31.4	30.6	33.4	-8.2
Intentional self-harm (suicide)	30.4	28.3	21.7	31.3	30.2	28.3	28.3	27.4	30.3	23.5	25.1	-17.6
Diseases of heart	19.1	16.2	16.6	17.2	16.3	15.4	15.3	15.9	14.3	13.3	14.0	-26.7
Assault (homicide)	24.7	20.0	25.9	25.6	22.9	23.7	24.7	24.2	22.8	19.2	13.4	-45.9
Malignant neoplasms	18.6	15.7	15.9	15.7	14.2	14.0	11.9	11.0	11.3	12.6	12.0	-35.5
ALL CAUSES	221.9	213.0	217.1	211.8	204.3	189.4	191.8	199.6	184.7	167.9	161.3	-27.3
(Number of all deaths)	(2048)	(2059)	(2172)	(2186)	(2169)	(2091)	(2185)	(2290)	(2166)	(2001)	(1944)	-5.1
<b>FEMALE</b>												
Accidents (unintentional injuries)	23.4	16.7	22.0	21.9	22.5	21.8	24.9	25.0	25.2	20.4	20.8	-11.1
Motor vehicle accidents	14.0	10.1	10.5	12.0	12.2	12.7	13.8	13.1	12.2	8.3	7.5	-46.4
Other than motor vehicle	9.4	6.6	11.5	9.9	10.3	9.1	11.1	11.9	13.0	12.1	13.3	41.5
Malignant neoplasms	21.0	21.0	21.2	18.7	15.9	18.2	13.4	16.4	15.5	13.7	15.9	-24.3
Intentional self-harm (suicide)	7.8	7.2	4.3	6.2	7.4	7.2	7.5	7.0	7.1	6.0	9.4	20.5
Diseases of heart	7.5	6.2	7.6	7.3	7.0	6.6	7.8	5.0	6.7	5.8	6.7	-10.7
Assault (homicide)	7.3	4.5	6.2	3.9	5.1	4.5	3.7	4.0	4.7	3.2	4.0	-45.2
ALL CAUSES	99.5	96.3	95.5	94.3	94.5	89.2	87.1	91.2	87.9	69.5	86.5	-13.1
(Number of all deaths)	(881)	(874)	(897)	(913)	(941)	(922)	(936)	(968)	(954)	(828)	(973)	10.4
<b>TOTAL</b>												
Accidents (unintentional injuries)	47.5	37.7	48.1	42.5	43.5	38.8	44.6	47.9	43.6	38.0	37.8	-20.4
Motor vehicle accidents	24.3	20.5	22.9	21.6	23.3	20.5	24.3	24.2	21.0	16.3	14.1	-42.0
Other than motor vehicle	23.2	17.2	25.2	20.9	20.2	18.3	20.3	23.7	22.6	21.7	23.7	2.2
Intentional self-harm (suicide)	19.4	18.1	13.3	19.1	19.2	18.1	18.2	17.6	19.1	15.0	17.5	-9.8
Malignant neoplasms	19.8	18.3	18.5	17.1	15.0	16.0	12.6	13.6	13.3	9.7	13.9	-29.8
Diseases of heart	13.4	11.4	12.2	12.4	11.8	11.1	11.7	10.7	10.7	11.5	10.5	-21.6
Assault (homicide)	16.2	12.5	16.3	15.1	14.3	14.5	14.5	14.5	14.1	13.1	8.8	-45.7
ALL CAUSES	162.0	156.5	158.2	154.9	151.1	141.0	140.9	147.5	138.2	123.0	125.2	-22.7
(Number of all deaths)	(2929)	(2933)	(3069)	(3099)	(3110)	(3013)	(3121)	(3258)	(3120)	(2829)	(2917)	-0.4

<sup>1</sup>Rates are presented per 100,000 persons 20-44 years old.

<sup>2</sup>The five causes with the greatest number of deaths over the 1999-2009 period.

Note: The cause-of-death titles are according to the Tenth Revision of the International Classification of Diseases (ICD-10). The causes of death for 2000-2009 are classified by ICD-10, replacing the Ninth Revision (ICD-9) used during 1979-1999. Measures of comparison between ICD-9 and ICD-10 – the “comparability ratios” – for the causes of death shown in this report are provided in the **Technical Notes**.

**TABLE 2C-17  
MORTALITY RATES<sup>1</sup> FOR THE FIVE LEADING CAUSES<sup>2</sup> OF DEATH AMONG YOUNG ADULTS (20-44 YEARS)  
IN URBAN AND RURAL AREAS<sup>3</sup>, ARIZONA, 1999-2009**

Area/Cause	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	% change from 1999
<b>URBAN</b>												
Accidents (unintentional injuries)	43.6	34.0	43.7	39.1	38.3	35.5	40.2	44.8	38.7	34.4	32.7	-25.0
Motor vehicle accidents	21.1	17.6	19.5	18.9	19.2	17.5	21.1	21.2	17.7	14.2	11.2	-46.9
Other injury	22.5	16.4	24.2	20.2	19.1	18.0	19.1	23.6	21.0	20.2	21.5	-4.4
Malignant neoplasms	19.0	17.8	18.6	16.2	14.7	16.0	11.8	13.5	12.9	14.2	15.6	-12.4
Intentional self-harm (suicide)	17.8	16.5	12.3	18.0	17.9	16.2	16.8	16.2	18.0	16.4	13.6	-28.4
Assault (homicide)	16.7	13.0	16.9	15.6	14.8	15.2	14.9	15.1	14.3	13.2	9.7	-22.4
Diseases of heart	12.5	10.5	12.3	11.8	11.0	10.6	11.9	10.0	9.9	8.9	8.7	-47.9
ALL CAUSES	150.6	147.8	148.1	145.4	140.2	132.2	133.0	139.3	129.8	113.6	113.0	-25.0
(Number of all deaths)	(2311)	(2372)	(2464)	(2494)	(2477)	(2426)	(2532)	(2640)	(2511)	(2239)	(2255)	-2.4
<b>RURAL</b>												
Accidents (unintentional injuries)	65.5	59.3	74.0	63.2	75.5	58.9	72.0	66.9	73.2	57.1	64.7	-1.2
Motor vehicle accidents	39.9	37.5	42.8	37.9	48.1	38.4	44.2	42.4	40.5	28.0	29.4	-26.3
Other injury	25.6	21.8	31.2	25.3	27.4	20.5	27.8	24.5	32.7	29.2	35.4	38.3
Intentional self-harm (suicide)	24.5	27.4	19.2	26.0	26.8	29.5	26.8	25.5	25.6	20.4	29.1	18.8
Malignant neoplasms	20.5	21.5	17.8	22.8	17.2	15.9	17.8	14.0	16.1	12.5	15.9	-22.4
Diseases of heart	16.5	15.2	11.6	16.2	16.8	14.2	10.0	15.0	15.1	9.4	15.0	-9.1
Assault (homicide)	11.3	9.6	12.7	11.9	11.3	9.9	12.6	11.2	12.7	14.6	7.8	-31.0
ALL CAUSES	193.6	208.1	212.6	212.2	217.3	194.3	189.9	196.9	188.1	174.2	191.6	-1.0
(Number of all deaths)	(529)	(561)	(586)	(604)	(633)	(587)	(588)	(618)	(609)	(590)	(662)	25.1
<b>STATEWIDE</b>												
Accidents (unintentional injuries)	47.5	37.7	48.1	42.5	43.5	38.8	44.6	47.9	43.6	38.0	37.8	-20.4
Motor vehicle accidents	24.3	20.5	22.9	21.6	23.3	20.5	24.3	24.2	21.0	16.3	14.1	-42.0
Other injury	23.2	17.2	25.2	20.9	20.2	18.3	20.3	23.7	22.6	21.7	23.7	2.2
Intentional self-harm (suicide)	19.4	18.1	13.3	19.1	19.2	18.1	18.2	17.6	19.1	15.0	17.5	-9.8
Malignant neoplasms	19.8	18.3	18.5	17.1	15.0	16.0	12.6	13.6	13.3	9.7	13.9	-29.8
Assault (homicide)	16.2	12.5	16.3	15.1	14.3	14.5	14.5	14.5	14.1	13.1	10.5	-21.6
Diseases of heart	13.4	11.4	12.2	12.4	11.8	11.1	11.7	10.7	10.7	11.5	8.8	-45.7
ALL CAUSES	162.0	156.5	158.2	154.9	151.1	141.0	140.9	147.5	138.2	123.0	125.2	-22.7
(Number of all deaths)	(2929)	(2933)	(3069)	(3099)	(3110)	(3013)	(3121)	(3258)	(3120)	(2829)	(2917)	-0.4

<sup>1</sup>Rates are presented per 100,000 young adults 20-44 years old.

<sup>2</sup>The five causes with the greatest number of deaths statewide over the 1999-2009 period.

<sup>3</sup>Urban = Maricopa, Pima, Pinal, and Yuma counties. The remaining counties comprise Arizona's rural areas. See **Technical Notes** for more information.

Note: Records with unknown county of residence are included in the statewide totals, but are not distributed by urban/rural area. The cause-of-death titles are according to the Tenth Revision of the International Classification of Diseases (ICD-10). The causes of death for 2000-2009 are classified by ICD-10, replacing the Ninth Revision (ICD-9) used during 1979-1999. Measures of comparison between ICD-9 and ICD-10 - the "comparability ratios" - for the causes of death shown in this report are provided in the **Technical**

**TABLE 2C-18**  
**MORTALITY RATES<sup>1</sup> FOR THE FIVE LEADING CAUSES OF DEATH AMONG YOUNG ADULTS (20-44 YEARS)**  
**BY GENDER IN URBAN AND RURAL AREAS<sup>2</sup>, ARIZONA, 1999-2009**

Area/Gender	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	% change from 1999
<b>URBAN</b>												
Male	206.5	201.4	201.8	197.0	190.5	176.7	181.5	188.7	172.2	154.2	143.9	-30.3
Female	92.3	90.3	90.5	89.9	86.1	84.4	81.0	85.3	83.6	69.4	79.5	-13.9
TOTAL	150.6	147.8	148.1	145.4	140.2	132.2	133.0	139.3	129.8	113.6	113.0	-25.0
<b>RURAL</b>												
Male	263.1	306.1	301.8	303.4	288.9	266.5	256.4	266.4	261.2	244.4	258.9	-1.6
Female	120.7	138.8	121.6	119.2	142.8	118.0	123.0	125.1	112.7	102.9	123.5	2.3
TOTAL	193.6	208.1	212.6	212.2	217.3	194.3	189.9	196.9	188.1	174.2	191.6	-1.0
<b>STATEWIDE</b>												
Male	221.9	213.0	217.1	211.8	204.3	189.4	191.8	199.6	184.7	167.9	161.3	-27.3
Female	99.5	96.3	95.5	94.3	94.5	89.2	87.1	91.2	87.9	69.5	86.5	-13.1
TOTAL	162.0	156.5	158.2	154.9	151.1	141.0	140.9	147.5	138.2	123.0	125.2	-22.7

<sup>1</sup>Rates are presented per 100,000 persons 20-44 years old.

<sup>2</sup>Urban = Maricopa, Pima, Pinal, and Yuma counties. The remaining counties comprise Arizona's rural areas. See **Technical Notes** for more information.

Note: Records with unknown county of residence are included in the statewide totals, but are not distributed by urban/rural area.

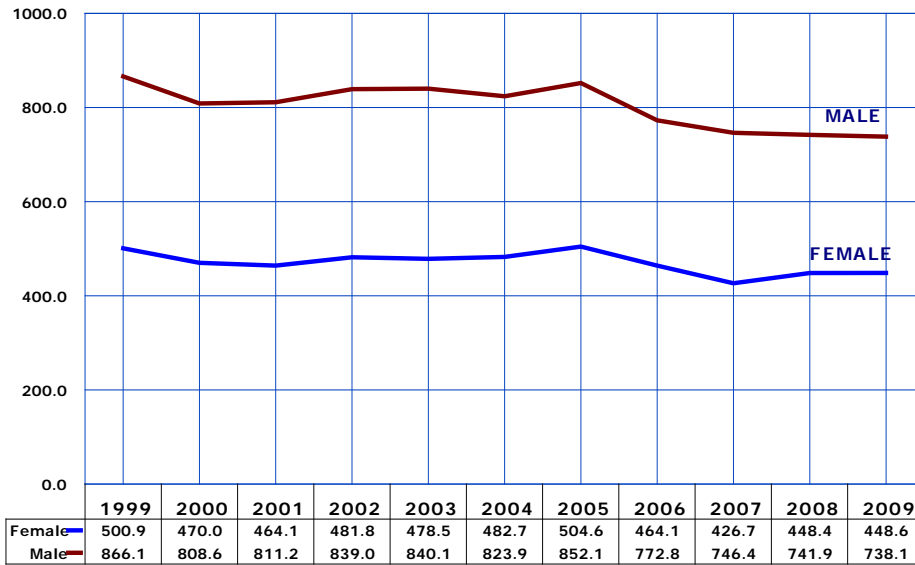
**TABLE 2C-19  
LEADING CAUSES OF DEATH AMONG YOUNG ADULTS (20-44 YEARS) BY GENDER, AREA AND RACE/ETHNICITY,  
ARIZONA, 2009**

Cause of death	Total	Gender		Area		Race/ethnicity					
		Male	Female	Urban	Rural	White non-Hispanic	Hispanic or Latino	Black or African American	American Indian or Alaska Native	Asian or Pacific Islander	Other/Unknown
Accidents (unintentional injury)	881	647	234	653	228	499	194	37	140	8	3
Accidental poisoning	423	290	133	338	85	300	73	17	33	0	0
Motor vehicle accidents	328	244	84	224	104	145	87	14	77	5	0
Intentional self-harm (suicide)	408	302	106	311	97	261	81	21	37	7	1
By discharge of firearms	194	153	41	154	40	136	40	11	6	1	0
By other means	214	149	65	157	57	125	41	10	31	6	1
Malignant neoplasms	324	145	179	271	53	177	96	15	26	9	1
Malignant neoplasm of breast	47	0	47	40	7	27	10	5	3	2	0
Malignant neoplasm of meninges, brain and other parts of central nervous system	38	18	20	34	4	19	17	0	1	1	0
Malignant neoplasm of lymphoid and hematopoietic and related tissue	37	25	12	33	4	21	15	0	1	0	0
Diseases of heart	244	169	75	194	50	136	56	25	23	4	0
Assault (homicide)	206	161	45	174	32	56	92	29	28	0	1
By discharge of firearms	142	119	23	125	17	38	69	24	11	0	0
By other means	64	42	22	49	15	18	23	5	17	0	1
Chronic liver disease and cirrhosis	116	75	41	80	36	44	16	1	55	0	0
Diabetes	57	36	21	46	11	27	14	3	12	1	0
Influenza and pneumonia	48	28	20	29	19	16	13	3	15	0	1
Human immunodeficiency virus (HIV) disease	38	34	4	29	9	15	12	6	5	0	0
Cerebrovascular diseases	35	17	18	28	7	17	9	6	2	0	1
<b>Total, all causes</b>	<b>2,917</b>	<b>1,944</b>	<b>973</b>	<b>2,255</b>	<b>662</b>	<b>1,542</b>	<b>712</b>	<b>183</b>	<b>429</b>	<b>39</b>	<b>12</b>

\*Urban = Maricopa, Pima, Pinal and Yuma counties. The remaining counties comprise Arizona's rural areas.

**2C. AGE-SPECIFIC MORTALITY**  
**Middle-age adult mortality (ages 45-64 years)**

**Figure 2C-17**  
**Mortality Rates by Gender and Year among Middle-Aged Adults 45-64 Years, Arizona, 1999-2009**



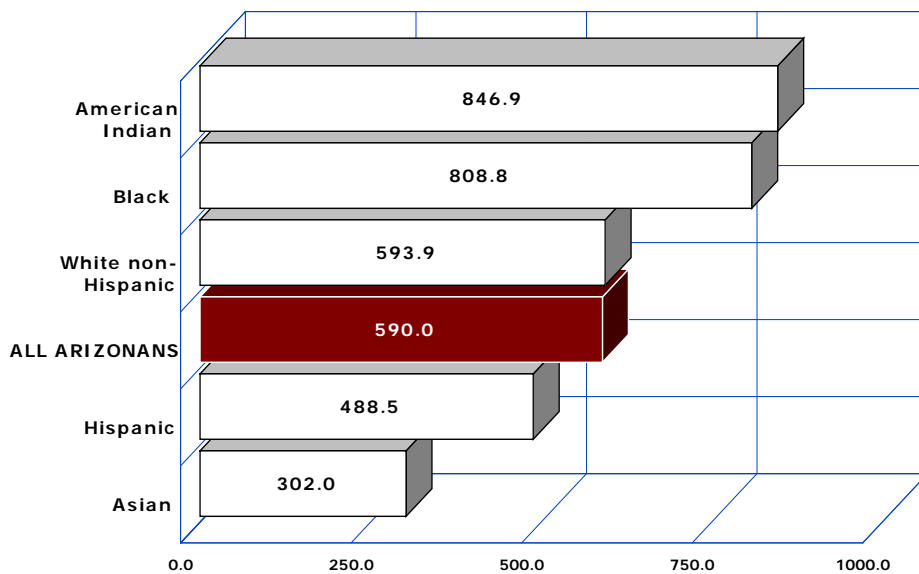
The 1,517,833 middle-aged adult residents aged 45 to 64 experienced 8,855 deaths or an average of 24 deaths per day. The total mortality rate of middle-aged adults slightly decreased from 591.8 deaths per 100,000 in 2008 to 590.0/100,000 in 2009 (Table 2C-20), and it was 12.9 percent lower than the 1999 rate of 677.1 deaths per 100,000.

The 2009 total mortality rate among middle-age females was 10.4 percent lower and among middle-aged males 14.8 percent lower than their respective rates in 1999 (Figure 2C-17, Table 2C-20).

The five causes with the greatest number of deaths, 1999-2009 were *malignant neoplasms, diseases of heart, accidents, chronic liver disease and cirrhosis, and chronic lower respiratory diseases* (Table 2C-20).

Number of deaths per 100,000 persons, 45-64 years old in specified group.

**Figure 2C-18**  
**Mortality Rates by Race/Ethnicity among Middle-Aged Adults 45-64 Years, Arizona, 2009**



American Indian middle-aged adults, followed by Blacks or African Americans and White non-Hispanics had the three highest mortality rates (846.9 deaths per 100,000, 808.8 per 100,000, and 593.9/100,000 respectively) among the race/ethnic groups. If the 2009 total mortality rate for Asian middle-aged adults applied to all Arizona residents 45-64 years old, 4,584 middle-aged adults would have died rather than 8,855 who actually did.

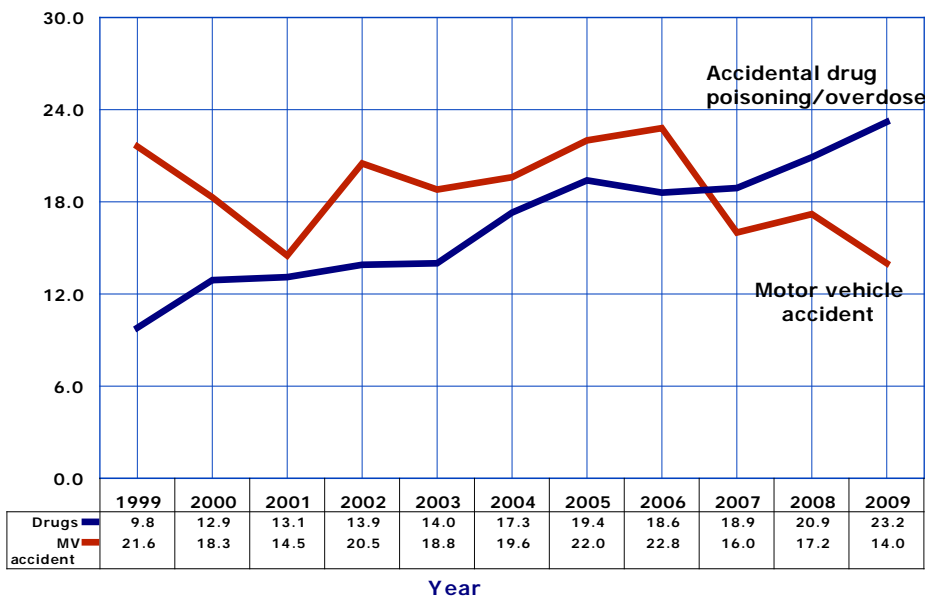
Number of deaths per 100,000 persons, 45-64 years old in specified group.

2C. AGE-SPECIFIC MORTALITY  
Middle-age adult mortality (ages 45-64 years)

Figure 2C-19  
Mortality Rates for Accidental Poisoning by Drugs by Year among Middle-Aged Adults 45-64 Years, Arizona, 1999-2009

In recent years, middle-aged adults experienced an unprecedented increase in mortality from accidental drug overdoses. In 2009, 314 deaths were attributed to accidental poisoning by drugs (Table 2C-23), compared to 93 deaths in 1999.

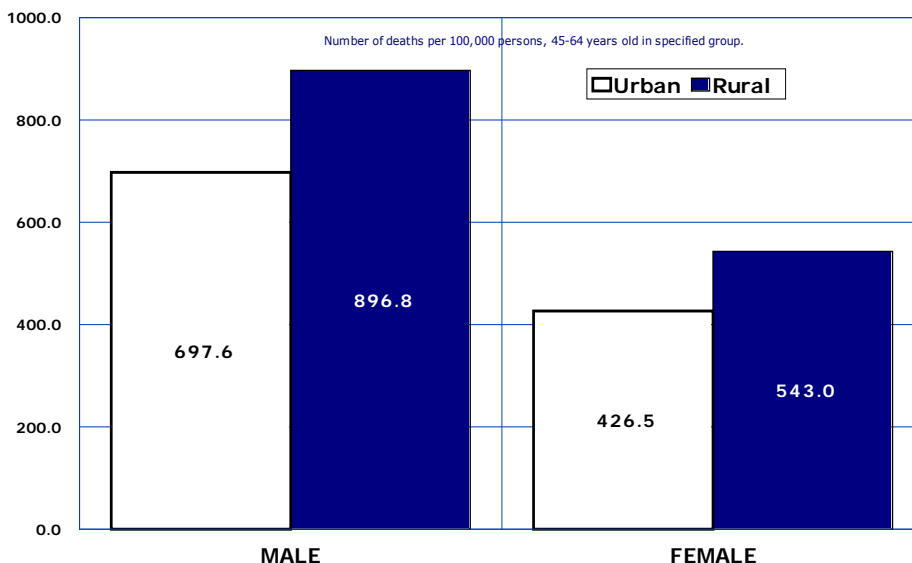
Beginning in 2007, the mortality rate for accidental drug poisoning exceeded the mortality rate for motor vehicle-related injuries among the middle-aged (Figure 2C-19). In 2009, the rate of 23.2 fatal drug overdoses per 100,000 middle-aged adults was 65.7 percent greater than the mortality rate of 14.0/100,000 for motor vehicle accidents. White non-Hispanic accounted for 297 or 76.6 percent of all accidental poisoning deaths, including drug overdoses, gases, and vapors (Table 2C-23).



Number of deaths per 100,000 persons, 45-64 years old in specified group.

Figure 2C-20  
Mortality Rates by Gender in Urban\* and Rural Areas among Middle-Aged Adults 45-64 Years, Arizona, 2009

In 2009, as in the past, rural middle-aged males had the poorest survival chances (Figure 2C-20, Table 2C-22). Rural middle-aged male chances of death in 2009 were 28.6 percent greater than urban males, 65.2 percent greater than rural females, and 110.3 percent (2.1 times) greater than urban females.



\*Maricopa, Pima, Pinal and Yuma Counties.

**TABLE 2C-20  
MORTALITY RATES<sup>1</sup> FOR THE FIVE LEADING CAUSES<sup>2</sup> OF DEATH AMONG MIDDLE-AGED ADULTS (45-64 YEARS)  
BY GENDER, ARIZONA, 1999-2009**

Gender/Cause	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	% change from 1999
<b>MALE</b>												
Malignant neoplasms	229.0	212.9	204.3	228.3	220.6	213.1	210.6	192.1	192.1	184.5	182.2	-20.4
Diseases of heart	225.3	202.0	197.4	206.1	196.7	196.7	207.5	186.7	170.8	175.5	169.0	-25.0
Accidents (unintentional injuries)	74.0	65.8	66.6	70.9	68.8	75.7	86.2	81.2	73.2	76.5	71.9	-2.8
Motor vehicle accidents	32.3	26.8	19.8	29.3	26.2	27.7	33.7	31.9	23.1	24.6	20.8	-35.6
Other than motor vehicle	29.0	39.0	46.8	41.6	42.6	48.0	52.5	49.3	50.1	51.9	51.1	76.2
Chronic liver disease and cirrhosis	42.3	41.9	42.5	36.0	42.7	42.3	45.1	34.4	35.5	39.2	38.0	-10.2
Suicide	33.9	29.7	25.6	34.4	29.4	31.6	32.7	31.9	35.0	35.1	37.0	9.1
ALL CAUSES	866.1	808.6	811.2	839.0	840.1	823.9	852.1	772.8	746.4	741.9	738.1	-14.8
(Number of all deaths)	(4133)	(4190)	(4348)	(4637)	(4776)	(4906)	(5232)	(5282)	(5397)	(5450)	(5472)	32.4
<b>FEMALE</b>												
Malignant neoplasms	192.5	181.5	185.4	179.2	181.3	179.4	182.3	166.2	154.7	151.4	154.2	-19.9
Diseases of heart	81.7	79.5	75.1	78.0	72.8	74.8	74.2	66.4	65.0	63.4	59.4	-27.3
Accidents (unintentional injuries)	22.7	21.0	23.5	26.5	24.6	29.6	33.1	35.8	30.2	34.2	36.1	59.0
Motor vehicle accidents	11.7	10.3	9.6	12.2	11.9	11.8	10.9	14.2	9.2	10.0	7.6	-35.0
Other than motor vehicle	10.9	10.7	13.9	14.3	12.7	17.8	22.2	21.6	21.0	24.2	28.5	161.5
Chronic lower respiratory diseases	23.5	20.6	25.7	19.9	22.5	18.5	25.4	21.6	23.6	24.3	19.2	-18.3
Diabetes	20.3	17.0	19.6	19.5	17.2	19.0	20.1	19.1	14.0	16.0	14.2	-30.0
ALL CAUSES	500.9	470.0	464.1	481.8	478.5	482.7	504.6	464.1	426.7	448.4	448.6	-10.4
(Number of all deaths)	(2563)	(2595)	(2650)	(2837)	(2898)	(3022)	(3292)	(3336)	(3232)	(3449)	(3483)	35.9
<b>TOTAL</b>												
Malignant neoplasms	210.1	196.7	194.6	203.0	200.3	195.8	196.0	178.8	173.0	167.6	167.9	-20.1
Diseases of heart	151.0	138.8	134.3	140.0	132.9	134.2	138.8	125.0	116.6	118.2	112.9	-25.2
Accidents (unintentional injuries)	47.4	42.7	44.4	48.0	46.0	52.1	58.8	57.9	51.2	54.9	53.6	13.1
Motor vehicle accidents	21.6	18.3	14.5	20.5	18.8	19.6	22.0	22.8	16.0	17.2	14.0	-35.2
Other than motor vehicle	25.8	24.4	29.9	27.5	27.2	32.5	36.8	35.1	35.2	37.7	39.5	53.1
Chronic liver disease and cirrhosis	28.7	29.1	27.5	26.1	29.0	28.9	31.8	25.0	25.3	29.7	29.1	1.4
Chronic lower respiratory diseases	27.2	24.2	26.7	23.7	21.9	21.4	26.8	22.7	21.8	24.7	21.5	-21.0
ALL CAUSES	677.1	633.9	632.1	654.8	653.7	649.1	673.1	614.6	582.8	591.8	590.0	-12.9
(Number of all deaths)	(6696)	(6785)	(6998)	(7474)	(7675)	(7928)	(8524)	(8618)	(8629)	(8899)	(8855)	32.2

<sup>1</sup>Rates are presented per 100,000 middle-aged adults 45-64 years old.

<sup>2</sup>The five causes with the greatest number of deaths over the 1999-2009 period.

Note: The cause-of-death titles are according to the Tenth Revision of the International Classification of Diseases (ICD-10). The causes of death for 2000-2009 are classified by ICD-10, replacing the Ninth Revision (ICD-9) used during 1979-1999. Measures of comparison between ICD-9 and ICD-10 – the “comparability ratios” – for the causes of death shown in this report are provided in the **Technical Notes**.

**TABLE 2C-21  
MORTALITY RATES<sup>1</sup> FOR THE FIVE LEADING CAUSES<sup>2</sup> OF DEATH AMONG MIDDLE-AGED ADULTS (45-64 YEARS)  
IN URBAN AND RURAL AREAS<sup>3</sup>, ARIZONA, 1999-2009**

Area/Cause	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	% change from 1999
<b>URBAN</b>												
Malignant neoplasms	205.3	196.6	193.2	202.4	198.0	188.9	190.5	174.8	169.6	162.8	165.4	-19.4
Diseases of heart	146.3	132.5	129.8	135.3	125.9	127.0	132.5	119.9	109.4	109.8	101.3	-30.8
Accidents (unintentional injuries)	43.1	41.0	42.8	45.1	40.6	47.6	55.7	54.2	47.8	51.6	48.8	13.2
Motor vehicle accidents	19.6	17.0	12.5	18.0	14.7	17.0	18.7	19.7	13.7	14.8	11.5	-41.3
Other injury	23.5	24.0	30.3	27.1	25.9	30.6	37.0	34.5	34.1	36.8	37.3	58.7
Chronic liver disease and cirrhosis	29.2	28.3	26.9	25.8	26.8	25.2	30.0	23.3	23.0	27.4	25.7	-12.0
Chronic lower respiratory diseases	26.2	25.1	27.8	23.0	21.2	21.9	25.8	22.3	20.5	23.6	20.2	-22.9
ALL CAUSES	655.0	619.2	615.7	637.2	630.2	620.7	647.8	595.0	559.7	559.5	559.4	-14.6
(Number of all deaths)	(5302)	(5345)	(5509)	(5878)	(5987)	(6140)	(6658)	(6834)	(6812)	(6918)	(6979)	31.6
<b>RURAL</b>												
Malignant neoplasms	230.7	197.1	199.7	205.5	210.1	225.2	219.6	197.0	188.3	188.1	176.9	-23.3
Diseases of heart	172.2	164.7	153.6	159.4	162.4	164.5	165.9	148.1	149.6	156.0	164.3	-4.6
Accidents (unintentional injuries)	65.7	48.8	50.4	60.3	68.2	71.0	72.5	74.9	65.3	68.1	71.4	8.7
Motor vehicle accidents	30.1	22.7	23.1	31.1	35.7	30.6	36.0	37.0	26.6	27.3	24.8	-17.6
Other injury	35.7	26.1	27.3	29.2	32.5	40.4	36.5	37.9	38.7	40.8	46.6	30.5
Chronic liver disease and cirrhosis	26.7	32.4	29.7	27.4	37.9	44.8	39.8	32.3	36.1	39.6	43.3	62.2
Chronic lower respiratory diseases	30.6	20.3	22.1	26.9	25.0	18.9	31.4	24.8	28.1	29.5	27.4	-10.5
ALL CAUSES	772.8	693.7	683.9	725.8	750.7	768.9	781.4	702.9	687.3	727.8	713.2	-7.7
(Number of all deaths)	(1387)	(1436)	(1452)	(1589)	(1683)	(1786)	(1865)	(1784)	(1810)	(1946)	(1927)	38.9
<b>STATEWIDE</b>												
Malignant neoplasms	210.1	196.7	194.6	203.0	200.3	195.8	196.0	178.8	173.0	167.6	167.9	-20.1
Diseases of heart	151.0	138.8	134.3	140.0	132.9	134.2	138.8	125.0	116.6	118.2	112.9	-25.2
Accidents (unintentional injuries)	47.4	42.7	44.4	48.0	46.0	52.1	58.8	57.9	51.2	54.9	53.6	13.1
Motor vehicle accidents	21.6	18.3	14.5	20.5	18.8	19.6	22.0	22.8	16.0	17.2	14.0	-35.2
Other injury	25.8	24.4	29.9	27.5	27.2	32.5	36.8	35.1	35.2	37.7	39.5	53.1
Chronic liver disease and cirrhosis	28.7	29.1	27.5	26.1	29.0	28.9	31.8	25.0	25.3	29.7	29.1	1.4
Chronic lower respiratory diseases	27.2	24.2	26.7	23.7	21.9	21.4	26.8	22.7	21.8	24.7	21.5	-21.0
ALL CAUSES	677.1	633.9	632.1	654.8	653.7	649.1	673.1	614.6	582.8	591.8	590.0	-12.9
(Number of all deaths)	(6696)	(6785)	(6998)	(7474)	(7675)	(7928)	(8524)	(8618)	(8629)	(8899)	(8855)	32.2

<sup>1</sup>Rates are presented per 100,000 middle-aged adults 45-64 years old.

<sup>2</sup>The five causes with the greatest number of deaths over the 1999-2009 period.

<sup>3</sup>Urban = Maricopa, Pima, Pinal, and Yuma counties. The remaining counties comprise Arizona's rural areas. See **Technical Notes** for more information.

Note: Records with unknown county of residence are included in the statewide totals, but are not distributed by urban/rural area. The cause-of-death titles are according to the Tenth Revision of the International Classification of Diseases (ICD-10). The causes of death for 2000-2009 are classified by ICD-10, replacing the Ninth Revision (ICD-9) used during 1979-1999. Measures of comparison between ICD-9 and ICD-10 – the “comparability ratios” – for the causes of death shown in this report are provided in the **Technical**



**TABLE 2C-22**  
**MORTALITY RATES<sup>1</sup> FOR THE FIVE LEADING CAUSES OF DEATH AMONG MIDDLE-AGED ADULTS (45-64 YEARS)**  
**BY GENDER IN URBAN AND RURAL AREAS<sup>2</sup>, ARIZONA, 1999-2009**

Area/Gender	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	% change from 1999
<b>URBAN</b>												
Male	834.9	789.4	782.6	812.8	809.3	788.6	815.2	749.3	714.7	693.2	697.6	-16.4
Female	487.3	459.6	461.0	472.5	462.2	461.1	490.0	447.6	410.8	431.1	426.5	-12.5
TOTAL	655.0	619.2	615.7	637.2	630.1	620.7	647.8	595.0	559.7	559.5	559.4	-14.6
<b>RURAL</b>												
Male	1000.9	937.7	907.2	943.6	966.6	972.3	1010.8	879.7	891.7	953.6	896.8	-10.4
Female	560.0	575.2	473.2	520.2	546.9	575.1	567.2	536.9	497.7	518.4	543.0	-3.0
TOTAL	772.8	693.7	683.9	725.8	750.7	768.9	781.4	702.9	687.3	727.8	713.2	-7.7
<b>STATEWIDE</b>												
Male	866.1	808.6	811.2	839.0	840.1	823.9	852.1	772.8	746.4	741.9	738.1	-14.8
Female	500.9	470.0	464.1	481.8	478.5	482.7	504.6	464.1	426.7	448.4	448.6	-10.4
TOTAL	677.1	633.9	632.1	654.8	653.6	649.1	673.1	614.6	582.8	591.8	590.0	-12.9

<sup>1</sup>Rates are presented per 100,000 persons 45-64 years old.

<sup>2</sup>Urban = Maricopa, Pima, Pinal, and Yuma counties. The remaining counties comprise Arizona's rural areas. See **Technical Notes** for more information.

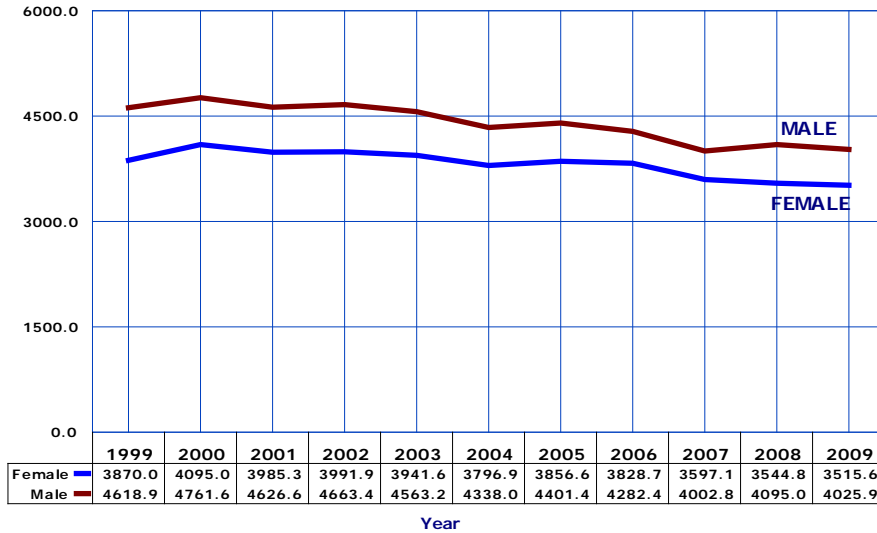
**TABLE 2C-23  
LEADING CAUSES OF DEATH AMONG MIDDLE-AGED ADULTS (45-64 YEARS) BY GENDER, AREA AND RACE/ETHNICITY,  
ARIZONA, 2009**

Cause of death	Total		Gender		Area *			Race/ethnicity					
	Total	Male	Female	Urban	Rural	Unknown	White non-Hispanic	Hispanic or Latino	Black or African American	American Indian or Alaska Native	Asian or Pacific Islander	Other/Unknown	
													Male
Malignant neoplasms	2,548	1,351	1,197	2,063	478	7	1,978	346	86	85	42	11	
Malignant neoplasm of trachea, bronchus and lung	594	349	245	482	111	1	515	39	22	10	7	1	
Malignant neoplasm of breast	238	2	236	191	46	1	181	36	13	6	1	1	
Malignant neoplasm of colon, rectum, and anus	226	117	109	175	49	2	175	30	8	7	4	2	
Malignant neoplasm of pancreas	156	82	74	131	25	0	125	18	5	3	4	1	
Diseases of heart	1,714	1,253	461	1,264	444	6	1,273	230	98	75	18	20	
Accidents (unintentional injury)	813	533	280	609	193	11	591	107	31	69	3	12	
Accidental poisoning	388	227	161	313	69	6	297	48	16	20	0	7	
Motor vehicle accidents	213	154	59	144	67	2	143	30	10	27	2	1	
Falls	74	51	23	53	21	0	56	8	1	8	1	0	
Chronic liver disease and cirrhosis	442	282	160	321	117	4	255	98	6	81	1	1	
Intentional self-harm (suicide)	389	274	115	287	101	1	336	31	4	10	5	3	
By discharge of firearms	212	171	41	164	48	0	188	16	2	2	2	2	
By other means	177	103	74	123	53	1	148	15	2	8	3	1	
Chronic lower respiratory diseases	326	177	149	252	74	0	295	13	11	3	1	3	
Diabetes	276	166	110	216	58	2	146	74	22	29	4	1	
Cerebrovascular diseases	228	117	111	185	43	0	143	59	12	7	7	0	
Viral hepatitis	179	117	62	146	33	0	129	29	9	7	5	0	
Influenza and pneumonia	147	74	73	114	31	2	84	30	7	22	2	2	
Septicemia	115	59	56	86	25	4	75	20	6	11	1	2	
Nephritis, nephrotic syndrome and nephrosis	96	52	44	67	27	2	54	23	10	9	0	0	
Assault (homicide)	75	55	20	64	11	0	42	21	3	9	0	0	
By discharge of firearms	39	26	13	35	4	0	18	16	1	4	0	0	
By other means	36	29	7	29	7	0	24	5	2	5	0	0	
Essential (primary) hypertension and hypertensive renal disease	63	43	20	55	8	0	38	11	8	4	1	1	
Human immunodeficiency virus (HIV) disease	62	56	6	53	8	1	29	16	13	4	0	0	
<b>Total, all causes</b>	<b>8,955</b>	<b>5,472</b>	<b>3,483</b>	<b>6,979</b>	<b>1,927</b>	<b>49</b>	<b>6,543</b>	<b>1,325</b>	<b>391</b>	<b>523</b>	<b>105</b>	<b>68</b>	

\*Urban = Maricopa, Pima, Pinal and Yuma counties. The remaining counties comprise Arizona's rural areas.

**2C. AGE-SPECIFIC MORTALITY**  
**Elderly mortality (ages 65 years and older)**

**Figure 2C-21**  
**Mortality Rates by Gender and Year among Elderly 65 Years and Older,**  
**Arizona, 1999-2009**



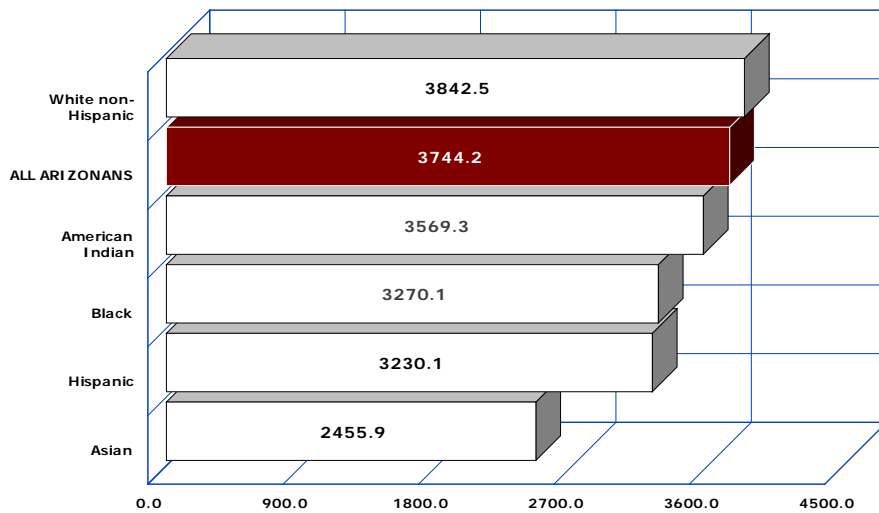
In 2009, an estimated 857,273 elderly over 64 years of age resided in the State (Table 10A-1). No other age group has as great a disproportionate gender distribution as the elderly. As a result of the higher total mortality rates for males in each of the earlier periods of lifespan, 23.2 percent more elderly women than men were alive in 2009.

The 2009 elderly mortality rate of 3744.2 per 100,000 was 10.9 percent lower than the 1999 rate of 4203.4, and it was the 2<sup>nd</sup> lowest annual elderly mortality rate of the eleven years from 1999 to 2009 (Table 2C-24).

Survival chances improved from 1999 to 2009 for both elderly males and females. The 2009 total mortality rate among elderly females was 9.2 percent lower than their rate in 1999. The mortality rate among elderly males decreased 12.8 percent from 1999 to 2009 (Figure 2C-21, Table 2C-24).

Number of deaths per 100,000 persons, 65+ years old in specified group.

**Figure 2C-22**  
**Mortality Rates by Race/Ethnicity among Elderly 65 Years and Older,**  
**Arizona, 2009**



In 2009 the mortality rate for Arizona's White non-Hispanic elderly residents was 1.6 times that for the Asian elderly population. The mortality rate of 2455.9 /100,000 among elderly Asians was the lowest rate among the race/ethnic groups (Figure 2C-22). Hispanic or Latino elderly had the second lowest mortality rate in 2009, 9.5 percent lower than the mortality rate of American Indian elderly.

The 2009 mortality rates of Black or African American and Hispanic or Latino elderly differed by a mere 1.2 percent.

Number of deaths per 100,000 persons, 65+ years old in specified group.

**2C. AGE-SPECIFIC MORTALITY**  
**Elderly mortality (ages 65 years and older)**

**Figure 2C-23**  
**Trends in Mortality Rates for Alzheimer's Disease by Gender and Year**  
**among Elderly 65 Years and Older, Arizona, 1999-2009**

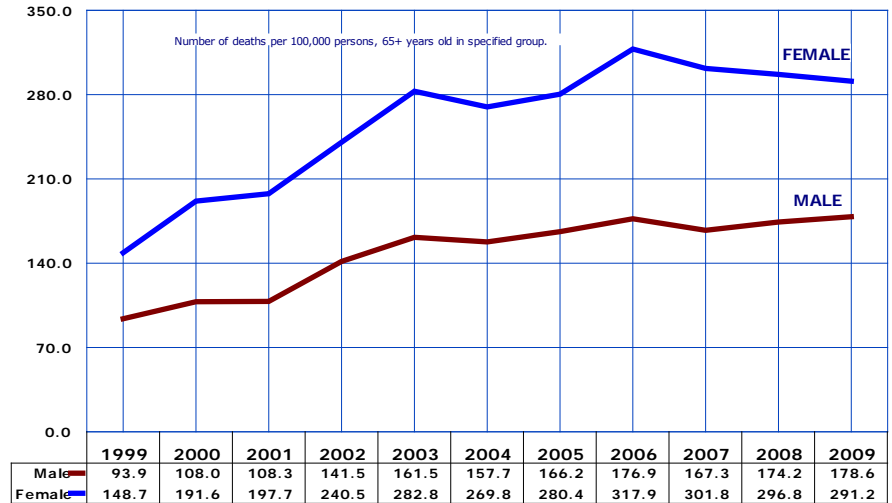
The two tables (Tables 2C-24 and 2C-25) provide mortality rates for the five causes with the greatest number of deaths over the 1999 – 2009 period.

In 1999-2009, Alzheimer's disease (5,526 deaths) replaced influenza and pneumonia (5,178 deaths) as the 5th leading cause of death among elderly males 65 years or older.

From 2006 to 2009, age-specific death rates for Alzheimer's disease decreased by 8.4 percent for elderly females (Figure 2C-23). In contrast, the mortality rate for Alzheimer's disease among males increased by 6.8 percent from 167.3 in 2007 to 178.6 in 2009.

There were 1,378 deaths from Alzheimer's disease among elderly females in 2009, 2 times the number of deaths from this cause among males (686; Table 2C-27).

White non-Hispanic elderly accounted for 89.0 percent of the 2009 deaths from Alzheimer's disease (based on data in Table 2C-27).

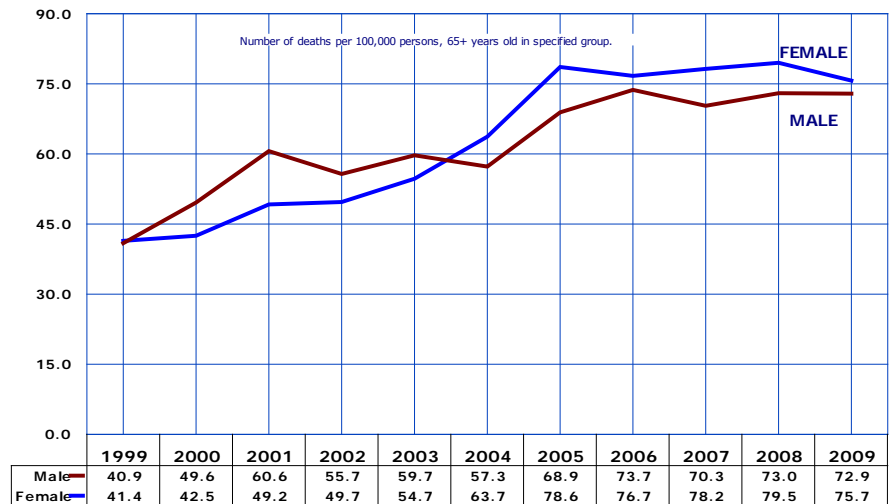


Note: The rates for 1998-1999 are based on the number of deaths according to ICD-9. The rates for 2000-2008 are based on the number of deaths according to ICD-10. For comparability, the rates for 1998-1999 are adjusted using the preliminary comparability ratio of 1.5536 from NCHS. Comparability ratio of 1.0 indicates that the same number of deaths was assigned to a cause of death whether ICD-9 or ICD-10 was used.

**Figure 2C-24**  
**Trends in Mortality Rates for Falls and Fall-related Injuries by Gender and Year**  
**among Elderly 65 Years and Older, Arizona, 1999-2009**

Among unintentional injury deaths unrelated to motor vehicles, Arizona's elderly experienced a substantial increase in mortality from fall-related injuries (Figure 2C-24). In 2009, 639 elderly Arizona 65 years or older died from fall-related injuries, compared to 337 in 1999, and 5 times as many as the number of those who died from motor vehicle-related injuries (129; Table 2C-27).

In 2009, those 85 years old or older, experienced the largest number of fall-related deaths (363), followed by Arizonans 75-84 years old (202 deaths) and the youngest elderly 65-74 years old (74 fall-related deaths). Among Arizonans 85 years or older in 2009, the rate of 326.6/100,000 for fall-related deaths was 19.2 times greater than the rate of 17.0/100,000 for those 65-74 years old (there is more data available online at <http://www.azdhs.gov/plan/report/im/falls.htm>)



Note: The rates for 1999 are based on the number of deaths according to ICD-9. The rates for 2000-2009 are based on the number of deaths according to ICD-10. For comparability, the rates for 1999 are adjusted using the preliminary comparability ratio of 1.5536 from NCHS. Comparability ratio of 1.0 indicates that the same number of deaths was assigned to a cause of death whether ICD-9 or ICD-10 was used.

**TABLE 2C-24  
MORTALITY RATES<sup>1</sup> FOR THE FIVE LEADING CAUSES<sup>2</sup> OF DEATH AMONG ELDERLY (65 YEARS AND OLDER) BY GENDER,  
ARIZONA, 1999-2009**

Gender/Cause	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	% change from 1999
<b>MALE</b>												
Diseases of heart	1406.8	1475.7	1378.0	1363.9	1335.3	1241.4	1238.7	1138.7	1079.2	1114.1	1073.3	-23.7
Malignant neoplasms	1118.4	1171.9	1091.2	1119.6	1126.0	1085.8	1068.2	1058.2	1020.4	1006.6	1017.3	-9.0
Chronic lower respiratory diseases	354.1	369.3	338.0	352.3	340.9	296.0	317.3	326.7	300.9	316.8	303.6	-14.3
Cerebrovascular diseases	297.3	309.9	277.0	269.4	248.9	242.2	224.9	195.2	168.6	188.9	182.8	-38.5
Alzheimer's disease	93.7	108.0	108.3	141.5	161.5	157.0	166.2	176.9	167.3	174.4	178.6	90.6
ALL CAUSES	4618.9	4761.6	4626.6	4663.4	4536.2	4338.0	4401.4	4282.4	4002.8	4095.0	4025.9	-12.8
(Number of all deaths)	(14141)	(14107)	(14182)	(14733)	(14744)	(14614)	(15385)	(15273)	(14981)	(15589)	(15462)	9.3
<b>FEMALE</b>												
Diseases of heart	1117.9	1165.3	1126.8	1101.9	1098.6	1028.8	1013.9	968.0	891.9	860.8	855.9	-23.4
Malignant neoplasms	771.2	814.6	781.9	734.5	757.2	731.8	721.8	713.1	696.4	691.1	701.6	-9.0
Alzheimer's disease	148.7	191.6	197.7	240.5	282.8	269.8	280.4	317.9	301.8	297.9	291.2	95.8
Chronic lower respiratory diseases	293.7	300.6	287.4	281.6	276.2	264.0	297.4	286.3	255.0	279.3	273.5	-6.9
Cerebrovascular diseases	312.5	376.0	337.9	337.4	316.2	311.8	286.9	258.7	246.8	229.2	218.5	-30.1
ALL CAUSES	3870.0	4095.0	3985.3	3991.9	3941.6	3796.9	3856.6	3828.7	3597.1	3544.8	3515.6	-9.2
(Number of all deaths)	(14799)	(15216)	(15322)	(15820)	(16070)	(15918)	(16778)	(16919)	(16601)	(16625)	(16636)	12.4
<b>TOTAL</b>												
Diseases of heart	1246.5	1303.0	1238.2	1218.1	1203.6	1123.5	1114.1	1044.8	975.7	974.3	953.3	-23.5
Malignant neoplasms	925.7	973.1	919.1	905.3	920.9	889.5	876.1	867.2	841.5	832.4	843.0	-8.9
Chronic lower respiratory diseases	320.5	331.1	309.8	313.0	304.9	278.3	306.3	304.3	275.6	296.1	287.0	-10.5
Alzheimer's disease	124.3	154.4	158.0	196.6	229.0	220.1	229.5	258.2	241.6	242.6	240.8	93.7
Cerebrovascular diseases	297.3	346.6	310.9	307.2	286.3	280.8	259.2	230.3	211.8	211.1	202.5	-31.9
ALL CAUSES	4203.4	4390.7	4269.8	4289.8	4205.5	4038.0	4099.3	4031.3	3778.8	3791.3	3744.2	-10.9
(Number of all deaths)	(28940)	(29323)	(29504)	(30553)	(30815)	(30532)	(32163)	(32192)	(31852)	(32214)	(32098)	10.9

<sup>1</sup>Rates are presented per 100,000 elderly persons 65 years and older.

<sup>2</sup>The five causes with the greatest number of deaths over the 1999-2009 period. In 1999-2009, Alzheimer's disease (5,526 deaths) replaced influenza and pneumonia (5,178 deaths) as the 5th leading cause of death among elderly males 65 years or older.

Note: The cause-of-death titles are according to the Tenth Revision of the International Classification of Diseases (ICD-10). The causes of death for 2000-2009 are classified by ICD-10, replacing the Ninth Revision (ICD-9) used during 1979-1999. The rates for both Alzheimer's disease and influenza and pneumonia for 1999 are comparability modified and represent the annual number of deaths per 100,000 persons 65+ that would have been classified as influenza and pneumonia, had the ICD-10 classification system and coding rules been in place. The comparability ratio for influenza and pneumonia is 0.6982, a decrease of about 30.2 percent due to ICD-10. The comparability ratio for Alzheimer's disease is 1.5536, a 55.4 percent increase due to ICD-10. The comparability ratios for other causes of death in the above table are equal to 1.0.

**TABLE 2C-25  
MORTALITY RATES<sup>1</sup> FOR THE FIVE LEADING CAUSES<sup>2</sup> OF DEATH AMONG ELDERLY (65 YEARS AND OLDER)  
IN URBAN AND RURAL AREAS<sup>3</sup>, ARIZONA, 1999-2009**

Area/Cause	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	% change from 1999
<b>URBAN</b>												
Diseases of heart	1295.9	1333.1	1273.8	1245.9	1217.0	1130.1	1110.7	1055.0	983.1	971.9	952.2	-26.5
Malignant neoplasms	931.6	977.7	915.3	906.5	907.5	869.3	863.6	854.5	834.1	817.9	835.0	-10.4
Chronic lower respiratory diseases	328.4	340.6	320.7	316.5	303.4	278.9	309.3	303.2	271.8	289.2	282.2	-14.1
Alzheimer's disease	132.9	164.4	169.8	208.6	235.7	232.9	244.6	270.7	262.4	261.3	263.2	98.0
Cerebrovascular diseases	308.5	352.4	315.5	313.7	289.5	287.8	257.3	234.6	211.3	206.4	206.1	-33.2
ALL CAUSES	4277.2	4447.4	4292.7	4314.8	4192.3	4021.7	4083.4	4053.0	3792.4	3765.0	3765.4	-12.0
(Number of all deaths)	(23447)	(23753)	(23758)	(24619)	(24633)	(24384)	(25740)	(25585)	(25143)	(25374)	(25596)	9.2
<b>RURAL</b>												
Diseases of heart	1052.9	1180.6	1094.2	1106.2	1146.3	1094.8	1127.8	1006.1	946.3	979.3	950.4	-9.7
Malignant neoplasms	902.6	954.0	933.5	900.1	974.1	966.6	927.4	915.2	868.7	883.7	865.3	-4.1
Chronic lower respiratory diseases	289.9	293.1	266.1	297.9	310.0	275.7	293.8	308.5	290.0	322.1	302.5	4.3
Cerebrovascular diseases	253.6	323.7	292.3	281.0	272.1	251.7	267.2	214.0	213.6	228.2	187.0	-26.3
Alzheimer's disease	93.9	115.1	110.5	144.6	140.5	195.6	168.0	195.5	161.5	166.7	152.1	62.0
ALL CAUSES	3911.7	4160.1	4123.0	4185.5	4249.8	4093.4	4164.3	3949.5	3723.8	3863.1	3628.5	-7.2
(Number of all deaths)	(5491)	(5564)	(5671)	(5929)	(6169)	(6132)	(6421)	(6607)	(6434)	(6789)	(6441)	17.3
<b>STATEWIDE</b>												
Diseases of heart	1246.5	1303.0	1238.2	1218.1	1203.6	1123.5	1114.1	1044.8	975.7	974.3	953.3	-23.5
Malignant neoplasms	925.7	973.1	919.1	905.3	920.9	889.5	876.1	867.2	841.5	832.4	843.0	-8.9
Chronic lower respiratory diseases	320.5	331.1	309.8	313.0	304.9	278.3	306.3	304.3	275.6	296.1	287.0	-10.5
Alzheimer's disease	124.3	154.4	158	196.6	229.0	220.1	229.5	258.2	241.6	242.6	240.8	93.7
Cerebrovascular diseases	297.3	346.6	310.9	307.2	286.3	280.8	259.2	230.3	211.8	211.1	202.5	-31.9
ALL CAUSES	4203.4	4390.7	4269.8	4289.8	4205.5	4038.0	4099.3	4031.3	3778.8	3791.3	3744.2	-10.9
(Number of all deaths)	(28940)	(29323)	(29504)	(30553)	(30815)	(30532)	(32163)	(32192)	(31852)	(32214)	(32098)	10.9

<sup>1</sup>Rates are presented per 100,000 elderly persons 65 years and older.

<sup>2</sup>The five causes with the greatest number of deaths over the 1999-2009 period. In 1999-2009, Alzheimer's disease (2,567 deaths) replaced influenza and pneumonia (2,309 deaths) as the 5th leading cause of death among Arizonans 65 years or older in the rural areas.

<sup>3</sup>Urban = Maricopa, Pima, Pinal, and Yuma counties. The remaining counties comprise Arizona's rural areas. See **Technical Notes** for more information.

Note: Records with unknown county of residence are included in the statewide totals, but are not distributed by urban/rural area. The cause-of-death titles are according to the Tenth Revision of the International Classification of Diseases (ICD-10). The causes of death for 2000-2009 are classified by ICD-10, replacing the Ninth Revision (ICD-9) used during 1979-1999. Measures of comparison between ICD-9 and ICD-10 – the "comparability ratios" – for the causes of death shown in this report are provided in the **Technical Notes**.

**TABLE 2C-26**  
**MORTALITY RATES<sup>1</sup> FOR THE FIVE LEADING CAUSES OF DEATH AMONG ELDERLY (65 YEARS AND OLDER)**  
**BY GENDER IN URBAN AND RURAL AREAS<sup>2</sup>, ARIZONA, 1999-2009**

Area/Gender	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	% change from 1999
<b>URBAN</b>												
Male	4692.7	4818.1	4650.1	4674.4	4542.1	4323.1	4359.2	4283.2	3986.1	4053.2	4013.8	-14.5
Female	3954.0	4160.0	4015.6	4036.1	3920.8	3786.0	3866.8	3871.5	3638.1	3534.9	3567.5	-9.8
TOTAL	4277.2	4447.4	4292.7	4314.8	4192.1	4021.7	4083.4	4053.0	3792.4	3765.0	3765.4	-12.0
<b>RURAL</b>												
Male	4349.0	4695.7	4473.9	4617.9	4502.4	4379.8	4561.0	4279.7	4058.9	4216.1	4021.7	-7.5
Female	3515.2	4417.3	3810.1	3799.9	4024.4	3836.1	3811.3	3658.6	3432.7	3555.8	3286.5	-6.5
TOTAL	3911.7	4160.1	4123.0	4185.5	4249.8	4093.4	4164.3	3949.5	3723.8	3863.1	3628.5	-7.2
<b>STATEWIDE</b>												
Male	4618.9	4761.6	4626.6	4663.4	4536.2	4338.0	4401.4	4282.4	4002.8	4095.0	4025.9	-12.8
Female	3870.0	4095.0	3985.3	3991.9	3941.6	3796.9	3856.6	3828.7	3597.1	3544.8	3515.6	-9.2
TOTAL	4203.4	4390.7	4269.8	4289.8	4205.3	4038.0	4099.3	4031.3	3778.8	3791.3	3744.2	-10.9

<sup>1</sup>Rates are presented per 100,000 persons 65 years and older.

<sup>2</sup>Urban = Maricopa, Pima, Pinal and Yuma counties. The remaining counties comprise Arizona's rural areas. See **Technical Notes** for more information.

**TABLE 2C-27  
LEADING CAUSES OF DEATH AMONG ELDERLY (65 YEARS AND OLDER) BY GENDER, AREA AND RACE/ETHNICITY,  
ARIZONA, 2009**

Cause of death	Gender		Area*			Race/ethnicity						
	Total	Male	Female	Urban	Rural	Other/ Unknown	White non- Hispanic	Hispanic or Latino	Black or African American	American Indian or Alaska Native	Asian or Pacific Islander	Other/ Unknown
Diseases of heart	8,172	4,122	4,050	6,473	1,687	12	7,076	695	168	147	66	20
Malignant neoplasms	7,227	3,907	3,320	5,676	1,536	15	6,224	635	164	128	66	10
Malignant neoplasm of trachea, bronchus and lung	2,077	1,122	955	1,607	466	4	1,862	139	43	11	19	3
Malignant neoplasm of lymphoid, hematopoietic and related tissue	741	406	335	609	131	1	649	53	20	10	8	1
Malignant neoplasm of colon, rectum, and anus	628	332	296	485	143	0	522	74	16	8	8	0
Malignant neoplasm of breast	431	6	425	356	74	1	377	36	10	6	2	0
Malignant neoplasm of prostate	498	497	1	383	113	2	418	50	19	10	1	0
Malignant neoplasm of pancreas	465	222	243	384	81	0	397	44	10	10	2	2
Chronic lower respiratory diseases	2,460	1,166	1,294	1,918	537	5	2,286	98	30	29	14	3
Alzheimer's disease	2,064	686	1,378	1,789	270	5	1,836	158	38	16	13	3
Cerebrovascular diseases	1,736	702	1,034	1,401	332	3	1,445	179	49	35	27	1
Accidents (unintentional injury)	980	488	492	812	163	5	830	94	7	37	12	0
Falls	639	280	359	548	89	2	553	56	4	18	8	0
Motor vehicle accidents	129	88	41	97	31	1	103	17	2	6	1	0
Influenza and pneumonia	786	351	435	609	177	0	635	76	13	47	12	3
Diabetes	744	366	378	579	163	2	495	142	29	66	11	1
Parkinson's disease	433	275	158	360	72	1	383	32	6	10	2	0
Essential (primary) hypertension and hypertensive disease	403	194	209	336	66	1	314	50	22	9	7	1
Septicemia	368	170	198	287	79	2	269	39	14	40	6	0
Nephritis, nephrotic syndrome and nephrosis	414	215	199	298	116	0	294	77	16	26	1	0
<b>Total, all causes</b>	<b>32,098</b>	<b>15,462</b>	<b>16,636</b>	<b>25,596</b>	<b>6,441</b>	<b>61</b>	<b>27,354</b>	<b>2,936</b>	<b>655</b>	<b>796</b>	<b>299</b>	<b>58</b>

\*Urban = Maricopa, Pima, Pinal and Yuma counties. The remaining counties comprise Arizona's rural areas.



**COMPARATIVE CAUSE-SPECIFIC  
MORTALITY BY AGE GROUP**

TABLE 2C-28  
COMPARISON OF CAUSES OF MORTALITY BY AGE GROUP, ARIZONA, 2009

	All ages	Infants <1	Children 1-14	Adoles- cents 15- 19	Young adults 20-44	Middle- aged adults 45-64	Elderly 65+	Un- known
Total, all causes	45,065	547	271	255	2,917	8,955	32,098	22
Salmonella infections	0	0	0	0	0	0	0	0
Shigellosis and amebiasis	1	0	0	0	0	0	1	0
Certain other intestinal infections	218	5	2	0	3	23	185	0
Enterocolitis due to Clostridium difficile	161	0	0	0	0	16	145	0
Tuberculosis	8	0	0	0	0	4	4	0
Respiratory tuberculosis	8	0	0	0	0	4	4	0
Other tuberculosis	0	0	0	0	0	0	0	0
Whooping cough	2	2	0	0	0	0	0	0
Scarlet fever and erysipelas	0	0	0	0	0	0	0	0
Meningococcal infection	0	0	0	0	0	0	0	0
Septicemia	528	5	6	1	33	115	368	0
Syphilis	0	0	0	0	0	0	0	0
Acute poliomyelitis	0	0	0	0	0	0	0	0
Arthropod-borne encephalitis	0	0	0	0	0	0	0	0
Measles	0	0	0	0	0	0	0	0
Viral hepatitis	239	0	0	0	14	179	46	0
Human immunodeficiency virus (HIV) disease	105	0	0	0	38	62	5	0
Malaria	0	0	0	0	0	0	0	0
Other and unspecified infectious and parasitic diseases	175	5	7	2	20	47	94	0
Malignant neoplasms	10,147	0	33	15	324	2,548	7,227	0
Malignant neoplasm of lip, oral cavity and pharynx	125	0	1	0	1	43	80	0
Malignant neoplasm of esophagus	266	0	0	0	6	86	174	0
Malignant neoplasm of stomach	179	0	0	0	13	41	125	0
Malignant neoplasm of colon, rectum, and anus	887	0	0	0	33	226	628	0
Malignant neoplasm of liver and intrahepatic bile ducts	371	0	1	0	8	139	223	0
Malignant neoplasm of pancreas	622	0	0	0	1	156	465	0
Malignant neoplasm of larynx	66	0	0	0	0	18	48	0
Malignant neoplasm of trachea, bronchus and lung	2,691	0	0	1	19	594	2,077	0
Malignant melanoma of skin	226	0	0	0	18	73	135	0
Malignant neoplasm of breast	716	0	0	0	47	238	431	0
Malignant neoplasm of cervix uteri	64	0	0	0	19	32	13	0
Malignant neoplasm of corpus uteri and uterus, part unspecified	108	0	0	0	5	42	61	0
Malignant neoplasm of ovary	271	0	0	0	7	89	175	0
Malignant neoplasm of prostate	551	0	0	0	1	52	498	0
Malignant neoplasm of kidney and renal pelvis	240	0	0	0	8	71	161	0
Malignant neoplasm of bladder	264	0	0	0	1	37	226	0

**TABLE 2C-28 (continued)**  
**COMPARISON OF CAUSES OF MORTALITY BY AGE GROUP, ARIZONA, 2009**

	All ages	Infants <1	Children 1-14	Adolescents 15-19	Young adults 20-44	Middle-aged adults 45-64	Elderly 65+	Unknown
Malignant neoplasm of meninges, brain and other parts of CNS	275	0	8	3	38	91	135	0
Malignant neoplasm of lymphoid, hematopoietic and related tissue	1,019	0	14	7	37	220	741	0
Hodgkin's disease	16	0	0	1	3	3	9	0
Non-Hodgkin's lymphoma	388	0	1	0	9	93	285	0
Leukemia	425	0	13	6	25	73	308	0
Multiple myeloma and immunoproliferative neoplasms	189	0	0	0	0	51	138	0
Other and unspecified malignant neoplasms of lymphoid tissue	1	0	0	0	0	0	1	0
All other and unspecified malignant neoplasm	1,206	0	9	4	62	300	831	0
In situ neoplasms	490	1	4	1	16	107	361	0
Anemias	49	0	2	0	7	7	33	0
Diabetes	1,078	0	0	1	57	276	744	0
Nutritional deficiencies	53	0	0	0	2	2	49	0
Malnutrition	52	0	0	0	2	2	48	0
Other nutritional deficiencies	1	0	0	0	0	0	1	0
Obesity	84	0	0	0	24	44	16	0
Meningitis	14	4	1	0	1	5	3	0
Parkinson's disease	446	0	0	0	0	13	433	0
Alzheimer's disease	2,086	0	0	0	0	21	2,064	1
Major cardiovascular diseases	13,138	16	8	9	295	2,070	10,738	2
Diseases of heart	10,151	9	4	6	244	1,714	8,172	2
Acute rheumatic fever and chronic rheumatic heart disease	51	0	0	0	1	7	43	0
Hypertensive heart disease	698	0	0	1	36	190	471	0
Hypertensive heart and renal disease	35	0	0	0	1	2	32	0
Ischemic heart disease	7,372	0	0	0	102	1,268	6,000	2
Acute myocardial infarction	1,640	0	0	0	22	297	1,320	1
Other acute ischemic heart disease	31	0	0	0	1	6	24	0
Other forms of chronic ischemic heart disease	5,701	0	0	0	79	965	4,656	1
Atherosclerotic cardiovascular disease	1,825	0	0	0	28	514	1,282	1
All other forms of chronic ischemic heart disease	3,876	0	0	0	51	451	3,374	0
Other heart diseases	1,995	9	4	5	104	247	1,626	0
Acute and subacute endocarditis	22	0	0	0	4	11	7	0
Diseases of pericardium and acute myocarditis	12	0	1	1	4	2	4	0
Heart failure	583	0	0	0	8	21	554	0
All other forms of heart disease	1,378	9	3	4	88	213	1,061	0
Essential (primary) hypertension and hypertensive renal disease	475	0	0	0	9	63	403	0
Cerebrovascular diseases	2,010	7	2	2	35	228	1,736	0
Atherosclerosis	157	0	0	0	0	14	143	0

TABLE 2C-28 (continued)  
COMPARISON OF CAUSES OF MORTALITY BY AGE GROUP, ARIZONA, 2009

	All ages	Infants <1	Children 1-14	Adolescents 15-19	Young adults 20-44	Middle-aged adults 45-64	Elderly 65+	Unknown
Other diseases of circulatory system	345	0	2	1	7	51	284	0
Aortic aneurysm and dissection	198	0	0	1	2	36	159	0
Other disease of arteries, arterioles and capillaries	147	0	2	0	5	15	125	0
Other disorders of circulatory system	118	1	0	0	13	48	56	0
Influenza and pneumonia	1,007	10	9	7	48	147	786	0
Influenza	39	2	4	4	12	10	7	0
Pneumonia	968	8	5	3	36	137	779	0
Other acute lower respiratory infections	7	1	2	0	0	2	2	0
Acute bronchiolitis	6	1	2	0	0	1	2	0
Unspecified acute lower respiratory infection	1	0	0	0	0	1	0	0
Chronic lower respiratory diseases	2,808	1	4	2	15	326	2,460	0
Bronchitis, chronic and unspecified	5	0	0	0	1	1	3	0
Emphysema	207	0	0	0	3	24	180	0
Asthma	52	0	3	2	9	15	23	0
Other chronic lower respiratory diseases	2,544	1	1	0	2	286	2,254	0
Pneumoconioses and chemical effects	11	0	0	0	1	1	9	0
Pneumonitis due to solids and liquids	297	0	0	0	5	34	258	0
Other disease of respiratory system	538	8	3	1	23	90	413	0
Peptic ulcer	67	0	0	0	1	14	52	0
Diseases of appendix	15	0	0	0	0	5	10	0
Hernia	33	0	0	0	0	7	26	0
Chronic liver disease and cirrhosis	818	0	0	0	116	442	260	0
Alcoholic liver disease	510	0	0	0	100	314	96	0
Other chronic liver disease and cirrhosis	308	0	0	0	16	128	164	0
Cholelithiasis and other disorders of gallbladder	55	0	0	0	0	10	45	0
Nephritis, nephrotic syndrome and nephrosis	532	0	0	0	22	96	414	0
Acute and rapidly progressive nephritic and nephrotic syndrome	4	0	0	0	0	0	4	0
Chronic glomerulonephritis	60	0	0	0	4	5	51	0
Renal failure	468	0	0	0	18	91	359	0
Others disorders of kidney	0	0	0	0	0	0	0	0
Infections of kidney	15	0	0	0	0	1	14	0
Hyperplasia of prostate	8	0	0	0	0	0	8	0
Inflammatory diseases of female pelvic organs	2	0	0	0	0	0	2	0
Pregnancy, childbirth and the puerperium	7	0	0	0	7	0	0	0
Pregnancy with abortive outcome	0	0	0	0	0	0	0	0
Other complications of pregnancy, childbirth and the puerperium	7	0	0	0	7	0	0	0

**TABLE 2C-28 (continued)**  
**COMPARISON OF CAUSES OF MORTALITY BY AGE GROUP, ARIZONA, 2009**

	All ages	Infants <1	Children 1-14	Adolescents 15-19	Young adults 20-44	Middle-aged adults 45-64	Elderly 65+	Unknown
Perinatal conditions	263	258	5	0	0	0	0	0
Congenital anomalies, deformations and chromosomal abnormalities	211	122	19	2	24	18	25	1
Symptoms, signs, abnormal findings	802	75	12	2	69	101	531	12
Total accidents	2,887	18	91	101	881	813	980	3
Transport accidents	844	2	50	51	348	243	149	1
Motor vehicle accidents	771	2	48	50	328	213	129	1
Other land transport accidents	20	0	1	0	7	6	6	0
Water, air, space	53	0	1	1	13	24	14	0
Nontransport accidents	2,043	16	41	50	533	570	831	2
Falls	731	2	4	0	12	74	639	0
Accidental discharge of firearms	7	0	1	0	5	0	1	0
Accidental drowning and submersion	99	3	22	7	30	19	18	0
Accidental exposure to smoke, fire and flames	31	0	2	0	10	10	9	0
Accidental poisoning	887	1	1	39	423	388	35	0
Other and unspecified nontransport accidents	288	10	11	4	53	79	129	2
Intentional self-harm (suicide)	1,060	0	4	49	408	389	209	1
By discharge of firearms	596	0	0	21	194	212	169	0
By other means	464	0	4	28	214	177	40	1
Assault (homicide)	360	2	18	41	206	75	17	1
By discharge of firearms	224	0	8	27	142	39	7	1
By other means	136	2	10	14	64	36	10	0
Legal intervention	7	0	0	0	5	2	0	0
Events of undetermined intent	119	2	2	5	40	59	10	1
Discharge of firearms	9	0	0	2	3	4	0	0
Other and unspecified events of undetermined intent	110	2	2	3	37	55	10	1
Operations of war	3	0	0	0	0	1	2	0
Complications of medical and surgical care	50	0	1	1	4	15	29	0
Injury by firearms	843	0	9	50	349	257	177	1
Drug-induced deaths	1,093	3	0	38	485	509	57	1
Alcohol-induced deaths	795	0	0	4	168	478	145	0

Note: The causes of death in this table are classified by the Tenth Revision of the International Classification of Diseases (ICD-10).

TABLE 2C-29  
COMPARISON OF CAUSE-SPECIFIC MORTALITY RATES<sup>1</sup> BY AGE GROUP, ARIZONA, 2009

	All ages	Infants <1	Children 1-14	Adoles- cents 15- 19	Young adults 20-44	Middle- aged adults 45-64	Elderly 65+
Total, all causes	683.2	592.9	20.2	55.9	125.2	590.0	3744.2
Salmonella infections	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Shigellosis and amebiasis	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Certain other intestinal infections	3.3	5.4	0.1	0.0	0.1	1.5	21.6
Enterocolitis due to Clostridium difficile	2.4	0.0	0.0	0.0	0.0	1.1	16.9
Tuberculosis	0.1	0.0	0.0	0.0	0.0	0.3	0.5
Respiratory tuberculosis	0.1	0.0	0.0	0.0	0.0	0.3	0.5
Other tuberculosis	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Whooping cough	0.0	2.2	0.0	0.0	0.0	0.0	0.0
Scarlet fever and erysipelas	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meningococcal infection	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Septicemia	8.0	5.4	0.4	0.2	1.4	7.6	42.9
Syphilis	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Acute poliomyelitis	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Arthropod-borne encephalitis	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Measles	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Viral hepatitis	3.6	0.0	0.0	0.0	0.6	11.8	5.4
Human immunodeficiency virus (HIV) disease	1.6	0.0	0.0	0.0	1.6	4.1	0.6
Malaria	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other and unspecified infectious and parasitic diseases	2.7	5.4	0.5	0.4	0.9	3.1	11.0
Malignant neoplasms	153.8	0.0	2.5	3.3	13.9	167.9	843.0
Malignant neoplasm of lip, oral cavity and pharynx	1.9	0.0	0.1	0.0	0.0	2.8	9.3
Malignant neoplasm of esophagus	4.0	0.0	0.0	0.0	0.3	5.7	20.3
Malignant neoplasm of stomach	2.7	0.0	0.0	0.0	0.6	2.7	14.6
Malignant neoplasm of colon, rectum, and anus	13.4	0.0	0.0	0.0	1.4	14.9	73.3
Malignant neoplasm of liver and intrahepatic bile ducts	5.6	0.0	0.1	0.0	0.3	9.2	26.0
Malignant neoplasm of pancreas	9.4	0.0	0.0	0.0	0.0	10.3	54.2
Malignant neoplasm of larynx	1.0	0.0	0.0	0.0	0.0	1.2	5.6
Malignant neoplasm of trachea, bronchus and lung	40.8	0.0	0.0	0.2	0.8	39.1	242.3
Malignant melanoma of skin	3.4	0.0	0.0	0.0	0.8	4.8	15.7
Malignant neoplasm of breast	10.9	0.0	0.0	0.0	2.0	15.7	50.3
Malignant neoplasm of cervix uteri	1.0	0.0	0.0	0.0	0.8	2.1	1.5
Malignant neoplasm of corpus uteri and uterus, part unspecified	1.6	0.0	0.0	0.0	0.2	2.8	7.1
Malignant neoplasm of ovary	4.1	0.0	0.0	0.0	0.3	5.9	20.4
Malignant neoplasm of prostate	8.4	0.0	0.0	0.0	0.0	3.4	58.1
Malignant neoplasm of kidney and renal pelvis	3.6	0.0	0.0	0.0	0.3	4.7	18.8
Malignant neoplasm of bladder	4.0	0.0	0.0	0.0	0.0	2.4	26.4

**TABLE 2C-29 (continued)**  
**COMPARISON OF CAUSE-SPECIFIC MORTALITY RATES<sup>1</sup> BY AGE GROUP, ARIZONA, 2009**

	All ages	Infants <1	Children 1-14	Adoles- cents 15- 19	Young adults 20-44	Middle- aged adults 45-64	Elderly 65+
Malignant neoplasm of meninges, brain and other parts of CNS	4.2	0.0	0.6	0.7	1.6	6.0	15.7
Malignant neoplasm of lymphoid, hematopoietic and related tissue	15.4	0.0	1.0	1.5	1.6	14.5	86.4
Hodgkin's disease	0.2	0.0	0.0	0.2	0.1	0.2	1.0
Non-Hodgkin's lymphoma	5.9	0.0	0.1	0.0	0.4	6.1	33.2
Leukemia	6.4	0.0	1.0	1.3	1.1	4.8	35.9
Multiple myeloma and immunoproliferative neoplasms	2.9	0.0	0.0	0.0	0.0	3.4	16.1
Other and unspecified malignant neoplasms of lymphoid tissue	0.0	0.0	0.0	0.0	0.0	0.0	0.1
All other and unspecified malignant neoplasm	18.3	0.0	0.7	0.9	2.7	19.8	96.9
In situ neoplasms	7.4	1.1	0.3	0.2	0.7	7.0	42.1
Anemias	0.7	0.0	0.1	0.0	0.3	0.5	3.8
Diabetes	16.3	0.0	0.0	0.2	2.4	18.2	86.8
Nutritional deficiencies	0.8	0.0	0.0	0.0	0.1	0.1	5.7
Malnutrition	0.8	0.0	0.0	0.0	0.1	0.1	5.6
Other nutritional deficiencies	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Obesity	1.3	0.0	0.0	0.0	1.0	2.9	1.9
Meningitis	0.2	4.3	0.1	0.0	0.0	0.3	0.3
Parkinson's disease	6.8	0.0	0.0	0.0	0.0	0.9	50.5
Alzheimer's disease	31.6	0.0	0.0	0.0	0.0	1.4	240.8
Major cardiovascular diseases	199.2	17.3	0.6	2.0	12.7	136.4	1252.6
Diseases of heart	153.9	9.8	0.3	1.3	10.5	112.9	953.3
Acute rheumatic fever and chronic rheumatic heart disease	0.8	0.0	0.0	0.0	0.0	0.5	5.0
Hypertensive heart disease	10.6	0.0	0.0	0.2	1.5	12.5	54.9
Hypertensive heart and renal disease	0.5	0.0	0.0	0.0	0.0	0.1	3.7
Ischemic heart disease	111.8	0.0	0.0	0.0	4.4	83.5	699.9
Acute myocardial infarction	24.9	0.0	0.0	0.0	0.9	19.6	154.0
Other acute ischemic heart disease	0.5	0.0	0.0	0.0	0.0	0.4	2.8
Other forms of chronic ischemic heart disease	86.4	0.0	0.0	0.0	3.4	63.6	543.1
Atherosclerotic cardiovascular disease	27.7	0.0	0.0	0.0	1.2	33.9	149.5
All other forms of chronic ischemic heart disease	58.8	0.0	0.0	0.0	2.2	29.7	393.6
Other heart diseases	30.2	9.8	0.3	1.1	4.5	16.3	189.7
Acute and subacute endocarditis	0.3	0.0	0.0	0.0	0.2	0.7	0.8
Diseases of pericardium and acute myocarditis	0.2	0.0	0.1	0.2	0.2	0.1	0.5
Heart failure	8.8	0.0	0.0	0.0	0.3	1.4	64.6
All other forms of heart disease	20.9	9.8	0.2	0.9	3.8	14.0	123.8
Essential (primary) hypertension and hypertensive renal disease	7.2	0.0	0.0	0.0	0.4	4.2	47.0
Cerebrovascular diseases	30.5	7.6	0.1	0.4	1.5	15.0	202.5
Atherosclerosis	2.4	0.0	0.0	0.0	0.0	0.9	16.7

TABLE 2C-29 (continued)  
**COMPARISON OF CAUSE-SPECIFIC MORTALITY RATES<sup>1</sup> BY AGE GROUP, ARIZONA, 2009**

	All ages	Infants <1	Children 1-14	Adoles- cents 15- 19	Young adults 20-44	Middle- aged adults 45-64	Elderly 65+
Other diseases of circulatory system	5.2	0.0	0.1	0.2	0.3	3.4	33.1
Aortic aneurysm and dissection	3.0	0.0	0.0	0.2	0.1	2.4	18.5
Other disease of arteries, arterioles and capillaries	2.2	0.0	0.1	0.0	0.2	1.0	14.6
Other disorders of circulatory system	1.8	1.1	0.0	0.0	0.6	3.2	6.5
Influenza and pneumonia	15.3	10.8	0.7	1.5	2.1	9.7	91.7
Influenza	0.6	2.2	0.3	0.9	0.5	0.7	0.8
Pneumonia	14.7	8.7	0.4	0.7	1.5	9.0	90.9
Other acute lower respiratory infections	0.1	1.1	0.1	0.0	0.0	0.1	0.2
Acute bronchiolitis	0.1	1.1	0.1	0.0	0.0	0.1	0.2
Unspecified acute lower respiratory infection	0.0	0.0	0.0	0.0	0.0	0.1	0.0
Chronic lower respiratory diseases	42.6	1.1	0.3	0.4	0.6	21.5	287.0
Bronchitis, chronic and unspecified	0.1	0.0	0.0	0.0	0.0	0.1	0.3
Emphysema	3.1	0.0	0.0	0.0	0.1	1.6	21.0
Asthma	0.8	0.0	0.2	0.4	0.4	1.0	2.7
Other chronic lower respiratory diseases	38.6	1.1	0.1	0.0	0.1	18.8	262.9
Pneumoconioses and chemical effects	0.2	0.0	0.0	0.0	0.0	0.1	1.0
Pneumonitis due to solids and liquids	4.5	0.0	0.0	0.0	0.2	2.2	30.1
Other disease of respiratory system	8.2	8.7	0.2	0.2	1.0	5.9	48.2
Peptic ulcer	1.0	0.0	0.0	0.0	0.0	0.9	6.1
Diseases of appendix	0.2	0.0	0.0	0.0	0.0	0.3	1.2
Hernia	0.5	0.0	0.0	0.0	0.0	0.5	3.0
Chronic liver disease and cirrhosis	12.4	0.0	0.0	0.0	5.0	29.1	30.3
Alcoholic liver disease	7.7	0.0	0.0	0.0	4.3	20.7	11.2
Other chronic liver disease and cirrhosis	4.7	0.0	0.0	0.0	0.7	8.4	19.1
Cholelithiasis and other disorders of gallbladder	0.8	0.0	0.0	0.0	0.0	0.7	5.2
Nephritis, nephrotic syndrome and nephrosis	8.1	0.0	0.0	0.0	0.9	6.3	48.3
Acute and rapidly progressive nephritic and nephrotic syndrome	0.1	0.0	0.0	0.0	0.0	0.0	0.5
Chronic glomerulonephritis	0.9	0.0	0.0	0.0	0.2	0.3	5.9
Renal failure	7.1	0.0	0.0	0.0	0.8	6.0	41.9
Others disorders of kidney	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Infections of kidney	0.2	0.0	0.0	0.0	0.0	0.1	1.6
Hyperplasia of prostate	0.1	0.0	0.0	0.0	0.0	0.0	0.9
Inflammatory diseases of female pelvic organs	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Pregnancy, childbirth and the puerperium	0.1	0.0	0.0	0.0	0.3	0.0	0.0
Pregnancy with abortive outcome	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other complications of pregnancy, childbirth and the puerperium	0.1	0.0	0.0	0.0	0.3	0.0	0.0



**TABLE 2C-29 (continued)  
COMPARISON OF CAUSE-SPECIFIC MORTALITY RATES<sup>1</sup> BY AGE GROUP, ARIZONA, 2009**

	All ages	Infants <1	Children 1-14	Adoles- cents 15- 19	Young adults 20-44	Middle- aged adults 45-64	Elderly 65+
Perinatal conditions	4.0	279.6	0.4	0.0	0.0	0.0	0.0
Congenital anomalies, deformations and chromosomal abnormalities	3.2	132.2	1.4	0.4	1.0	1.2	2.9
Symptoms, signs, abnormal findings	12.2	81.3	0.9	0.4	3.0	6.7	61.9
Total accidents	43.8	19.5	6.8	22.1	37.8	53.6	114.3
Transport accidents	12.8	2.2	3.7	11.2	14.9	16.0	17.4
Motor vehicle accidents	11.7	2.2	3.6	11.0	14.1	14.0	15.0
Other land transport accidents	0.3	0.0	0.1	0.0	0.3	0.4	0.7
Water, air, space	0.8	0.0	0.1	0.2	0.6	1.6	1.6
Nontransport accidents	31.0	17.3	3.1	11.0	22.9	37.6	96.9
Falls	11.1	2.2	0.3	0.0	0.5	4.9	74.5
Accidental discharge of firearms	0.1	0.0	0.1	0.0	0.2	0.0	0.1
Accidental drowning and submersion	1.5	3.3	1.6	1.5	1.3	1.3	2.1
Accidental exposure to smoke, fire and flames	0.5	0.0	0.1	0.0	0.4	0.7	1.0
Accidental poisoning	13.4	1.1	0.1	8.6	18.2	25.6	4.1
Other and unspecified nontransport accidents	4.4	10.8	0.8	0.9	2.3	5.2	15.0
Intentional self-harm (suicide)	16.1	0.0	0.3	10.7	17.5	25.6	24.4
By discharge of firearms	9.0	0.0	0.0	4.6	8.3	14.0	19.7
By other means	7.0	0.0	0.3	6.1	9.2	11.7	4.7
Assault (homicide)	5.5	2.2	1.3	9.0	8.8	4.9	2.0
By discharge of firearms	3.4	0.0	0.6	5.9	6.1	2.6	0.8
By other means	2.1	2.2	0.7	3.1	2.7	2.4	1.2
Legal intervention	0.1	0.0	0.0	0.0	0.2	0.1	0.0
Events of undetermined intent	1.8	2.2	0.1	1.1	1.7	3.9	1.2
Discharge of firearms	0.1	0.0	0.0	0.4	0.1	0.3	0.0
Other and unspecified events of undetermined intent	1.7	2.2	0.1	0.7	1.6	3.6	1.2
Operations of war	0.0	0.0	0.0	0.0	0.0	0.1	0.2
Complications of medical and surgical care	0.8	0.0	0.1	0.2	0.2	1.0	3.4
Injury by firearms <sup>2</sup>	12.8	0.0	0.7	11.0	15.0	16.9	20.6
Drug-induced deaths <sup>2</sup>	16.6	3.3	0.0	8.3	20.8	33.5	6.6
Alcohol-induced deaths <sup>2</sup>	12.1	0.0	0.0	0.9	7.2	31.5	16.9

<sup>1</sup>The rates for infants <1 year of age are per 100,000 births. All other rates are per 100,000 population in specified group. The rates for malignant neoplasm of cervix uteri, corpus uteri, ovary, inflammatory disease of female pelvic organs and complications of pregnancy are per 100,000 females. The rates for prostate cancer and hyperplasia of prostate are per 100,000 males.

<sup>2</sup>Included in selected categories above.





## 2D.

### PATTERNS OF PREMATURE MORTALITY

Compared with the White non-Hispanics, the race/ethnic minority groups in Arizona have had greater percentages of people younger than 25 years (46.7 vs. 28.3 percent). In contrast, people aged 65 years and older accounted for 17.9 percent of White non-Hispanics, but only 5.6 percent of all ethnic minority groups combined (percentages based on race-and-age-specific population denominators in **Table 10C-1**).

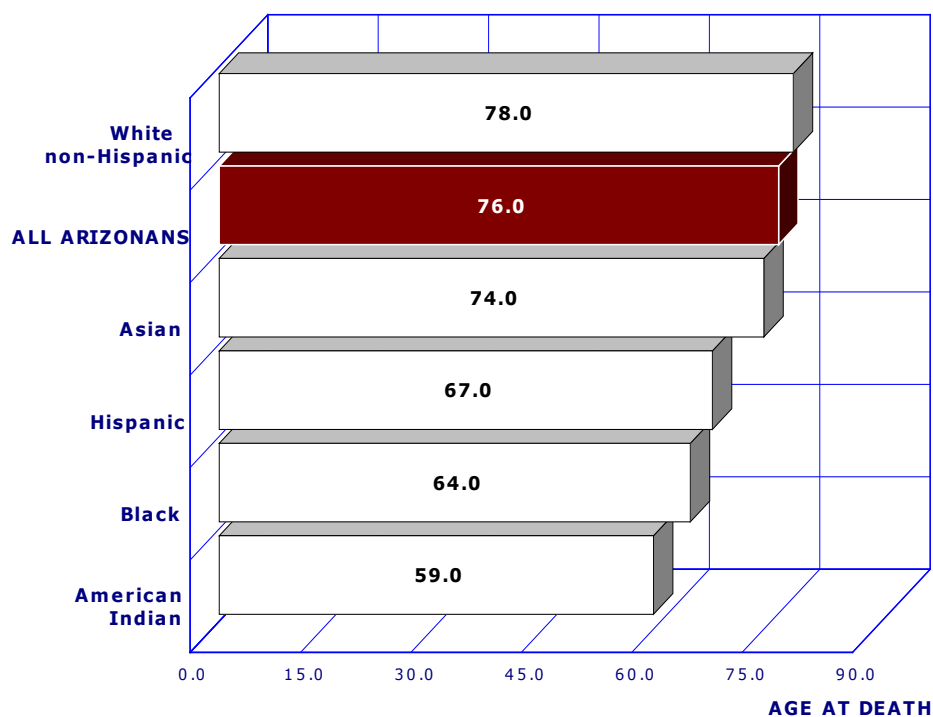
Similar to the differences in the age composition is the contrasting pattern of proportional mortality by age group. In 2009, the elderly (65 years and older) comprised 76.3 percent of the total mortality among White non-Hispanics, compared to 42.5 percent among American Indians, 49.1 percent among Blacks, 54.4 percent among Hispanics, and 63.8 percent among Asians. One out of sixty-three White non-Hispanics who died in 2009 was less than 25 years old (1.5 percent). In contrast, persons younger than 25 years of age accounted for one out of every ten (9.8 percent) deaths among Arizona ethnic minorities.

The smaller the proportion of elderly as well as the proportion of deaths at older age, the lower is the average age at death. In 2009 the average age at death among the residents of Sun City (a retirement community where the median age of residents is 75 years) was 81.9 years. In contrast, the average age in Gilbert (median age 30.1 years) was 66.8 years. Compared to residents of Sun City, on average residents of Gilbert were 15.1 years younger at time of death. It is not so much that the risk of premature death is higher in Gilbert than it is in Sun City. Rather, it is the lower proportional contribution of elderly deaths to total mortality in Gilbert that depresses the average age at death for this community.

Beginning with the 2005 edition of the report, information about the arithmetic mean age at death is supplemented with the information about the median age, the age in the middle and conceptually similar to life expectancy at birth (see **Table 2D-1**). The median age is higher than the arithmetic mean age in negatively skewed distributions.

## 2D. PATTERNS OF PREMATURE MORTALITY

**Figure 2D-1**  
Median Age at Death by Race/Ethnicity, Arizona, 2009

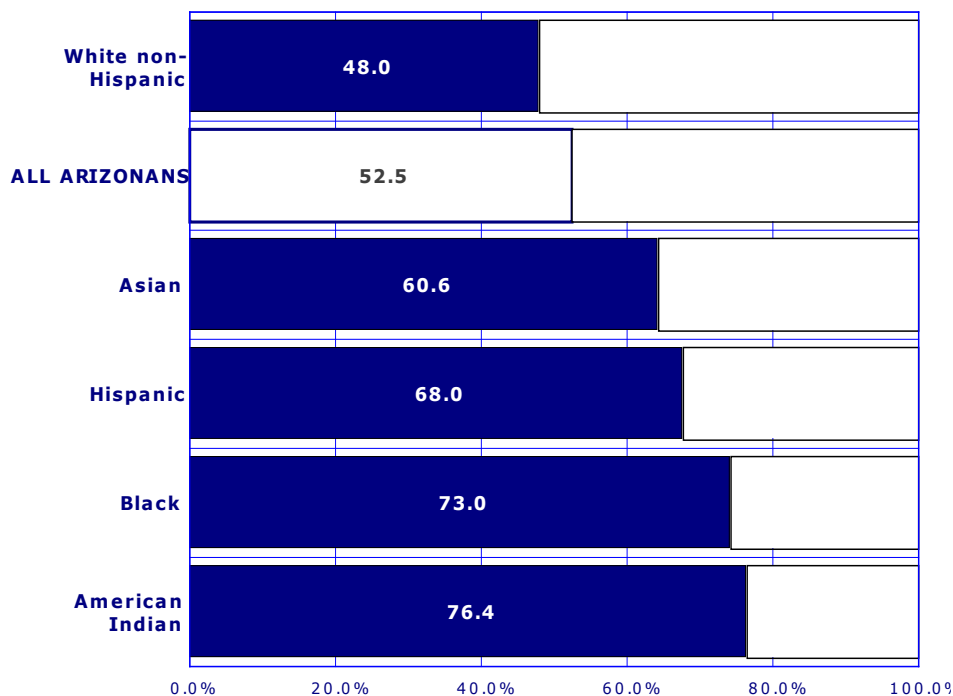


The median age at death decreased from 77 years in 2008 to 76 years in 2009 (**Table 2D-1**). Compared to 2008, there were more deaths in 2009 from causes such as accidental drug overdoses or suicide, i.e., the causes with the lowest median age at death (45 and 48 years, respectively; **Table 2 B-1, Table 2 D-3, Figure 2D-3**).

One out of two Arizonans who died in 2009 was older than 76 years of age. Among Arizona females, fifty percent were older than 80 years when they died in 2009 (no change since 2003). Among males, the median age at death was 73 years in 2009. **Table 2D-1** shows both the average and the median age at death by race/ethnicity and gender in 1999-2009.

In 2009, compared to White non-Hispanics, on average Asians were 2 years younger at time of death, Hispanics were 4 years younger, Blacks were 12 years younger, and American Indian residents of Arizona were 17 years younger.

**Figure 2D-2**  
Percent of Deaths before Expected Years of Life Reached\* by Race/Ethnicity, Arizona, 2009



\*Expected years of life at birth for all U.S. residents (77.7 years in 2006).

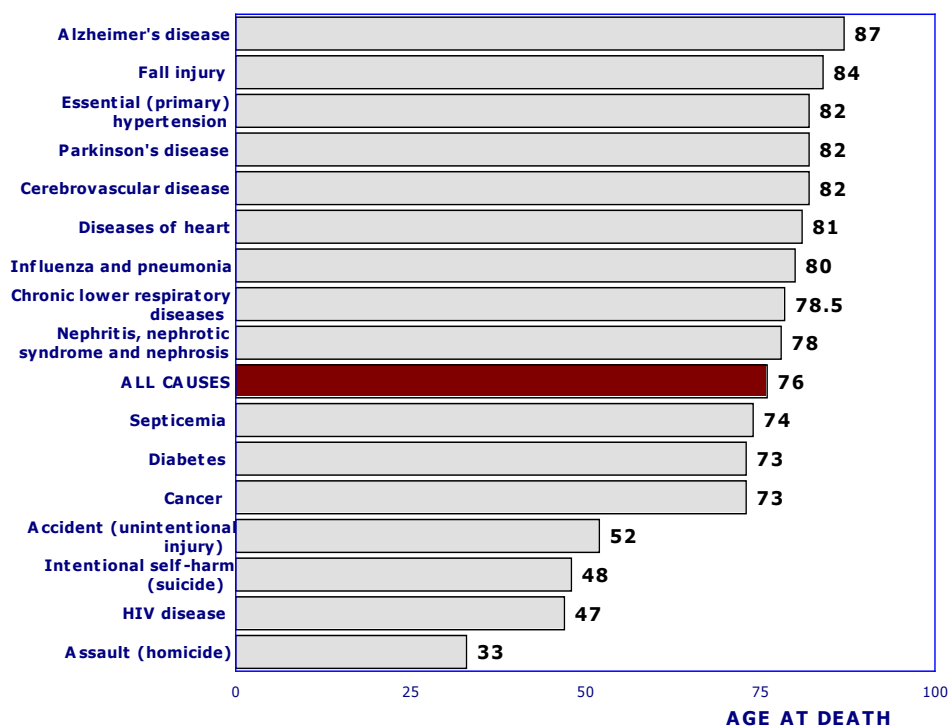
The percent of deaths before expected years of life reached (a premature death ratio) remained virtually unchanged for all Arizonans at 52.4 in 2008 and 52.5 in 2009 (**Figure 2D-2**).

As expected, based on the findings for average and median age at death, White non-Hispanics were the only group with less than 50 percent of all deaths (48.0 percent) occurring before the expected years of life were reached (**Figure 2D-2**). In contrast, at least 60.6 percent among race/ethnic minority groups occurred prematurely.

Among American Indians, eight out of ten deaths (76.4 percent) were premature (**Table 2D-2**).

## 2D. PATTERNS OF PREMATURE MORTALITY

**Figure 2D-3**  
Median Age at Death for Selected Leading Causes of Death, Arizona, 2009

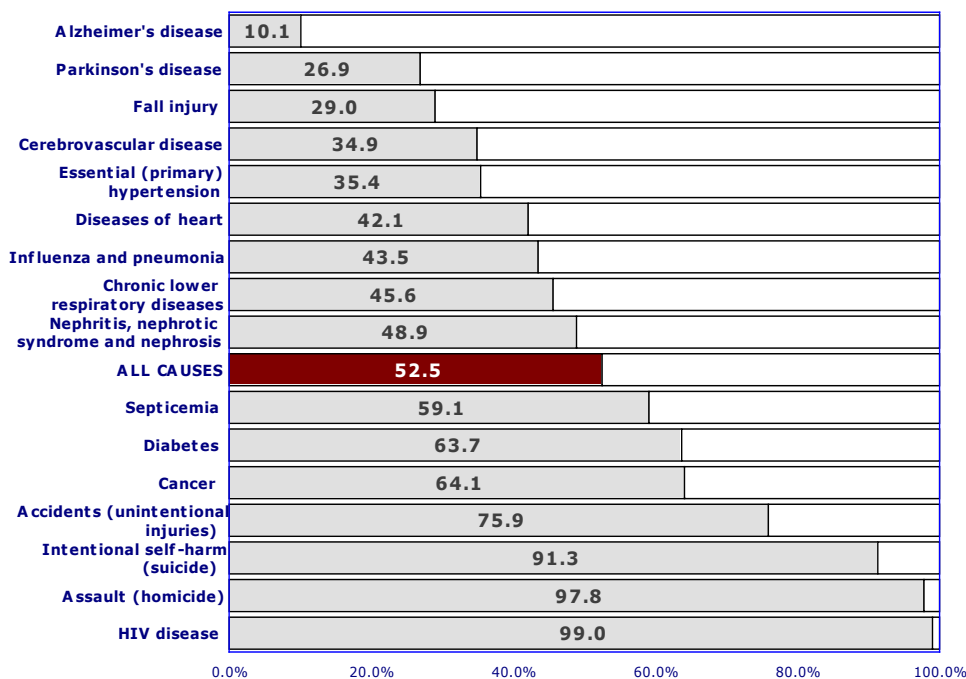


In 2009, *Alzheimer's disease* again ranked highest with median age at death of 87 years (Figure 2D-3), exceeding by 11 years the median age at death for all causes (Figure 2D-3, Table 2D-3).

Among the leading causes of death, *homicide* had the lowest median age at death of 33 years.

In 2009, *cancer* replaced *diseases of the heart* as the leading cause of death (based on the age-adjusted mortality rates). This epidemiologic transition in mortality risks is likely to have long lasting implications for the life expectancy of Arizonans, because the median age at death from *cancer* (73 years) is substantially lower than the median age at death from *diseases of the heart* (81 years).

**Figure 2D-4**  
Percent of Deaths before Expected Years of Life Reached\* for Selected Leading Causes of Death, Arizona, 2009



Only 10.1 percent of deaths from *Alzheimer's disease* occurred before the age of 77.7 years, i.e., before the expected years of life were reached. In contrast, almost all deaths from *HIV disease* were premature at 99.0 percent (Figure 2D-4, Table 2D-4) and the median age at death from *HIV disease* has changed little from previous year at 47 years (Figure 2D-3, Table 2D-3).

A minority of deaths from *diseases of heart* were premature (42.1 percent). In contrast 64.1 percent of deaths from *cancer* occurred before the expected years of life were reached.

\* Expected years of life at birth for all U.S. residents (77.7 years in 2006).

**TABLE 2D-1  
AVERAGE AND MEDIUM AGE AT DEATH FROM ALL CAUSES BY GENDER AND RACE/ETHNICITY, ARIZONA, 1999-2009**

Year	Gender	All ethnic groups		Race/ethnicity											
		Mean	Median	White non-Hispanic		Hispanic or Latino		Black or African American		American Indian or Alaska Native		Asian or Pacific Islander			
				Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median		
1999	Total	71.7	76.0	74.1	77.0	59.2	65.0	60.5	64.5	55.7	58.0	63.9	69.0		
	Male	68.8	73.0	71.5	75.0	56.2	60.0	57.8	60.0	51.8	52.0	62.3	69.0		
	Female	74.9	79.0	77.0	80.0	63.3	71.0	63.9	70.0	60.6	64.0	65.5	70.0		
2000	Total	71.6	76.0	73.9	77.0	59.2	66.0	60.8	66.0	55.4	57.5	62.3	68.0		
	Male	68.7	73.0	70.9	75.0	55.8	60.0	56.8	61.0	51.6	52.0	61.6	67.0		
	Female	74.9	79.0	77.0	80.0	63.7	71.0	65.8	71.0	60.4	65.0	63.0	68.0		
2001	Total	71.2	76.0	74.2	78.0	58.4	65.0	59.1	63.0	54.3	56.0	63.9	68.5		
	Male	67.9	73.0	71.2	75.0	54.8	59.0	55.6	58.0	50.1	49.0	61.6	68.0		
	Female	75.0	79.0	77.3	80.0	63.4	71.0	63.2	69.0	60.0	65.0	66.0	69.0		
2002	Total	71.5	76.0	74.3	78.0	58.6	65.0	60.9	65.0	55.8	57.0	67.4	74.0		
	Male	68.1	73.0	71.3	75.0	54.9	59.0	56.9	60.0	52.5	52.0	64.2	72.0		
	Female	75.3	79.0	77.5	80.0	63.9	72.0	66.4	72.0	60.4	64.0	71.1	75.0		
2003	Total	72.2	76.0	74.4	78.0	60.4	66.0	62.4	66.0	54.7	56.0	64.3	70.0		
	Male	69.6	73.0	71.6	75.0	57.5	60.0	60.0	60.0	50.3	51.0	63.5	70.0		
	Female	75.1	80.0	77.4	81.0	64.4	72.0	65.3	71.0	60.4	65.0	65.0	71.0		
2004	Total	71.0	76.0	73.8	78.0	58.5	65.0	60.4	64.0	55.9	58.0	65.3	69.0		
	Male	67.7	73.0	70.9	75.0	54.6	60.0	55.4	59.0	52.4	53.0	63.5	68.0		
	Female	74.6	80.0	76.9	81.0	63.8	72.0	66.5	70.0	60.4	64.0	67.0	70.0		
2005	Total	71.5	77.0	74.4	79.0	59.0	65.0	60.7	64.0	56.8	59.0	65.5	72.0		
	Male	68.1	73.0	71.4	76.0	55.5	61.0	55.7	58.0	53.4	54.0	64.3	71.0		
	Female	75.2	80.0	77.6	81.0	63.8	71.0	66.3	71.0	61.2	66.0	66.8	73.0		
2006	Total	71.2	76.0	74.0	78.0	58.7	65.0	60.2	63.0	55.4	57.0	68.7	73.0		
	Male	67.9	73.0	71.1	75.0	55.1	59.0	57.3	59.0	51.5	52.0	64.5	71.5		
	Female	74.8	80.0	76.9	81.0	64.0	73.0	64.4	70.0	60.9	65.0	72.7	73.0		
2007	Total	71.2	76.0	74.2	78.0	58.4	64.0	60.1	62.0	57.2	59.0	64.9	70.0		
	Male	67.8	73.0	71.3	75.0	54.6	59.0	54.8	57.0	53.7	54.0	60.2	64.0		
	Female	74.9	80.0	77.4	81.0	63.4	71.0	66.5	70.0	61.9	67.0	69.0	73.0		
2008	Total	71.5	77.0	74.3	78.0	61.2	68.0	58.5	62.0	57.3	59.0	63.5	70.0		
	Male	68.4	73.0	71.6	76.0	57.1	62.0	55.3	59.0	53.7	54.0	61.5	67.5		
	Female	75.0	80.0	77.2	81.0	66.4	74.0	62.5	67.0	62.0	67.0	65.6	73.0		
2009	Total	71.9	76.0	74.3	78.0	61.8	67.0	60.0	64.0	57.6	59.0	66.7	74.0		
	Male	69.3	73.0	71.6	75.0	58.6	63.0	56.9	60.0	54.2	54.0	63.6	69.0		
	Female	74.8	80.0	77.2	81.0	65.7	72.0	63.4	68.0	61.8	66.0	70.1	77.0		

Average age at death = the arithmetic mean of the ages of Arizonans who died in a given year.

Median age at death = the middle of the age distribution; half died at age greater than the median and half at age below the median. The mean is lower than the median in negatively skewed distributions.

**TABLE 2D-2  
PERCENT OF DEATHS BEFORE EXPECTED YEARS OF LIFE REACHED<sup>1</sup>  
BY GENDER AND RACE/ETHNICITY, ARIZONA, 1999-2009**

<b>Year/gender</b>	<b>All race/ethnic groups<sup>2</sup></b>	<b>White non-Hispanic</b>	<b>Hispanic or Latino</b>	<b>Black or African American</b>	<b>American Indian or Alaska Native</b>	<b>Asian or Pacific Islander</b>
<b>1999 Total</b>	51.8	47.4	71.7	70.7	76.9	67.0
<b>Male</b>	59.3	54.8	78.0	76.6	83.4	63.9
<b>Female</b>	43.3	39.3	62.6	63.1	69.0	70.1
<b>2000 Total</b>	51.6	47.3	70.5	69.3	78.7	69.6
<b>Male</b>	59.6	55.4	76.7	75.7	83.1	70.6
<b>Female</b>	42.9	38.7	62.2	61.2	72.9	68.6
<b>2001 Total</b>	51.0	46.2	71.2	73.0	79.1	69.9
<b>Male</b>	59.2	54.3	78.1	79.2	85.3	71.2
<b>Female</b>	42.0	37.6	61.7	65.7	70.8	68.6
<b>2002 Total</b>	50.2	45.6	70.3	71.7	78.3	59.8
<b>Male</b>	58.4	53.6	77.0	79.2	82.8	60.6
<b>Female</b>	41.1	37.0	60.7	61.1	72.2	59.0
<b>2003 Total</b>	50.8	46.1	70.0	70.6	78.4	65.7
<b>Male</b>	59.0	54.2	76.8	79.1	84.4	66.7
<b>Female</b>	41.7	37.4	61.0	60.4	70.5	65.0
<b>2004 Total</b>	53.0	48.3	71.5	74.3	80.3	64.3
<b>Male</b>	61.0	56.4	78.3	81.9	85.9	69.0
<b>Female</b>	44.1	39.9	62.4	65.2	73.3	60.0
<b>2005 Total</b>	52.7	47.9	71.3	75.1	78.4	65.1
<b>Male</b>	60.8	56.2	76.9	83.3	83.3	64.5
<b>Female</b>	43.7	39.2	63.3	65.8	72.2	65.7
<b>2006 Total</b>	52.7	48.2	70.8	73.9	77.4	61.0
<b>Male</b>	61.0	56.2	78.4	80.9	82.9	61.0
<b>Female</b>	43.7	40.1	60.0	63.7	69.8	61.0
<b>2007 Total</b>	52.6	47.7	71.6	73.3	75.8	64.9
<b>Male</b>	61.5	56.4	79.2	82.6	82.0	73.8
<b>Female</b>	42.9	38.5	61.3	62.1	67.5	57.4
<b>2008 Total</b>	52.4	48.0	67.6	74.7	76.5	66.4
<b>Male</b>	60.0	55.4	75.4	81.6	82.6	68.7
<b>Female</b>	43.9	40.0	57.6	66.4	68.6	63.9
<b>2009 Total</b>	52.5	48.0	68.0	73.0	76.4	60.6
<b>Male</b>	59.9	55.4	74.4	79.3	81.1	66.8
<b>Female</b>	44.5	40.1	60.1	66.1	70.6	53.9

<sup>1</sup>Based on expected years of life at birth for all U.S. residents (77.8 years in 2005).

<sup>2</sup>May include records with other/unknown ethnic groups.

**TABLE 2D-3  
MEDIAN AGE AT DEATH FOR LEADING CAUSES OF MORTALITY BY GENDER, RACE/ETHNICITY AND  
URBAN/RURAL AREAS\*, ARIZONA, 2009**

	ARIZONA				Area/gender						Race/ethnicity					
	Total	Male	Female	Total	Urban	Urban Male	Urban Female	Total Rural	Rural Male	Rural Female	White Non-Hispanic	Hispanic or Latino	Black or American	American Indian or Alaska Native	Asian or Pacific Islander	
																76.0
<b>Total, all causes</b>	76.0	73.0	80.0	77.0	73.0	80.0	75.0	72.0	77.0	78.0	67.0	64.0	59.0	74.0		
<b>Major cardiovascular diseases</b>	81.0	77.0	84.0	81.0	78.0	84.0	79.0	76.0	82.0	82.0	75.0	70.0	72.0	77.0		
<b>Diseases of heart</b>	81.0	77.0	84.0	81.0	77.0	84.0	78.0	75.0	82.0	82.0	75.0	68.0	70.0	76.5		
<b>Coronary heart disease</b>	80.0	76.0	84.0	81.0	77.0	84.0	76.0	73.0	81.0	81.0	75.0	68.0	70.0	76.0		
<b>Malignant neoplasms</b>	73.0	73.0	73.0	73.0	73.0	73.0	72.0	72.0	72.0	74.0	68.0	68.0	66.0	67.0		
<b>Lung cancer</b>	73.0	73.0	74.0	73.0	73.0	74.0	72.0	72.0	72.0	73.0	73.0	68.0	65.0	74.0		
<b>Prostate cancer</b>	80.0	80.0	NA	80.0	80.0	NA	79.0	79.0	NA	80.0	78.5	78.0	75.5	67.0		
<b>Breast cancer</b>	69.0	78.5	69.0	69.0	75.0	69.0	69.0	80.0	68.5	71.0	62.0	58.5	61.0	51.0		
<b>Colorectal cancer</b>	73.0	73.0	75.0	74.0	73.0	75.0	73.0	71.0	73.5	74.0	72.0	70.0	58.0	70.0		
<b>Malignant melanoma of skin</b>	69.5	71.5	65.0	71.0	72.0	65.0	66.0	67.0	64.5	69.0	67.0	78.0	NA	NA		
<b>Cerebrovascular diseases</b>	82.0	80.0	84.0	82.0	80.0	83.0	82.0	80.0	84.0	83.0	75.0	75.0	78.5	76.5		
<b>Chronic lower respiratory diseases</b>	78.5	78.0	79.0	79.0	78.0	79.5	78.0	78.0	78.0	79.0	77.0	71.0	81.0	78.0		
<b>Accidents (unintentional injuries)</b>	52.0	48.0	59.0	52.0	48.0	62.0	49.0	46.0	54.0	57.0	40.0	43.0	37.5	55.0		
<b>Motor vehicle accidents</b>	40.0	40.0	42.0	40.0	40.0	42.0	40.5	39.0	43.0	49.0	30.0	40.0	31.0	34.0		
<b>Falls</b>	84.0	82.0	86.0	85.0	83.0	86.0	82.0	79.0	85.0	85.0	81.0	89.0	77.0	80.0		
<b>Accidental poisoning</b>	44.0	41.0	47.0	44.0	42.0	47.0	42.0	39.0	47.0	44.0	40.0	43.5	39.0	79.0		
<b>Accidental drowning</b>	32.0	29.5	40.0	30.0	29.5	37.0	36.5	28.0	72.5	44.0	22.5	44.0	32.0	4.0		
<b>Influenza and pneumonia</b>	80.0	79.0	81.0	80.0	78.0	82.0	80.0	79.0	81.0	82.0	72.0	64.0	68.0	77.0		
<b>Alzheimer's disease</b>	87.0	86.0	88.0	87.0	86.0	88.0	86.0	85.0	87.0	87.0	86.0	85.5	84.0	84.0		
<b>Diabetes</b>	73.0	71.0	74.0	73.0	71.0	74.0	73.0	72.0	76.0	75.0	69.5	65.5	69.0	74.0		
<b>Intentional self-harm (suicide)</b>	48.0	48.0	47.0	47.0	47.0	46.0	50.0	50.0	50.0	52.0	34.0	34.0	28.5	43.0		
<b>Chronic liver disease and cirrhosis</b>	58.0	57.0	60.0	57.0	57.0	61.0	58.0	58.0	59.0	60.0	60.0	54.0	48.0	79.0		
<b>Nephritis, nephrotic syndrome and nephrosis</b>	78.0	77.0	79.0	78.0	77.0	79.0	78.0	77.0	80.0	80.0	75.0	65.0	72.0	97.0		
<b>Septicemia</b>	74.0	72.0	76.0	74.5	72.0	77.0	73.0	73.0	72.0	77.0	66.0	71.0	68.0	81.5		
<b>Assault (homicide)</b>	33.0	31.0	36.0	32.0	31.0	35.0	38.0	38.0	38.0	40.0	29.5	27.0	30.0	67.0		
<b>Parkinson's disease</b>	82.0	82.0	83.0	82.0	82.0	83.0	81.0	81.0	80.0	82.0	81.0	83.0	84.0	81.0		
<b>Essential (primary) hypertension and hypertensive renal disease</b>	82.0	80.0	84.0	82.0	80.0	84.0	81.0	79.5	82.0	82.0	79.0	80.0	66.0	84.0		
<b>Human immunodeficiency virus (HIV) disease</b>	47.0	47.0	48.0	48.0	48.0	47.0	46.5	44.5	68.5	50.0	46.0	47.5	46.5	NA		
<b>INJURY BY FIREARMS</b>	45.0	46.0	44.0	43.0	44.5	40.5	53.0	55.0	50.0	53.0	31.5	28.0	29.0	56.0		
<b>DRUG-INDUCED DEATHS</b>	45.0	42.5	48.0	45.0	43.0	48.0	44.0	40.0	48.5	46.5	42.0	42.0	37.5	21.0		
<b>ALCOHOL-INDUCED DEATHS</b>	54.0	55.0	52.0	54.0	55.0	52.0	53.0	54.0	50.5	56.0	54.0	52.0	47.0	66.0		

\*Urban = Maricopa, Pima, Pinal and Yuma counties.

Median age at death = the middle of the age distribution: half died at age greater than the median and half at age below the median.



**TABLE 2D-4  
PERCENT DEATHS BEFORE EXPECTED\* YEARS OF LIFE REACHED FOR THE LEADING CAUSES OF MORTALITY BY  
GENDER, RACE/ETHNICITY AND URBAN/RURAL AREAS\*\*, ARIZONA, 2009**

	ARIZONA				Area/gender						Race/ethnicity					
	Total	Male	Female	Total	Urban	Urban Male	Urban Female	Total Rural	Rural Male	Rural Female	White Non-Hispanic	Hispanic or Latino	Black or African American	American Indian or Alaska Native	Asian or Pacific Islander	
																52.5
<b>Total, all causes</b>	52.5	59.9	44.5	51.2	58.9	43.1	57.4	63.3	50.2	48.0	68.0	73.0	76.4	60.6		
<b>Major cardiovascular diseases</b>	40.7	50.5	29.9	39.1	49.0	28.5	46.8	55.5	35.5	37.0	55.1	65.0	63.4	51.5		
<b>Diseases of heart</b>	42.1	51.9	30.4	40.1	50.3	28.4	49.2	57.0	38.3	38.6	55.5	70.2	65.9	54.5		
<b>Coronary heart disease</b>	43.7	53.5	30.9	41.2	51.4	28.5	53.2	61.0	41.2	40.5	55.0	70.1	66.7	57.3		
<b>Malignant neoplasms</b>	64.1	64.4	63.8	63.0	63.4	62.5	68.6	68.2	69.1	61.8	73.8	77.1	77.6	76.5		
<b>Lung cancer</b>	66.2	67.6	64.6	64.7	66.4	62.5	71.9	72.1	71.7	66.1	63.0	71.6	76.2	74.1		
<b>Prostate cancer</b>	40.8	40.7	NA	39.7	39.7	NA	45.1	44.6	NA	39.3	45.0	47.6	58.3	100.0		
<b>Breast cancer</b>	70.0	50.0	70.2	69.2	60.0	69.2	74.0	33.3	75.0	66.3	84.1	85.7	93.3	100.0		
<b>Colorectal cancer</b>	61.2	64.8	57.3	59.0	63.3	54.6	68.3	69.0	67.4	58.3	70.0	80.0	85.0	64.3		
<b>Malignant melanoma of skin</b>	63.3	63.1	63.6	63.1	62.2	65.4	63.2	66.7	57.1	63.3	70.0	0.0	0.0	0.0		
<b>Cerebrovascular diseases</b>	34.9	43.1	29.0	35.2	42.5	30.0	33.5	45.6	23.9	29.7	55.2	60.0	50.0	52.9		
<b>Chronic lower respiratory diseases</b>	45.6	49.0	42.5	44.7	48.7	41.1	48.5	49.7	47.4	45.0	52.6	59.1	39.4	40.0		
<b>Accidents (unintentional injuries)</b>	75.9	82.9	63.8	73.6	81.4	61.3	83.5	88.1	74.1	69.9	88.7	94.1	92.0	69.0		
<b>Motor vehicle accidents</b>	92.3	93.3	89.9	90.9	91.7	89.0	95.9	97.5	91.8	89.1	96.5	96.7	97.6	90.9		
<b>Falls</b>	29.0	36.2	22.7	27.3	34.4	21.4	38.1	43.5	31.4	26.2	43.5	20.0	51.7	44.4		
<b>Accidental poisoning</b>	99.0	99.5	98.1	98.9	99.3	98.0	99.4	100.0	98.4	98.8	100.0	100.0	100.0	0.0		
<b>Accidental drowning</b>	92.9	95.0	84.2	95.1	95.5	93.3	83.3	92.9	50.0	90.4	96.2	100.0	91.7	100.0		
<b>Influenza and pneumonia</b>	43.5	46.3	41.0	42.9	46.6	39.6	45.1	44.1	46.0	37.4	59.8	55.6	64.0	53.3		
<b>Alzheimer's disease</b>	10.1	13.3	8.4	9.9	12.3	8.7	11.4	19.4	6.5	9.7	13.8	10.5	22.2	0.0		
<b>Diabetes</b>	63.7	67.5	59.5	63.9	67.3	59.9	63.1	67.5	58.2	58.3	71.3	74.1	77.6	56.3		
<b>Intentional self-harm (suicide)</b>	91.3	89.6	96.3	91.9	90.2	97.0	90.0	88.5	94.4	89.5	97.9	96.3	100.0	93.3		
<b>Chronic liver disease and cirrhosis</b>	88.5	91.2	84.3	87.8	90.2	83.8	90.0	93.6	85.4	86.8	86.7	100.0	96.6	33.3		
<b>Nephritis, nephrotic syndrome and nephrosis</b>	48.9	53.0	44.3	49.1	53.2	44.4	47.7	51.9	43.1	42.1	55.1	79.3	71.8	0.0		
<b>Septicemia</b>	59.1	63.2	55.3	56.9	62.8	51.6	65.5	63.8	67.3	53.2	70.8	75.0	74.6	37.5		
<b>Assault (homicide)</b>	97.8	97.4	98.9	98.3	98.2	98.7	96.2	94.4	100.0	96.8	97.9	100.0	100.0	100.0		
<b>Parkinson's disease</b>	26.9	28.4	24.4	26.1	27.9	23.2	31.1	30.8	31.8	27.2	29.4	0.0	18.2	50.0		
<b>Essential (primary) hypertension and hypertensive renal disease</b>	35.4	42.2	28.1	34.0	41.2	26.8	41.6	45.5	36.4	31.1	47.6	39.4	80.0	12.5		
<b>Human immunodeficiency virus (HIV) disease</b>	99.0	100.0	90.9	100.0	100.0	100.0	94.4	100.0	50.0	100.0	100.0	100.0	90.0	0.0		
<b>INJURY BY FIREARMS</b>	90.2	88.9	95.6	91.3	90.5	94.9	86.4	83.2	97.4	86.9	98.3	97.8	100.0	80.0		
<b>DRUG-INDUCED DEATHS</b>	98.4	99.1	97.5	98.5	99.1	97.7	98.5	100.0	96.6	98.2	100.0	97.1	100.0	100.0		
<b>ALCOHOL-INDUCED DEATHS</b>	96.4	95.9	97.4	96.3	95.6	98.2	96.3	96.7	95.3	95.4	96.6	100.0	98.9	66.7		

\* Expected years of life at birth for all U.S. residents.

\*\*Urban = Maricopa, Pima, Pinal and Yuma counties.

Note: The causes of death for 2008 are classified by the Tenth Revision of the International Classification of Diseases (ICD-10).