

# **CHAPTER 2**

## **TRENDS AND PATTERNS IN MORTALITY, ARIZONA, 2009-2019**

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





## 2A.

### TOTAL MORTALITY

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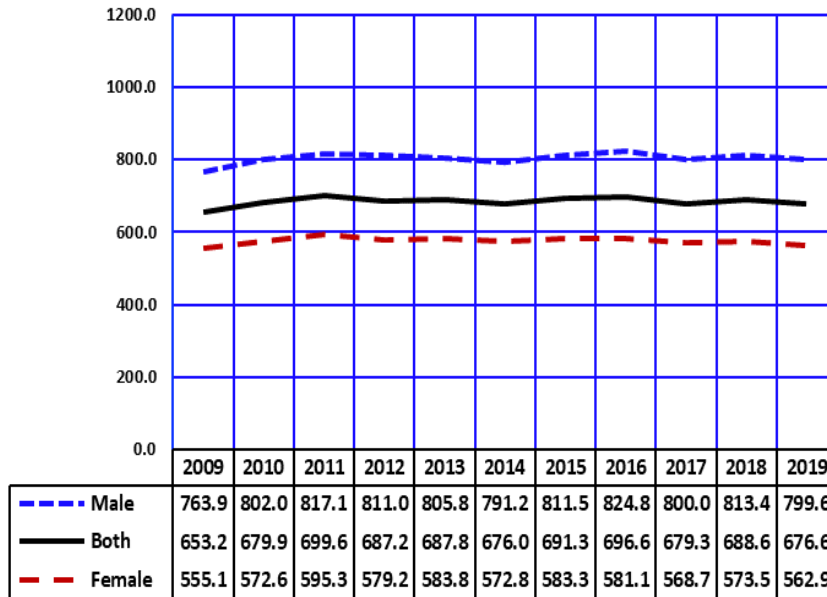
The total number of deaths from all causes among Arizona residents increased by 1.6 percent from 59,206 in 2018 to 60,161 in 2019 (**Table 2A-1**). The age-adjusted mortality rate for all causes of death declined from 688.6/100,000 in 2018 to 676.6 /100,000 in 2019. When considering race/ethnicity, we observe a decrease in the age adjusted mortality of all racial/ethnic groups except the American Indians who experienced an increase of 1.4 percent in their age adjusted mortality rate.

Between 2018 and 2019, the increase in mortality did not affect all leading causes of death. A reduction in the number of deaths was recorded for Influenza and pneumonia (14.9 percent), septicemia (11.3 percent), chronic lower respiratory diseases (3.7 percent), homicide (1.7 percent) and suicide (1.5 percent).

There were some disparities by gender and race/ethnicity for most selected causes of death. Between 2018 and 2019, not all subgroups (based on gender and race/ethnicity) witnessed an increase in mortality due to unintentional injury. While the highest increases in mortality due to unintentional injury was among Black females (18.2 percent), Hispanic males (11.5 percent) and White males (11.1 percent), a decline in mortality due to unintentional injury was recorded among Asian females (19.8 percent), American Indian males (18.2 percent), and Black males (0.5 percent). In terms of mortality due to diabetes, the overall mortality rate for both males and females increased from 23.0/100,000 in 2018 to 23.9/100,00 in 2019 following a period of stability during 2011 to 2014 (**Table 2B-2**). However, the increase in deaths due to diabetes between 2018 and 2019 did not affect all racial/ethnic groups. Black or African American regardless of gender, Asian males and Hispanic males witnessed a decrease in their age adjusted diabetes mortality rates.

## 2A. TOTAL MORTALITY

**Figure 2A-1**  
Age-adjusted Mortality Rates<sup>a</sup> for all Causes by Gender and Year,  
Arizona, 2009-2019



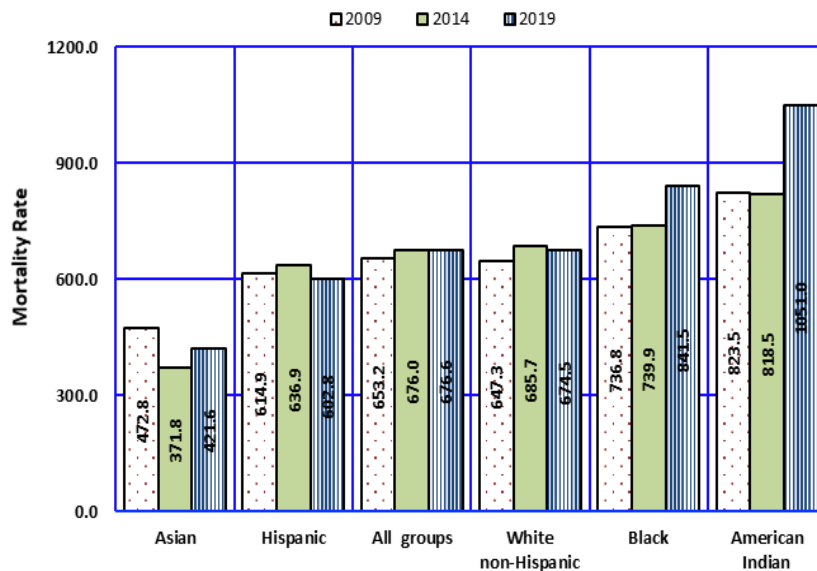
The age-adjusted mortality rates discussed below are based on the year 2000 population standard. All mortality rates in sections 2A and 2B are age-adjusted. A detailed explanation of the age-adjustment of mortality rates is given in the **Technical Notes**.

The total age-adjusted mortality rate decreased by 1.7 percent, from 688.6 deaths per 100,000 population in 2018 to 676.6 deaths in 2019 (**Figure 2A-1, Table 2B-2**). Over this period, the age-adjusted mortality rates decreased for both males (1.7 percent) and females (1.8 percent).

The gap between male and female mortality rates remained between 2009 and 2019. In each year during the 11-year period, the male age-adjusted mortality rate was consistently 1.4 times higher than the female age-adjusted mortality.

Note: <sup>a</sup> Number of deaths per 100,000 persons (adjusted to the 2000 standard U.S. population).

**Figure 2A-2**  
Age-adjusted Mortality Rates<sup>a</sup> for all Causes by Race/Ethnicity and Year,  
Arizona Residents, 2009, 2014, and 2019



The 2019 age-adjusted death rates for the major racial/ethnic groups were as follows: for Asian or Pacific Islander, 421.6 deaths per 100,000 population; Hispanic or Latino, 602.8; White non-Hispanic, 674.5; Black or African American, 841.5; and American Indian or Alaska Native, 1051.0 (**Figure 2A-2, Table 2B-4**).

In 2019, as in 2009 and 2014, American Indians and Blacks had higher total mortality rates than White non-Hispanics, Hispanics, and Asians. The total mortality rates for Asians were lower than the rates of both White non-Hispanics and Hispanics in 2009, 2014, and 2019.

Note: <sup>a</sup> Number of deaths per 100,000 persons (adjusted to the 2000 standard U.S. population).

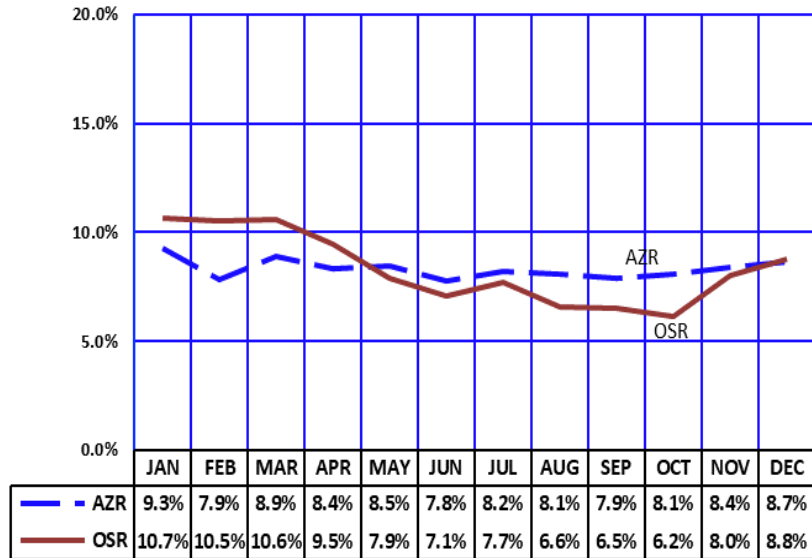
## 2A. TOTAL MORTALITY

If there was no monthly variation in proportional contribution to total annual deaths, 8.3 percent (100/12) of deaths should occur monthly. However, when the monthly distribution of resident deaths is examined, the month of January (9.3 percent), March (8.9 percent), December (8.7 percent), May (8.5 percent), April (8.4 percent) and November (8.4 percent) contributed more than the expected value (**Figure 2A-3**). June was the month with the lowest percent contribution to the total annual deaths among Arizona residents (AZR).

The majority of the 3,540 non-residents who died in Arizona during 2019 did so during the months of January, March, and February.

October was the month with the lowest percent contribution (6.2 percent) to the annual death among out-of-State residents (OSR) who died in Arizona.

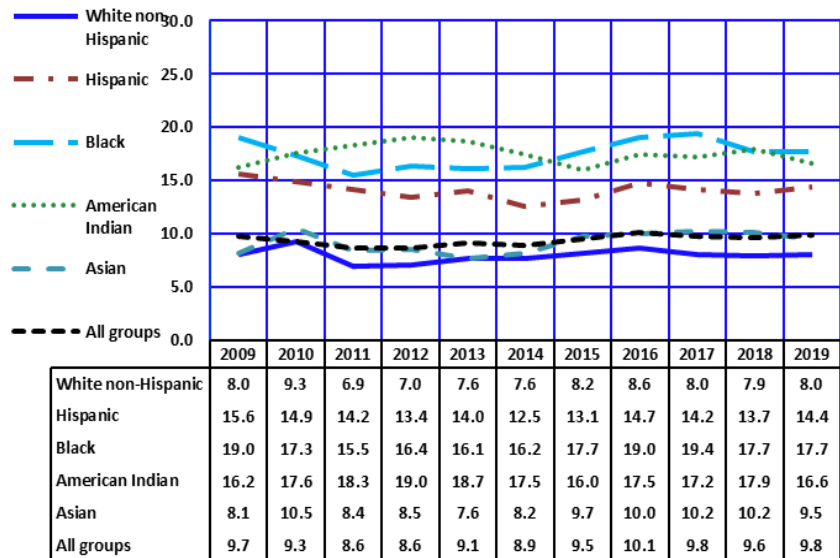
**Figure 2A-3**  
Percent of Annual Deaths by Month of Occurrence and Residence Status, Arizona, 2019



**Figure 2A-4**  
Percentage of Deaths for which Autopsies were Reported by Race/Ethnicity and Year, Arizona Residents, 2009-2019

Autopsies were reported as performed on 5,903 decedents, or 9.8 percent of the deaths that occurred among Arizona residents in 2019. From 2009 – 2019, the percentage of deaths for which autopsies were reported varied from 9.7 percent in 2009, to a low of 8.6 percent in 2011 and 2012, a high of 10.1 percent in 2016, then 9.8 percent in 2019.

The percentage autopsied varies by the decedent's demographic characteristics. By race/ethnicity (**Figure 2A-4**) the percentage autopsied was the lowest for White non-Hispanic than for other racial/ethnic groups. The prevalence of autopsies was substantially greater among Black, American Indian, and Hispanic or Latino sub-populations. 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 deaths by homicide, suicide, accidents, and undetermined manner.



**TABLE 2A-1  
NUMBER OF DEATHS BY RACE/ETHNICITY, GENDER, AND YEAR, ARIZONA RESIDENTS, 2009-2019**

	2009	2010	2011	2012 <sup>a</sup>	2013 <sup>a</sup>	2014 <sup>a</sup>	2015 <sup>a</sup>	2016 <sup>a</sup>	2017	2018	2019
<b>TOTAL</b>											
<b>Total</b>	45,065	45,871	47,547	48,459	49,929	51,074	54,152	56,480	57,261	59,206	60,161
<b>Male</b>	23,535	24,163	24,785	25,577	26,222	27,037	28,814	30,431	30,721	32,067	32,575
<b>Female</b>	21,530	21,708	22,762	22,874	23,703	24,034	25,334	26,046	26,537	27,136	27,585
<b>White non-Hispanic</b>											
<b>Total</b>	35,829	36,066	37,211	38,629	39,543	40,391	42,750	44,092	44,191	45,194	45,467
<b>Male</b>	18,476	18,693	19,307	20,206	20,550	21,207	22,504	23,439	23,375	24,150	24,334
<b>Female</b>	17,353	17,373	17,904	18,416	18,989	19,181	20,242	20,653	20,816	21,044	21,133
<b>Hispanic or Latino</b>											
<b>Total</b>	5,401	5,374	5,575	5,963	6,300	6,444	6,839	7,343	7,539	8,088	8,488
<b>Male</b>	2,978	2,959	2,982	3,323	3,412	3,543	3,814	4,154	4,197	4,629	4,770
<b>Female</b>	2,423	2,415	2,593	2,640	2,888	2,901	3,025	3,189	3,341	3,458	3,718
<b>Black or African American</b>											
<b>Total</b>	1,334	1,336	1,399	1,509	1,593	1,578	1,742	1,925	1,896	2,057	2,207
<b>Male</b>	697	735	734	803	897	852	971	1,108	1,076	1,104	1,205
<b>Female</b>	637	601	665	706	696	726	771	817	820	953	1,002
<b>American Indian or Alaska Native</b>											
<b>Total</b>	1,871	1,781	1,681	1,806	1,955	2,074	2,140	2,346	2,355	2,527	2,599
<b>Male</b>	1,028	1,015	876	993	1,103	1,152	1,187	1,365	1,334	1,445	1,463
<b>Female</b>	843	766	805	812	852	922	953	981	1,021	1,081	1,136
<b>Asian or Pacific Islander</b>											
<b>Total</b>	469	487	528	552	538	582	673	769	796	886	957
<b>Male</b>	241	258	269	252	260	280	334	364	377	419	492
<b>Female</b>	228	229	259	300	278	302	339	405	419	467	465
<b>Refused/Unknown race</b>											
<b>Total</b>	161	827	1,153	<sup>b</sup>	<sup>b</sup>	10 <sup>†</sup>	10 <sup>†</sup>	0 <sup>†</sup>	484	454	443
<b>Male</b>	115	503	617	<sup>b</sup>	<sup>b</sup>	*	*	*	362	320	311
<b>Female</b>	46	324	536	<sup>b</sup>	<sup>b</sup>	*	*	*	120	133	131

Notes: \* Cell suppressed due to non-zero count less than 6; † Sum rounded to nearest tens unit due to non-zero addend less than 6; <sup>a</sup> Deaths with unknown gender (Total, n=1); Unknown race/ethnicity, n=1, was included in total for 2019); <sup>b</sup> Bridging of race/ethnicity in 2012 and 2013 differed from previous years. Individuals with unknown race were categorized as White non-Hispanic, while individuals with unknown race and Hispanic ethnicity were coded as Hispanic.

**TABLE 2A-2  
RESIDENT MORTALITY BY MONTH OF OCCURRENCE AND YEAR, ARIZONA, 2009-2019**

Month of death	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
	<b>JAN</b>	<b>Count</b>	3,983	3,950	4,321	4,210	4,824	5,028	5,119	5,111	6,219
	<b>Percent</b>	8.8%	8.6%	9.1%	8.7%	9.4%	9.3%	9.1%	8.9%	10.5%	9.3%
<b>FEB</b>	<b>Count</b>	3,592	3,582	4,070	4,147	4,227	4,267	5,135	4,514	4,832	4,724
	<b>Percent</b>	8.0%	7.8%	8.6%	8.6%	8.3%	7.9%	9.1%	7.9%	8.2%	7.9%
<b>MAR</b>	<b>Count</b>	3,954	4,084	4,358	4,414	4,333	4,819	5,387	5,070	5,353	5,372
	<b>Percent</b>	8.8%	8.9%	9.2%	9.1%	8.5%	8.9%	9.5%	8.9%	9.0%	8.9%
<b>APR</b>	<b>Count</b>	3,945	3,845	3,967	4,176	4,231	4,547	4,689	4,854	4,922	5,029
	<b>Percent</b>	8.8%	8.4%	8.3%	8.6%	8.5%	8.4%	8.3%	8.5%	8.3%	8.4%
<b>MAY</b>	<b>Count</b>	3,699	3,811	3,899	3,980	4,076	4,291	4,603	4,867	4,768	5,098
	<b>Percent</b>	8.2%	8.3%	8.2%	8.2%	8.2%	8.4%	8.1%	8.5%	8.1%	8.5%
<b>JUN</b>	<b>Count</b>	3,500	3,651	3,823	3,868	3,831	4,072	4,396	4,782	4,666	4,689
	<b>Percent</b>	7.8%	8.0%	8.0%	8.0%	7.7%	8.0%	8.1%	8.4%	7.9%	7.8%
<b>JUL</b>	<b>Count</b>	3,741	3,843	3,791	3,862	3,926	4,071	4,338	4,739	4,761	4,923
	<b>Percent</b>	8.3%	8.4%	8.0%	8.0%	7.9%	8.0%	8.0%	8.3%	8.0%	8.2%
<b>AUG</b>	<b>Count</b>	3,617	3,756	3,913	3,850	3,893	4,112	4,338	4,534	4,647	4,848
	<b>Percent</b>	8.0%	8.2%	8.2%	7.9%	7.8%	8.1%	8.0%	7.9%	7.8%	8.1%
<b>SEP</b>	<b>Count</b>	3,604	3,633	3,678	3,849	3,804	3,994	4,183	4,423	4,505	4,755
	<b>Percent</b>	8.0%	7.9%	7.7%	7.9%	7.6%	7.8%	7.7%	7.7%	7.6%	7.9%
<b>OCT</b>	<b>Count</b>	3,739	3,678	3,888	3,956	3,868	4,184	4,284	4,548	4,619	4,858
	<b>Percent</b>	8.3%	8.0%	8.2%	8.2%	7.7%	8.2%	7.9%	7.9%	7.8%	8.1%
<b>NOV</b>	<b>Count</b>	3,694	3,806	3,753	3,894	3,924	4,239	4,543	4,547	4,706	5,058
	<b>Percent</b>	8.2%	8.3%	7.9%	8.0%	7.9%	8.3%	8.4%	7.9%	7.9%	8.4%
<b>DEC</b>	<b>Count</b>	3,997	4,232	4,086	4,253	4,430	4,449	4,882	4,883	5,272	5,212
	<b>Percent</b>	8.9%	9.2%	8.6%	8.8%	8.9%	8.7%	9.0%	8.6%	9.2%	8.7%
<b>TOTAL</b>	<b>Count</b>	45,065	45,871	47,547	48,459	49,929	51,074	54,152	56,480	59,206	60,161
	<b>Percent</b>	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

**TABLE 2A-3  
DEATHS BY DAY AND MONTH OF OCCURRENCE, ARIZONA RESIDENTS, 2019**

Day of death	Month of death												Total
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	
1	180	166	213	167	163	145	145	151	193	158	175	178	2,034
2	196	163	163	152	182	146	158	145	179	141	159	168	1,952
3	187	155	173	180	160	164	168	176	173	158	177	153	2,024
4	195	177	195	199	178	146	158	161	172	161	179	172	2,093
5	186	198	169	153	181	148	156	166	150	178	162	188	2,035
6	197	175	172	169	180	143	182	156	163	169	184	163	2,053
7	200	144	158	177	157	141	172	162	147	146	162	169	1,935
8	165	171	160	201	167	171	152	139	150	159	196	187	2,018
9	198	157	186	184	150	178	163	152	136	145	186	169	2,004
10	203	173	150	181	163	175	164	158	157	179	162	141	2,006
11	188	163	206	184	181	141	175	164	138	144	146	168	1,998
12	165	154	185	175	144	153	193	151	151	171	175	176	1,993
13	194	154	184	169	166	160	150	142	156	165	181	177	1,998
14	182	164	174	169	148	171	158	156	142	149	153	146	1,912
15	188	171	170	168	169	171	177	159	166	172	172	150	2,033
16	176	167	169	157	157	159	160	152	166	156	185	188	1,992
17	174	160	160	139	168	158	170	148	157	164	173	154	1,925
18	167	175	163	156	165	142	156	167	152	154	174	188	1,959
19	180	184	201	163	155	146	144	151	151	180	130	161	1,946
20	152	182	166	182	181	130	162	165	137	164	186	141	1,948
21	188	198	150	173	152	167	145	166	148	127	170	167	1,951
22	177	177	163	145	144	147	170	146	152	156	166	172	1,915
23	179	181	149	168	149	163	150	121	149	143	192	184	1,928
24	155	148	179	153	160	170	148	153	148	142	156	180	1,892
25	188	157	151	174	164	153	150	140	177	138	152	156	1,900
26	180	160	185	163	169	164	131	157	195	142	167	166	1,979
27	178	181	169	163	172	163	164	172	179	159	154	168	2,022
28	187	169	179	150	189	181	160	165	158	147	146	176	2,007
29	179		160	163	155	137	148	161	135	158	173	176	1,745
30	164		178	152	162	156	153	181	178	160	165	167	1,816
31	147		192		167	141	141	165		173		163	1,148
<b>Total</b>	5,595	4,724	5,372	5,029	5,098	4,689	4,923	4,848	4,755	4,858	5,058	5,212	60,161



**TABLE 2A-4  
AGE-SPECIFIC MORTALITY BY PLACE OF DEATH AND DECEDENT STATUS, ARIZONA, 2019**

	Age											Un- known	Total			
	<1	1-4	5-14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	85+					
<b>IN HOSPITAL</b>																
<b>In-patient</b>	300	35	54	175	382	542	1,022	2,112	3,266	3,457	2,253	0	13,598			
<b>Out-patient<sup>a</sup></b>	92	16	25	156	231	245	318	529	612	546	327	*	3,098			
<b>Died on arrival</b>	0	0	0	0	*	*	*	6	8	*	*	0	30 <sup>+</sup>			
<b>Status unknown</b>	16	15	33	246	460	611	1,185	2,853	4,464	5,538	5,539	0	20,960			
<b>Subtotal</b>	408	66	112	577	1,070 <sup>†</sup>	1,400 <sup>†</sup>	2,530 <sup>†</sup>	5,500	8,350	9,550 <sup>†</sup>	8,120 <sup>†</sup>	0 <sup>†</sup>	37,683			
<b>NOT IN HOSPITAL</b>																
<b>Nursing home<sup>b</sup></b>	16	7	11	14	50	113	293	841	1,436	1,908	1,890	0	6,579			
<b>Residence</b>	0	0	0	*	*	27	81	305	724	1,246	1,919	0	4,310 <sup>†</sup>			
<b>Other<sup>c</sup></b>	6	8	20	251	381	382	477	810	1,433	2,697	5,126	*	11,592			
<b>Unspecified</b>	0	0	0	0	0	0	0	0	0	0	0	0	0			
<b>Subtotal</b>	22	15	31	270 <sup>†</sup>	440 <sup>†</sup>	522	851	1,956	3,593	5,851	8,935	0 <sup>†</sup>	22,478			
<b>TOTAL</b>	430	81	143	843	1,509	1,921	3,378	7,456	11,943	15,397	17,058	2	60,161			

Notes: \* Cell suppressed due to count less than 6; † Sum rounded to nearest tens unit due to addend less than 6; <sup>a</sup> Includes Emergency Room; <sup>b</sup> Includes other long-term care facilities; <sup>c</sup> Includes hospices.





## **2B.**

### **LEADING CAUSES OF DEATH**

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In 2010, the Office of Vital Records (OVR) of the Arizona Department of Health Services implemented the new (version 2003) Standard U.S. death certificate. The new certificate added several new questions: 1) whether tobacco use contributed to the death, and 2) whether, if the decedent was a female, the death was “pregnancy-associated” (defined as death from any cause during pregnancy or within one calendar year of delivery or pregnancy termination).

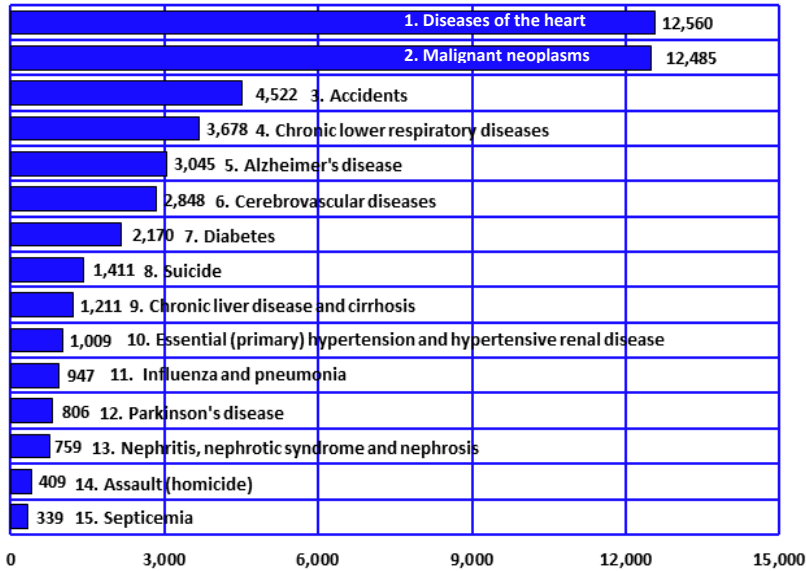
The death certificate now includes a new classification of the decedent’s racial/ethnic status, consistent with the revised federal standards for collecting and reporting racial and ethnic status. These standards were published in the Federal Register on October 30, 1997, as “Revisions to the Standards for the Classification of Federal Data on Race and Ethnicity.” The revised standards are available on the OMB (the Office of Management and Budget) web-site at: <https://www.whitehouse.gov/omb>.

There are now 15 racial categories (including Guamanian or Chamorro; Samoan or Native Hawaiian) to choose from. It is also permitted to indicate more than one race for a decedent. To create frequency counts of race and ethnicity that were adequate to compute statistically reliable mortality rates, race was “bridged”, or essentially collapsed into 5 categories; White non-Hispanic, Hispanic or Latino, Black or African American, Native American or Alaska Native, and Asian or Pacific Islander. When an individual was identified as both Hispanic and any other race, that person was added to the racial/ethnic group with the lowest population. For example, a person identified as both White and Hispanic would be coded as Hispanic, where a person identified as American Indian and Hispanic would be coded as American Indian. Please refer to the technical appendix for further explanation of the racial bridging used in this report.

2B. LEADING CAUSES OF DEATH

**Figure 2B-1A**  
**Leading Causes of Death among Arizona Residents in 2019**

BASED ON THE NUMBER OF DEATHS DUE TO THE UNDERLYING CAUSE:

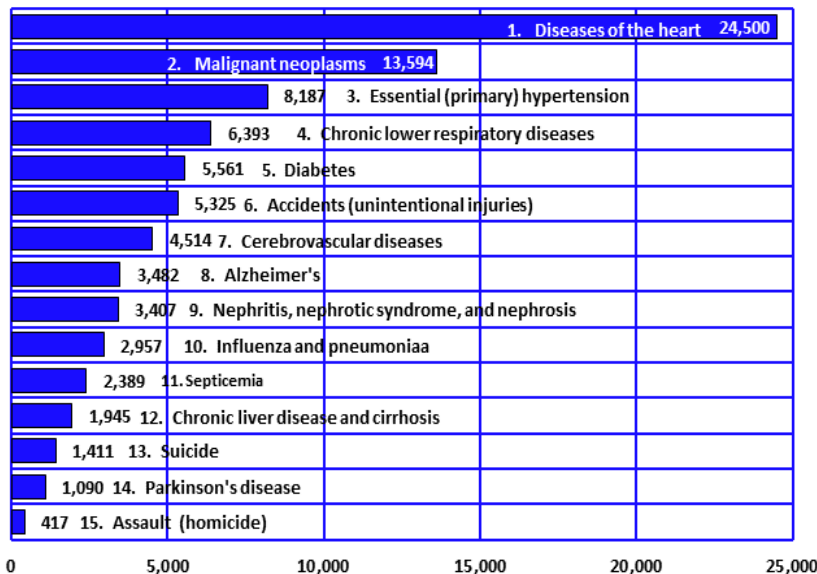


Based on the number of deaths (but not age-adjusted mortality rate), the leading underlying cause of death to Arizona residents in 2019 was *heart disease* (12,560 or 20.9 percent of all deaths), closely followed by *cancer*, which accounted for 12,485 or 20.8 percent of deaths (**Figure 2B-1A**, **Table 2B-1**, **Table 5E-14**).

The third leading cause of death, *accidents (unintentional injuries)*, accounted for 4,522 or 7.5 percent of total deaths. Deaths due to *chronic lower respiratory diseases* ranked fourth in 2019, with 3,678 (6.1 percent) resident deaths reported. Deaths due to *Alzheimer's disease* ranked fifth in 2019, with 3,045 resident deaths reported. Together, these five causes accounted for 60.3 percent of total deaths in 2019. The fifteen leading causes accounted for 80.1 percent of all deaths among Arizona residents.

**Figure 2B-1B**  
**Leading Causes of Death among Arizona Residents in 2019**

BASED ON THE NUMBER OF DEATHS DUE TO ANY MENTION OF A CAUSE:



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 12,560 deaths that had diseases of the heart assigned as the underlying cause, another 11,940 deaths had diseases of the heart assigned as a secondary cause of death. The sum of these two counts (24,500, **Figure 2B-1B**) is the total number of deaths that had any mention of diseases of the heart on the 2019 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 hypertension* ranked 10<sup>th</sup> as the underlying cause but ranked 3<sup>rd</sup> when any mention of it was counted.

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

**Figure 2B-2**  
**Age-adjusted Mortality Rates<sup>a</sup> for the Five Leading Causes of Death for Both Genders by Race/Ethnicity, Arizona, 2019**

It is important to note that (Figures 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 2019, diseases of the heart were the leading cause of death for White non-Hispanics, Blacks, and American Indians but placed second for the remaining racial/ethnic groups. Cancer was the second leading cause of death for White non-Hispanics, Black or African Americans, and American Indians but ranked first for Hispanics and Asians. Unintentional injury was the third leading cause of death for all racial/ethnic groups except Asians (cerebrovascular diseases) (Figure 2B-2, Table 2B-4).

In 2019, chronic lower respiratory diseases were the fourth leading cause of death specific to White non-Hispanics. Diabetes ranked fourth among the leading causes of death for Hispanics and American Indians, but place fifth for Black and Asians. Alzheimer's disease was the fourth leading cause of death for Blacks, and the fifth leading cause of death for White non-Hispanics. Chronic liver disease and cirrhosis was the fifth leading cause of death specific to American Indians (Table 2B-4).

Rank	White non-Hispanic	Hispanic or Latino	Black or African American	American Indian or Alaska Native	Asian or Pacific Islander
1	Diseases of heart 140.4	Cancer 118.3	Diseases of heart 188.3	Diseases of heart 132.8	Cancer 98.4
2	Cancer 136.9	Diseases of heart 107.9	Cancer 173.5	Cancer 132.3	Diseases of heart 86.7
3	Unintentional injury 60.5	Unintentional injury 48.3	Unintentional injury 60.4	Unintentional injury 129.4	Cerebrovascular diseases 23.2
4	Chronic lower respiratory diseases 43.7	Diabetes 34.6	Alzheimer's disease 44.8	Diabetes 91.4	Unintentional injury 22.9
5	Alzheimer's disease 33.6	Cerebrovascular diseases 33.9	Diabetes 43.6	Chronic liver disease and cirrhosis 82.7	Diabetes 19.5

Note: <sup>a</sup> Number of deaths per 100,000 population age-adjusted to the 2000 U.S. standard.

**Figure 2B-3**  
**Age-adjusted Mortality Rates<sup>a</sup> for the Five Leading Causes of Death by Race/Ethnicity among Females, Arizona, 2019**

Based on age-adjusted mortality rates, diseases of the heart were the leading cause of death for Black or African American females, while cancer was the leading cause of death for the remaining racial/ethnic groups. (Figure 2B-3, Table 2B-4).

Chronic lower respiratory diseases were the third leading cause of death specific to White non-Hispanic females. Alzheimer's disease ranked third among the leading cause of death for Hispanic and Black females, but placed fourth for White and Asian females.

Diabetes ranked fourth among Black and American Indian females but fifth among Hispanic and Asian females. Chronic liver disease and cirrhosis was unique to American Indian women and ranked fifth among the leading causes of death. While unintentional injury was the third leading cause of death for American Indian women, it ranked fifth for White non-Hispanic and Black women.

Rank	White non-Hispanic	Hispanic or Latino	Black or African American	American Indian or Alaska Native	Asian or Pacific Islander
1	Cancer 118.6	Cancer 103.7	Diseases of heart 175.5	Cancer 112.5	Cancer 89.8
2	Diseases of heart 108.5	Diseases of heart 81.1	Cancer 147.1	Diseases of heart 100.6	Diseases of heart 63.8
3	Chronic lower respiratory diseases 42.5	Alzheimer's disease 39.7	Alzheimer's disease 42.1	Unintentional injury 81.6	Cerebrovascular diseases 21.7
4	Alzheimer's disease 38.9	Cerebrovascular diseases 33.5	Diabetes 42.0	Diabetes 78.5	Alzheimer's disease 20.8
5	Unintentional injury 38.0	Diabetes 28.8	Unintentional injury 40.3	Chronic liver disease and cirrhosis 68.8	Diabetes 16.6

Note: <sup>a</sup> Number of deaths per 100,000 population age-adjusted to the 2000 U.S. standard.

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

**Figure 2B-4**  
Age-adjusted Mortality Rates<sup>a</sup> for the Five Leading Causes of Death  
by Race/Ethnicity among Males, Arizona, 2019

Rank	White non-Hispanic	Hispanic or Latino	Black or African American	American Indian or Alaska Native	Asian or Pacific Islander
1	Diseases of heart 175.7	Diseases of heart 141.6	Cancer 210.0	Unintentional injury 183.3	Diseases of heart 118.0
2	Cancer 158.3	Cancer 137.3	Diseases of heart 201.7	Diseases of heart 176.0	Cancer 113.1
3	Unintentional injury 83.0	Unintentional injury 70.8	Unintentional injury 80.0	Cancer 162.6	Unintentional injury 31.5
4	Chronic lower respiratory diseases 45.1	Diabetes 42.0	Chronic lower respiratory diseases 49.7	Diabetes 106.3	Cerebrovascular diseases 25.0
5	Intentional Self-harm Suicide 36.4	Cerebrovascular diseases 33.7	Alzheimer's disease 48.1	Chronic liver disease and cirrhosis 98.2	Diabetes 23.4

Note: <sup>a</sup> Number of deaths per 100,000 population age-adjusted to the 2000 U.S. standard.

Based on age-adjusted mortality rates, diseases of the heart followed by cancer were the two leading causes of death for males in all racial/ethnic groups, except for Black and American Indian males (**Figure 2B-4; Table 2B-4**). Unintentional injury ranked third among the leading cause of death for almost all the racial/ethnic groups, but placed first for American Indian males.

In 2019, based on the age-adjusted mortality rates, diabetes was the fourth leading cause of death for Hispanic and American Indian males, while chronic lower respiratory diseases ranked fourth for White non-Hispanic and Black males and Cerebrovascular diseases occupied the same rank for Asians.

Ranking fifth was suicide (White males) cerebrovascular diseases (Hispanic males), Alzheimer's disease (Black males) and diabetes (Asian males). Chronic liver disease and cirrhosis was specific to American Indian males and ranked fifth among the leading cause of death for that group.

**Figure 2B-5**  
Age-adjusted Mortality Rates<sup>a</sup> for the Five Leading Causes of Death  
by Gender in Urban<sup>b</sup> and Rural Areas, Arizona, 2019

Rank	Urban male	Urban female	Rural male	Rural female
1	Diseases of heart 168.9	Cancer 113.5	Diseases of heart 186.2	Cancer 129.1
2	Cancer 153.4	Diseases of heart 105.4	Cancer 168.9	Diseases of heart 110.2
3	Unintentional injury 79.1	Alzheimer's disease 39.1	Unintentional injury 97.2	Unintentional injury 47.3
4	Chronic lower respiratory diseases 38.4	Chronic lower respiratory diseases 34.7	Chronic lower respiratory diseases 54.5	Chronic lower respiratory diseases 46.7
5	Diabetes 29.9	Unintentional injury 34.0	Intentional Self-harm (suicide) 45.6	Alzheimer's disease 34.5

Notes: <sup>a</sup> Number of deaths per 100,000 population age-adjusted to the 2000 U.S. standard; <sup>b</sup> Urban = Maricopa, Pima, Pinal, and Yuma counties. The remaining counties comprise Arizona's rural areas.

In 2019, the profile of the leading causes of death differed by gender for residents of the urban (Maricopa, Pima, Pinal, and Yuma counties) and rural (all the remaining counties) areas of the state (**Figure 2B-5, Table 2B-5**). Diseases of the heart exceeded cancer as the leading causes of death among urban males and rural males. Unintentional injury placed third among the leading cause for males regardless of area of residence, and rural females, but placed fifth for urban females.

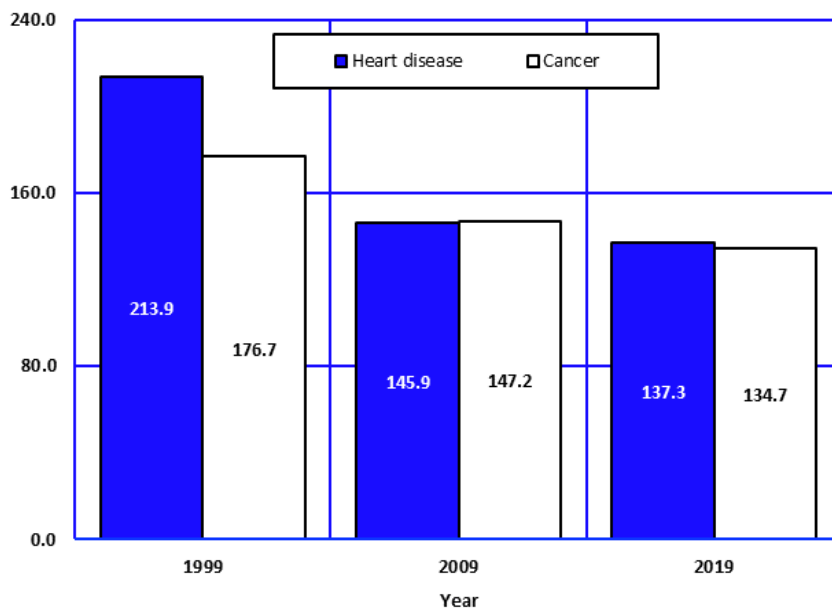
Alzheimer's disease was the third leading cause of death among urban females but the fifth among rural females. Chronic lower respiratory diseases were the fourth leading cause of death for all subgroups. Suicide was the fifth leading cause of death specific to rural males.

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

**Figure 2B-6**  
**Comparison of Age-adjusted Mortality Rates<sup>a</sup> for Heart Disease and Cancer (Malignant Neoplasm), Arizona, 1999, 2009, and 2019**

The age-adjusted mortality rate for diseases of the heart decreased by 35.8 percent from 213.9 deaths per 100,000 population in 1999 to 137.3/100,000 in 2019 (**Figure 2B-6**). The age-adjusted mortality rate for cancer declined less, by 23.8 percent, from 1999-2019. In Arizona, the relative risk of death from heart disease versus cancer changed from 21.1 percent greater in 1999 to 1.9 percent less in 2019.

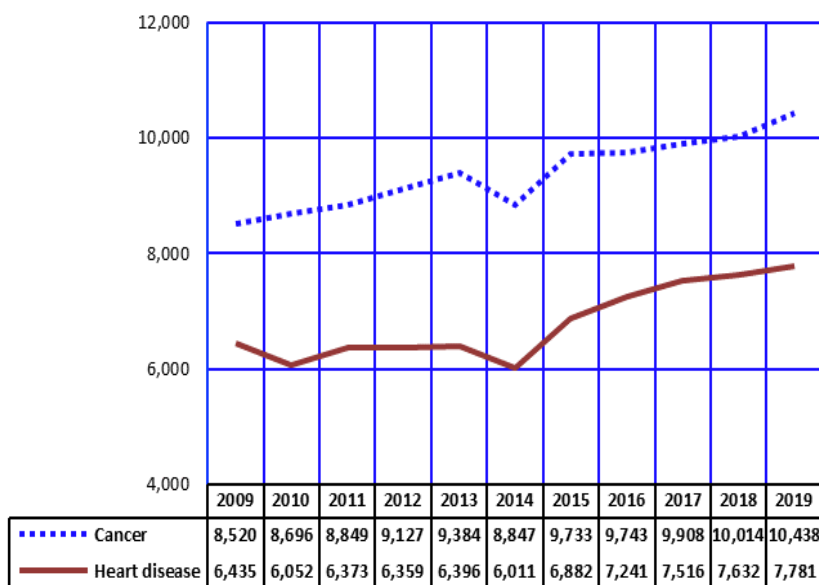
In 2009, 4 more Arizonans died from diseases of the heart than cancer (**Table 2B-1**). In 2019, the number of deaths due to diseases of the heart exceeded by 75 cases (**Table 2B-4**).



Note: <sup>a</sup> Number of deaths per 100,000 population age-adjusted to the 2000 U.S. standard.

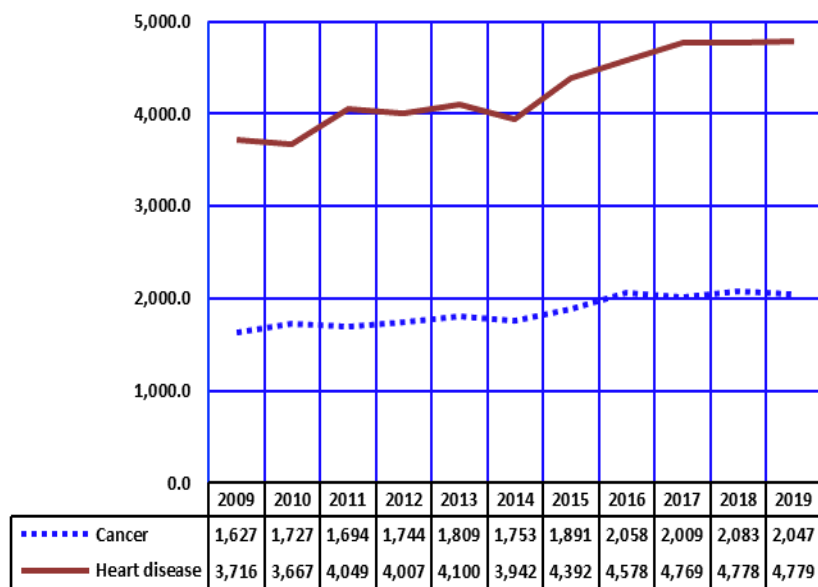
**Figure 2B-7**  
**Number of Deaths from Heart Disease and Cancer among Arizonans 0-84 Years, 2009-2019**

For the past several years, cancer has been the number one cause of death among Arizonans aged 0-84 years (**Figure 2B-7**). Beginning in 1996, the annual number of cancer deaths exceeded the number of deaths from heart disease. In 2019, 2,657 more Arizonans 0-84 years old died from cancer (10,438) than heart disease (7,781).



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

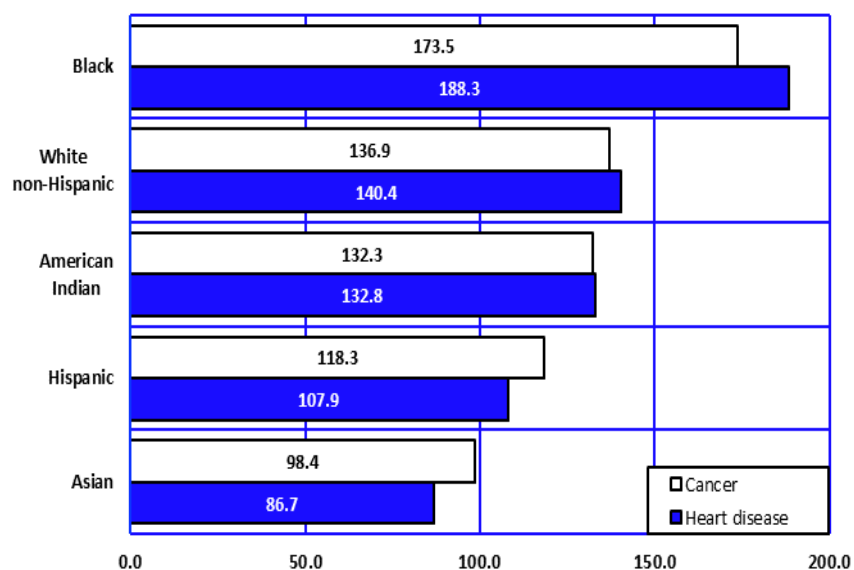
**Figure 2B-8**  
Deaths from Heart Disease and Cancer among Arizonans 85+, 2009-2019



Among Arizonans age 85 and over, heart disease is the number one leading cause of death by a wide margin. In 2019, adults aged 85 and over accounted for 16.4 percent of all deaths from cancer but 38.0 percent of all deaths from heart disease. In 2019, the median age at death for heart disease was 80 years (**Table 2D-3**); and a minority of deaths (44.8 percent, **Table 2D-4**) were premature, i.e., before reaching the expected years of life at birth for all U.S. residents (78.8 years).

However, from 2009 to 2019, the number of deaths from cancer increased by 25.8 percent among Arizonans 85 years or older, less than the increase observed in diseases of the heart (28.6 percent increase).

**Figure 2B-9**  
Age-adjusted Mortality Rates<sup>a</sup> for Heart Disease and Cancer by Race/Ethnicity, Arizona, 2019



In Arizona, Black or African Americans were 2.2 times more likely to die from diseases of the heart and 1.8 times more likely to die from malignant neoplasms in 2019 than Asians, the group with the lowest risk of each respective cause of death (**Figure 2B-9**, **Table 2B-4**). Compared to Asians, White non-Hispanic Arizonans were 1.6 times more likely to die of heart disease and 1.4 times more likely to die of cancer.

In 2019, the relative risk of death from heart disease exceeded cancer mortality risk (**Table 2B-3**) for all the racial/ethnic groups, except for Hispanics and Asians.

Note: <sup>a</sup> Number of deaths per 100,000 population age-adjusted to the 2000 U.S. standard.

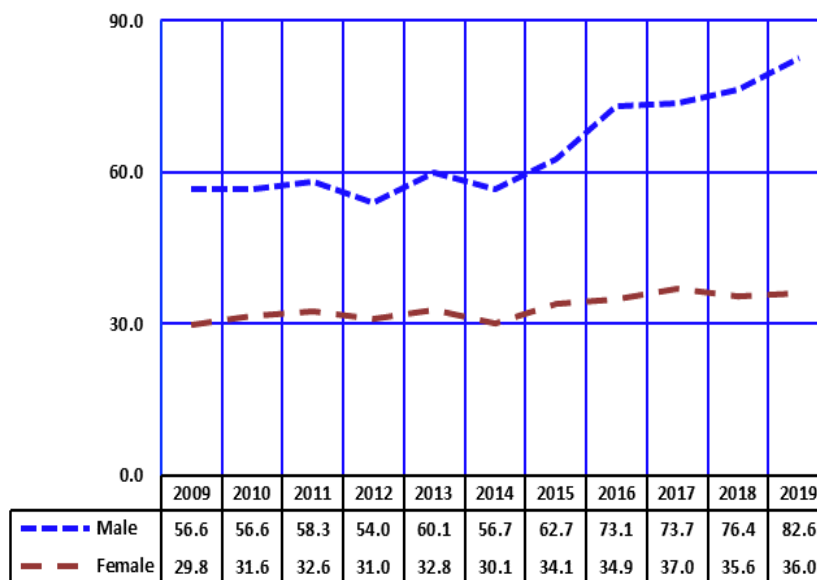


2B. LEADING CAUSES OF DEATH  
**Accidents (unintentional injury)**

**Figure 2B-10**  
**Age-adjusted Mortality Rates<sup>a</sup> for Accidents (Unintentional Injuries) by Gender and Year, Arizona, 2009-2019**

The number of deaths from unintentional injuries increased by 7.4 percent from 4,211 in 2018 to 4,522 in 2019 (**Table 2B-1**). In 2019, based on age-adjusted mortality rates, accidents ranked third as a leading cause of death for males and sixth for females (**Table 2B-4**). From 2018 to 2019, the age-adjusted mortality rate for accidents increased both for males (8.1 percent) and females (1.1 percent; **Figure 2B-10**).

In 2019, 970 deaths were caused by motor vehicle accidents, a decrease of 6.0 percent from 2018. Heat induced mortality has seen an increase of 25.5 percent between 2018 and 2019. Deaths due to accidental drowning and submersion increased by 8.7 percent from 2018 (n=92) to 2019 (n=100). Additionally, Arizonans experienced a 17.8 percent increase in the number of accidental poisonings due to drugs and/or medicaments from 1,425 fatalities in 2018 to 1,679 in 2019 (**Table 2B-9**).

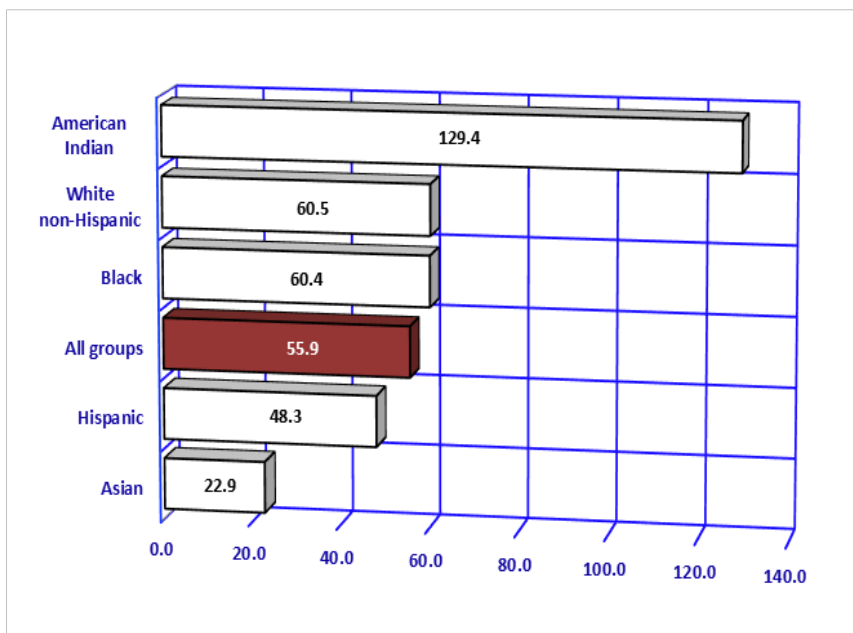


Note: <sup>a</sup> Number of deaths per 100,000 population age-adjusted to the 2000 U.S. standard.

**Figure 2B-11**  
**Age-adjusted Mortality Rates<sup>a</sup> for Accidents (Unintentional Injuries) by Race/Ethnicity, Arizona, 2019**

The American Indian death rate for unintentional injuries (129.4/100,000) was 5.7 times greater than the rate for Asians (22.9/100,000), the group with the lowest risk of unintentional injury death among racial/ethnic groups in the state (**Figure 2B-11, Table 2B-4**).

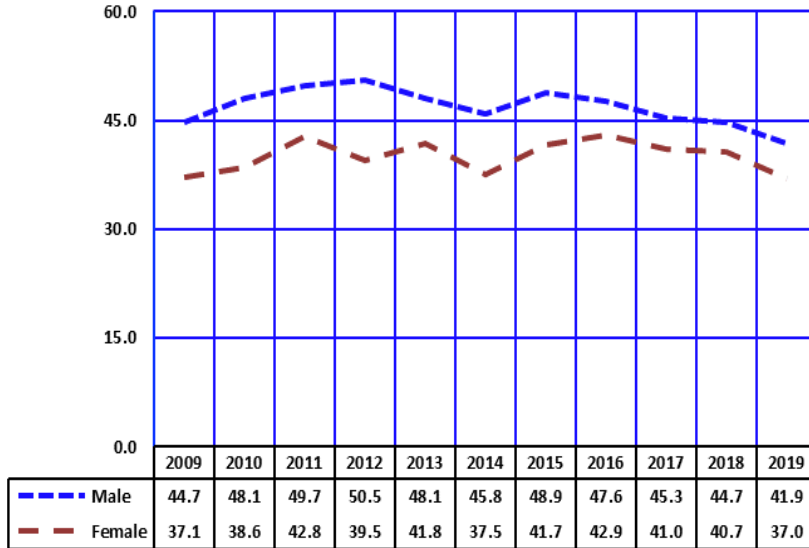
In 2019, Apache (127.1/100,000) and Navajo (112.1/100,000) counties had the two highest age-adjusted mortality rates for unintentional injuries (**Table 5E-11**).



Note: <sup>a</sup> 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<sup>a</sup> for Chronic Lower Respiratory Diseases<sup>b</sup> by Gender and Year, Arizona, 2009-2019

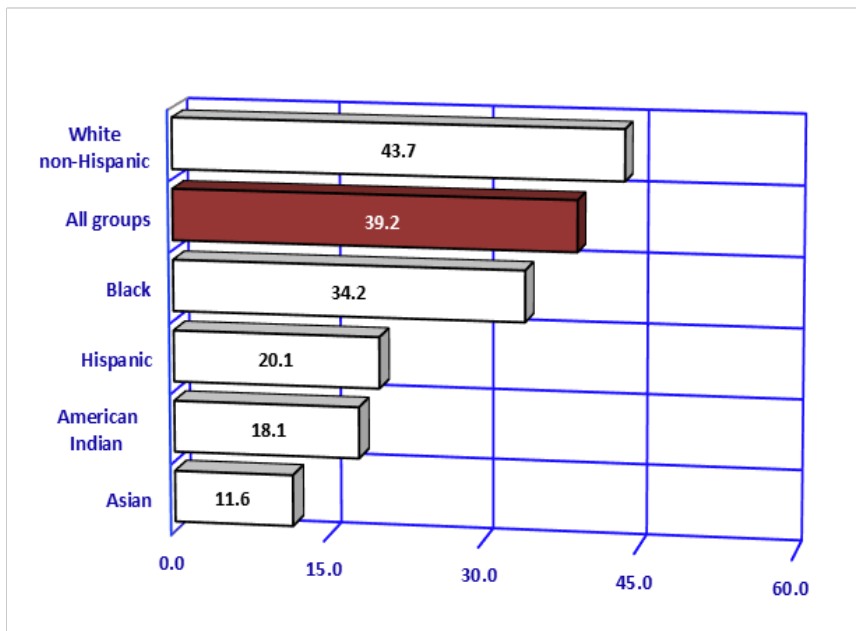


In 2019 as in 2018, chronic lower respiratory diseases (bronchitis, emphysema, asthma) were the 4th leading cause of death among Arizona residents (**Table 2B-1**). The mortality rate for chronic lower respiratory diseases decreased for both genders between 2018 and 2019, but more so among females (9.1 percent) than males (6.3 percent; **Figure 2B-12**, **Table 2B-2**).

Among genders and regional groups, rural males and females experienced the highest mortality due to chronic lower respiratory diseases with rates of 54.5/100,000 and 46.7/100,000, respectively (**Table 2B-5**).

Notes: <sup>a</sup> Number of deaths per 100,000 population age-adjusted to the 2000 U.S. standard; <sup>b</sup> This ICD-10 title corresponds to Chronic Obstructive Pulmonary Disease (ICD-9 title).

**Figure 2B-13**  
Age-adjusted Mortality Rates<sup>a</sup> for Chronic Lower Respiratory Diseases by Race/Ethnicity, Arizona, 2019



Mortality rates for emphysema, chronic bronchitis, asthma, and other lower respiratory disorders were substantially higher among White non-Hispanics (43.7 deaths per 100,000) than any other racial/ethnic groups. Asians recorded the lowest rate at 11.6 deaths per 100,000 population (**Figure 2B-13**, **Table 2B-4**).

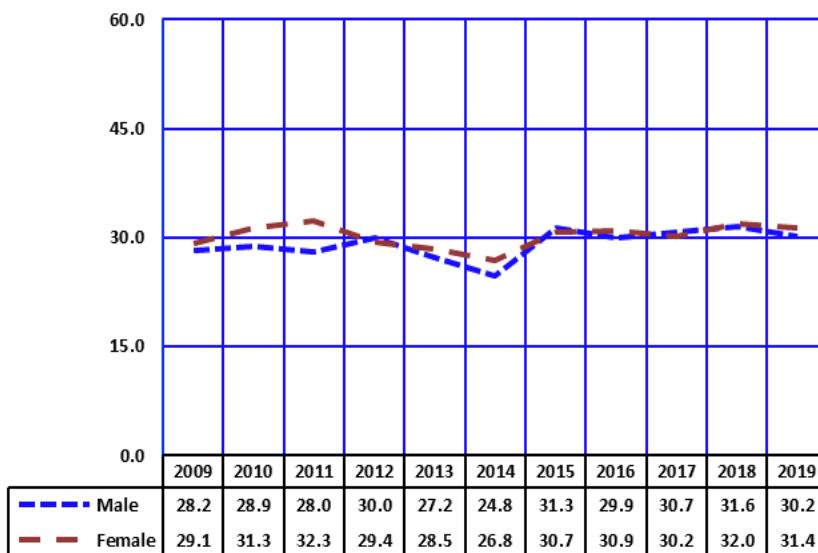
Note: <sup>a</sup> Number of deaths per 100,000 population age-adjusted to the 2000 U.S. standard.

2B. LEADING CAUSES OF DEATH  
**Cerebrovascular diseases**

**Figure 2B-14**  
**Age-adjusted Mortality Rates<sup>a</sup> for Cerebrovascular Disease by Gender and Year, Arizona, 2009-2019**

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 cerebrovascular diseases decreased by 3.4 percent from 32.1/100,000 in 2018 to 31.0 deaths per 100,000 population in 2019 (Table 2B-3).

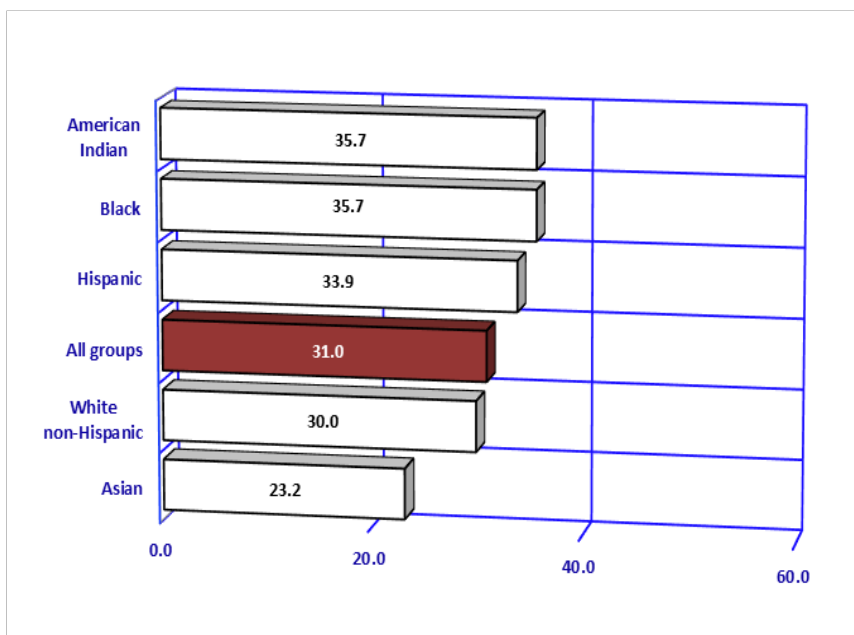
With some exceptions, the risk of dying from cerebrovascular diseases was generally higher among females than males for the period 2009-2019. In 2012, as in 2015 and 2017, males experienced a higher risk of dying from cerebrovascular diseases than females. (Figure 2B-14, Table 2B-2).



Note: <sup>a</sup> Number of deaths per 100,000 population age-adjusted to the 2000 U.S. standard.

**Figure 2B-15**  
**Age-adjusted Mortality Rates<sup>a</sup> for Cerebrovascular Disease by Race/Ethnicity, Arizona, 2019**

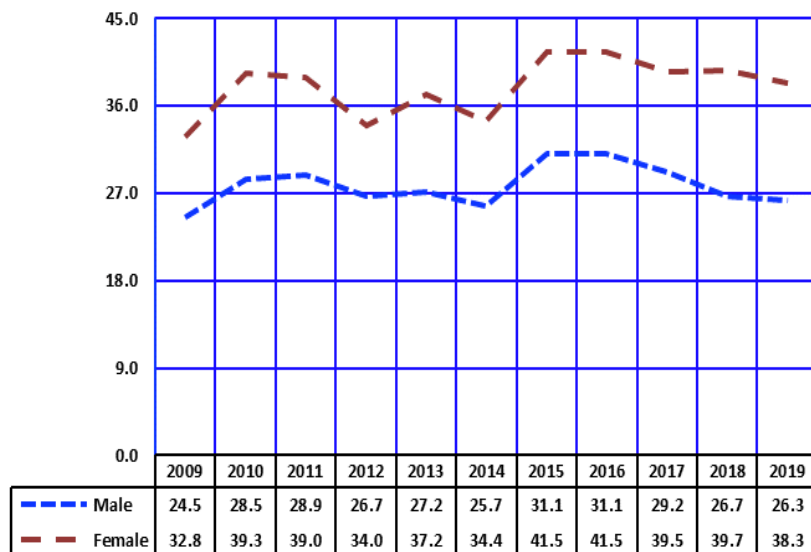
Compared to Arizona's overall rate, Black or African Americans were 1.2 times more likely to die from cerebrovascular disease in 2019 (Figure 2B-15, Table 2B-4). The 2019 mortality rate for cerebrovascular disease among Asians (23.2/100,000) was the lowest among racial/ethnic groups.



Note: <sup>a</sup> 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<sup>a</sup> for Alzheimer's Disease by Gender and Year, Arizona, 2009-2019

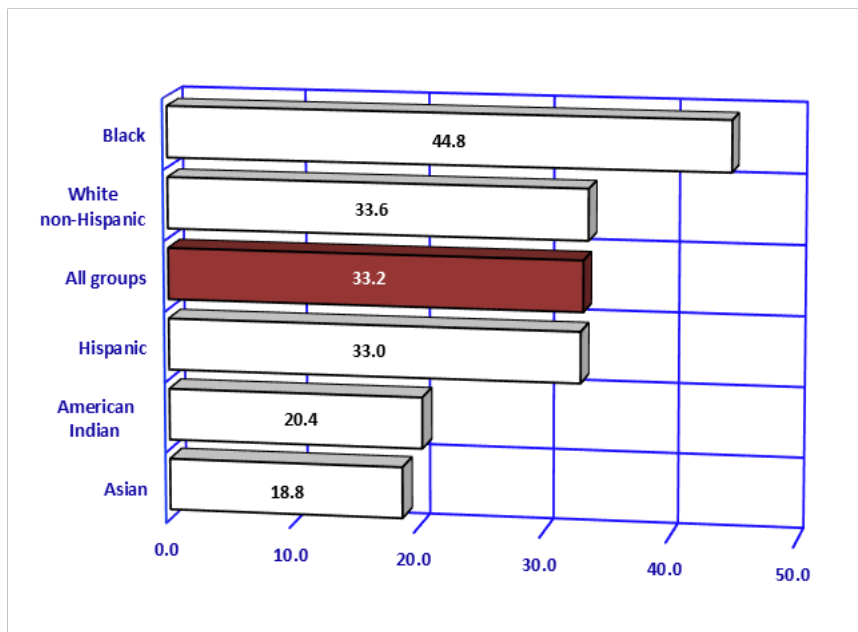


Based on the number of deaths in 2019, Alzheimer's disease was the 3<sup>rd</sup> leading cause of death for females and 8<sup>th</sup> leading cause for males (**Table 2B-4**)

From 2018 to 2019, the age-adjusted mortality rate for Alzheimer's disease decreased for both males (1.5/100,000) and females (3.5/100,000) (**Figure 2B-16**).

Note: <sup>a</sup> Number of deaths per 100,000 population age-adjusted to the 2000 U.S. standard.

**Figure 2B-17**  
Age-adjusted Mortality Rates<sup>a</sup> for Alzheimer's Disease by Race/Ethnicity, Arizona, 2019



The age-adjusted mortality rates for Alzheimer's disease in 2019 were higher among Black or African Americans (44.8/100,000), White non-Hispanics (33.6/100,000) than the other racial/ethnic groups. Rates lower than the state average were recorded among Asians (18.8/100,000), American Indians (20.4/100,000), and Hispanics (33.0/100,000; **Figure 2B-17, Table 2B-4**).

White non-Hispanic residents of Arizona disproportionately contributed to mortality from Alzheimer's disease. In 2019, White non-Hispanics accounted for 55.4 percent (**Table 10C-1**) of the state's population, but 83.3 percent of all deaths from Alzheimer's disease (2,535 out of 3,045; **Table 2B-4**).

In 2019, the overall median age at death from Alzheimer's disease was 87, specifically 85 years for males and 88 years for females (**Table 2D-3**).

Note: <sup>a</sup> Number of deaths per 100,000 population age-adjusted to the 2000 U.S. standard.

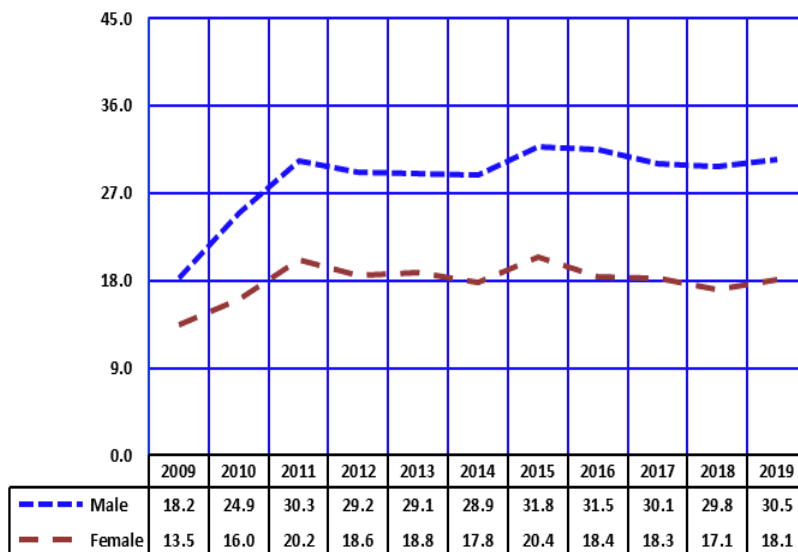
2B. LEADING CAUSES OF DEATH  
Diabetes

**Figure 2B-18**  
Age-adjusted Mortality Rates<sup>a</sup> for Diabetes by Gender and Year,  
Arizona, 2009-2019

From 2009-2019, mortality rates for diabetes increased for both males (2.3 percent) and females (5.8 percent; **Figure 2B-18**).

In addition to 2,170 deaths that had diabetes assigned as the underlying cause in 2019, another 3,391 deaths had diabetes assigned as a contributing factor. The diabetes-related death rate of 60.9/100,000 (**Table 6A-6**) was 2.5 times greater than the rate for diabetes as an underlying cause (23.9/100,000; **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.

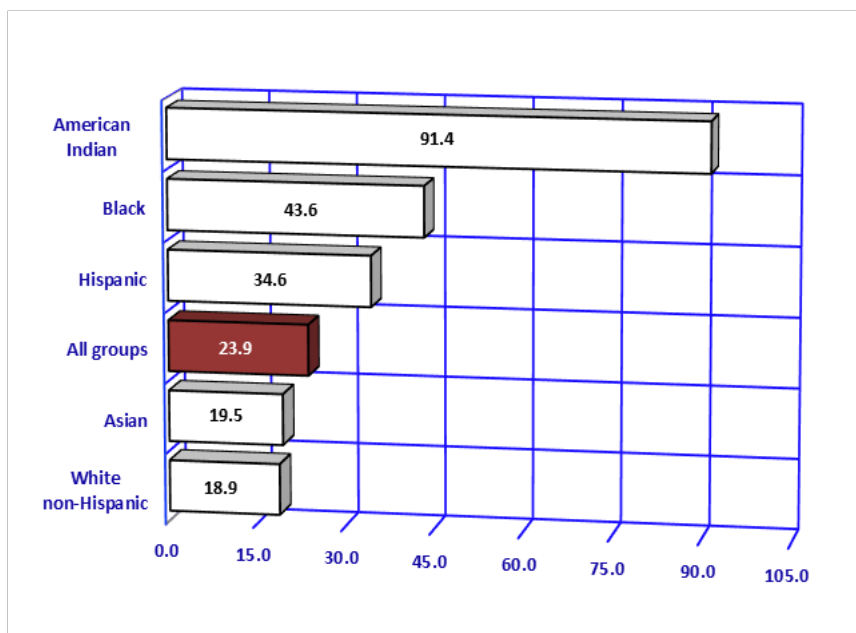


Note: <sup>a</sup> Number of deaths per 100,000 population age-adjusted to the 2000 U.S. standard.

**Figure 2B-19**  
Age-adjusted Mortality Rates<sup>a</sup> for Diabetes by Race/Ethnicity,  
Arizona, 2019

In 2019, compared to Arizona's rate, American Indians were 3.8 times more likely to die from diabetes (91.4 deaths per 100,000; **Figure 2B-19, Table 2B-4**). The rate of 18.9 deaths per 100,000 among White non-Hispanics was the lowest rate among all racial/ethnic groups in the state.

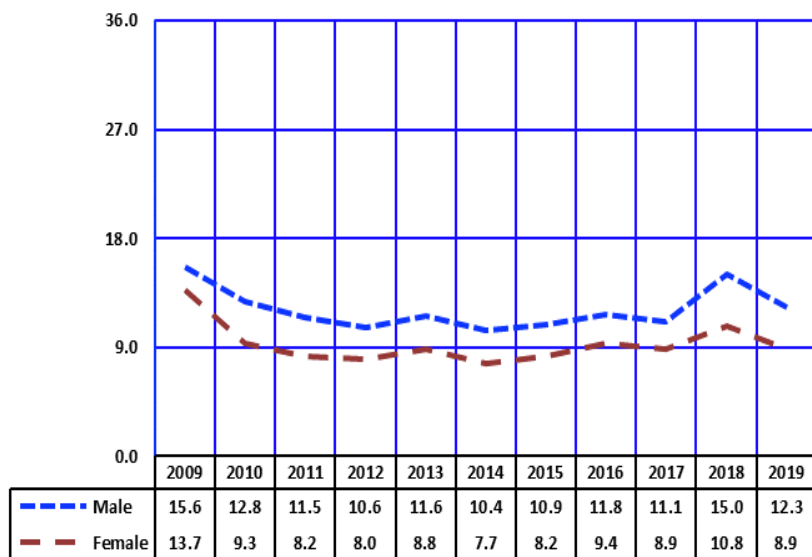
Among the 15 Arizona counties, Apache (67.8/100,000) and Navajo (51.6/100,000) counties had the highest mortality rates for diabetes recorded in 2019 (**Table 5E-11**).



Note: <sup>a</sup> 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<sup>a</sup> for Influenza and Pneumonia by Gender and Year, Arizona, 2009-2019**



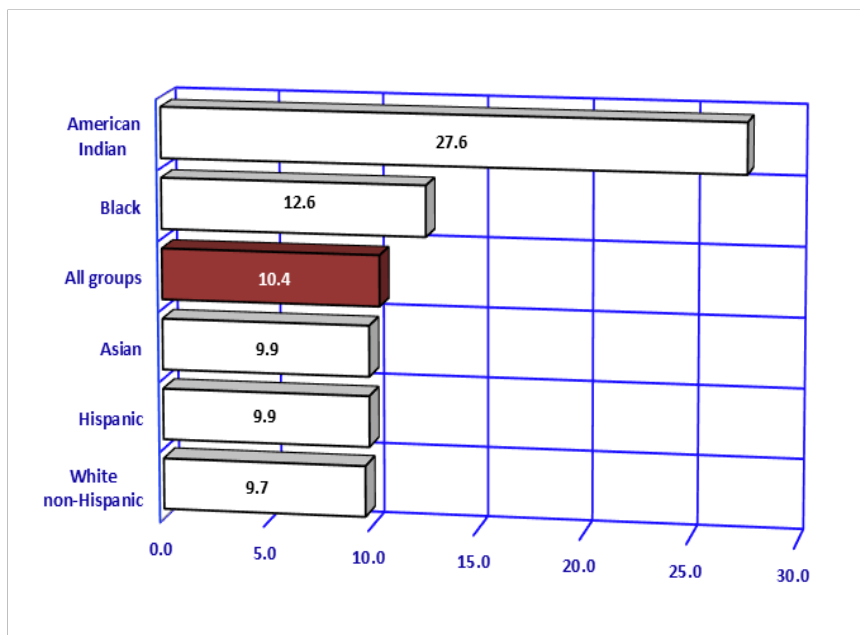
The number of deaths from influenza and pneumonia increased by 6.0 percent from 1,007 in 2009 to 947 in 2019. (Table 2B-1). Among the 947 deaths, influenza was identified as the underlying cause for 82 of them, while pneumonia was listed as the underlying cause on 865 death certificates (Table 2B-6).

The mortality rate for influenza and pneumonia decreased for females from 10.8 deaths per 100,000 in 2018 to 8.9 deaths in 2019 (Figure 2B-20, Table 2B-2). The mortality rate for influenza and pneumonia also decreased for males from 15.6/100,000 in 2009 to 12.3 deaths per 100,000 in 2019.

In 2019, the age-adjusted mortality rate for Arizona males was 38.2 percent greater than that of Arizona females.

Note: <sup>a</sup> Number of deaths per 100,000 population age-adjusted 2000 U.S. standard.

**Figure 2B-21**  
**Age-adjusted Mortality Rates<sup>a</sup> for Influenza and Pneumonia by Race/Ethnicity, Arizona, 2019**



In 2019, American Indian residents of Arizona had the highest mortality rate for influenza and pneumonia (27.6 deaths per 100,000) among the racial/ethnic groups. Mortality due to influenza and pneumonia for White non-Hispanics (9.7/100,000), Hispanics (9.9 /100,000) and Asians (9.9/100,000) were lower than the state rate. (Figure 2B-21, Table 2B-4).

County comparisons show that in 2019 influenza and pneumonia mortality rates were higher in Navajo (19.9/100,000), Apache (16.8/100,000), Graham (16.7/100,000), and Gila (15.8/100,000) Counties than in the remaining counties (Table 5E-11).

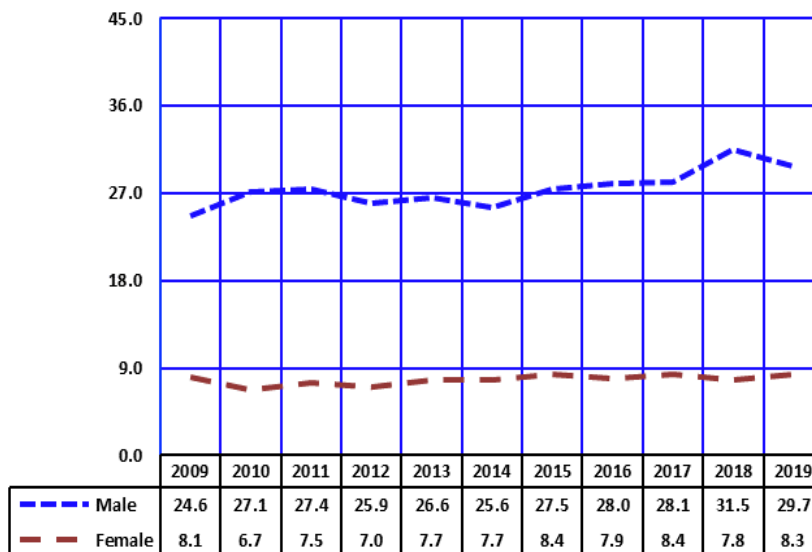
Note: <sup>a</sup> Number of deaths per 100,000 population age-adjusted to the 2000 U.S. standard.

2B. LEADING CAUSES OF DEATH  
Suicide

**Figure 2B-22**  
Age-adjusted Mortality Rates<sup>a</sup> for Suicide by Gender and Year, Arizona, 2009-2019

In 2019, based on age-adjusted mortality rates, suicide was the 7<sup>th</sup> leading cause of death among males. It ranked as the 11<sup>th</sup> cause of mortality for females. The overall age-adjusted suicide rate decreased from 19.5 suicides per 100,000 in 2018 to 18.9 in 2019 (**Table 2B-4**).

From 2018 to 2019, suicide mortality decreased by 5.7 percent among males, while it increased 6.4 percent among females (**Figure 2B-22, Table 2B-4**). In 2019, suicide posed a 3.6 times greater mortality risk for males (29.7/100,000) than for females (8.3/100,000).

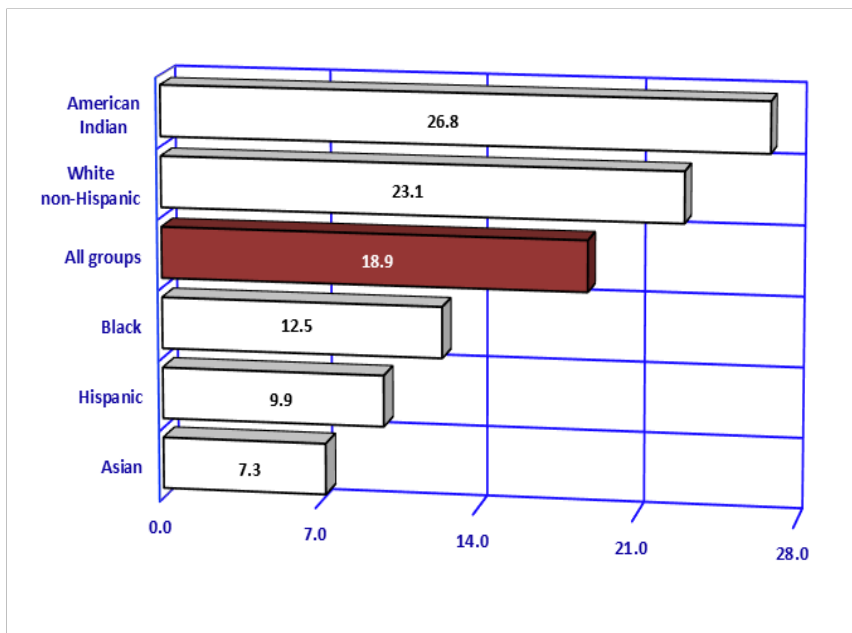


Note: <sup>a</sup> Number of deaths per 100,000 population age-adjusted to the 2000 U.S. standard.

**Figure 2B-23**  
Age-adjusted Mortality Rates<sup>a</sup> for Suicide by Race/Ethnicity, Arizona, 2019

In 2019, American Indians had the highest age-adjusted suicide rate (26.8 suicides per 100,000) among racial/ethnic groups, followed by White non-Hispanics (23.1/100,000), while Asians recorded the lowest age-adjusted suicide rate (7.3/100,000; **Figure 2B-23, Table 2B-4**).

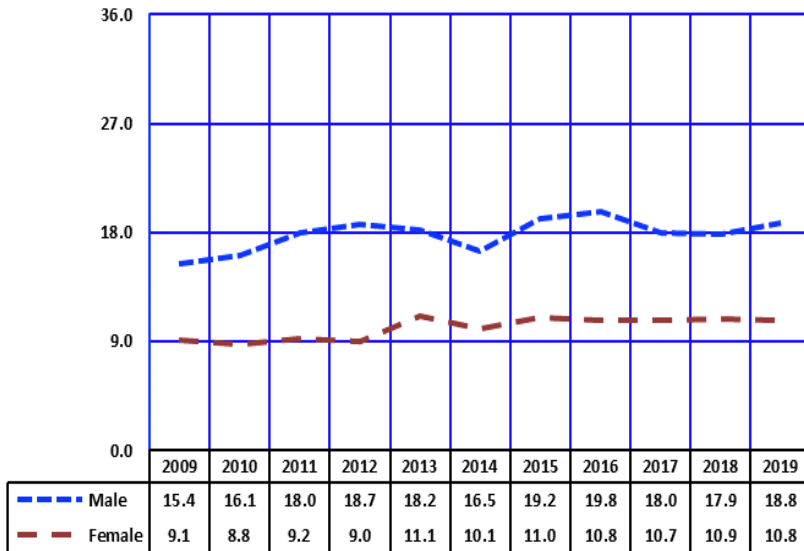
The 2019 age-adjusted mortality rates for suicide varied across the state, from a low rate of 8.1 suicides per 100,000 residents in Graham County to a high of 44.9 suicides per 100,000 residents in Gila County (**Table 5E-11**).



Note: <sup>a</sup> 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<sup>a</sup> for Chronic Liver Disease and Cirrhosis  
by Gender and Year, Arizona, 2009-2019



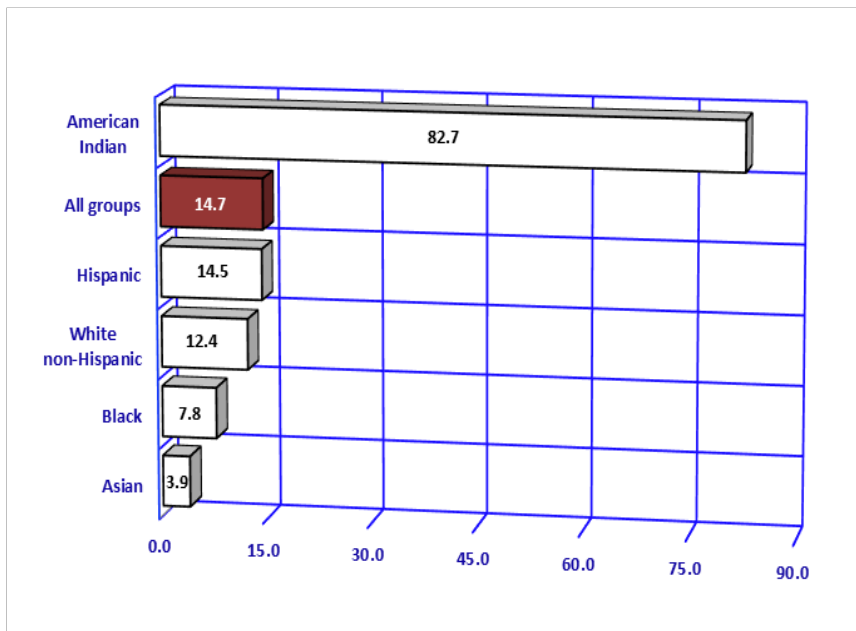
Note: <sup>a</sup> Number of deaths per 100,000 population age-adjusted to the 2000 U.S. standard.

Chronic liver disease and cirrhosis was the 9<sup>th</sup> leading cause of death in Arizona in 2019 (**Figure 2B-1, Table 2B-1**). Among the 1,211 deaths due to chronic liver disease and cirrhosis, 754 (62.3 percent) were males (**Table 2B-4**).

Among females, the age-adjusted mortality rate for chronic liver disease and cirrhosis decreased 0.9 percent from 2018 to 2019. Among males, the mortality rate increased 5.0 percent from 17.9/100,000 in 2018 to 18.8/100,000 in 2019 (**Figure 2B-24, Table 2B-3**).

In 2019, La Paz, Apache, Gila, and Navajo counties had the highest mortality rates for chronic liver disease and cirrhosis (**Table 5E-11**).

**Figure 2B-25**  
Age-adjusted Mortality Rates<sup>a</sup> for Chronic Liver Disease and Cirrhosis  
by Race/Ethnicity, Arizona, 2019



Note: <sup>a</sup> Number of deaths per 100,000 population age-adjusted to the 2000 U.S. standard.

In 2019, chronic liver disease and cirrhosis mortality rate was exceedingly high among American Indians (82.7 deaths per 100,000 population) than any racial/ethnic groups in the state (**Figure 2B-25, Table 2B-4**). Death rate for chronic liver disease and cirrhosis among Asians, Blacks, White non-Hispanics, and Hispanics were all below the state average (14.7 deaths per 100,000 population).

Compared to the median age at death from all causes (76 years), those who died from chronic liver disease and cirrhosis were on average 16 years younger (60 years, **Table 2D-3**). In 2019, the median age at death of American Indians who died from chronic liver disease and cirrhosis was 51 years, which was 9 years younger than all the other race/ethnic groups (**Table 2D-3**).



**TABLE 2B-1  
NUMBER OF DEATHS FOR THE LEADING CAUSES OF MORTALITY BY YEAR, ARIZONA, 2009-2019**

Rank in 2009	Rank in 2019	Cause of death	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
1	1	Diseases of heart	10,151	9,719	10,424	10,366	10,497	9,953	11,274	11,820	12,285	12,410	12,560
2	2	Malignant neoplasms	10,147	10,423	10,543	10,871	11,193	10,600	11,624	11,801	11,917	12,097	12,485
3	3	Accidents (unintentional injury)	2,887	2,834	2,959	2,804	3,137	3,011	3,403	3,899	4,085	4,211	4,522
4	4	Chronic lower respiratory diseases	2,808	2,892	3,143	3,167	3,295	3,185	3,648	3,788	3,779	3,820	3,678
6	5	Alzheimer's disease	2,086	2,314	2,336	2,154	2,384	2,345	2,942	3,081	3,050	3,011	3,045
5	6	Cerebrovascular diseases	2,010	2,051	2,067	2,096	2,047	1,995	2,463	2,536	2,647	2,829	2,848
7	7	Diabetes	1,078	1,372	1,721	1,698	1,744	1,776	2,050	2,013	2,037	2,041	2,170
9	8	Intentional self-harm (suicide)	1,060	1,070	1,113	1,070	1,116	1,124	1,233	1,256	1,304	1,432	1,411
10	9	Chronic liver disease and cirrhosis	818	843	933	971	1,040	984	1,120	1,169	1,122	1,159	1,211
14	10	Essential primary hypertension and hypertensive renal disease	475	498	725	739	711	758	896	1,010	1,018	928	1,009
8	11	Influenza and pneumonia	1,007	729	649	635	724	669	739	859	852	1,113	947
13	12	Parkinson's disease	446	488	545	579	578	569	719	712	749	790	806
12	13	Nephritis, nephrotic syndrome and nephrosis	532	516	409	440	391	353	498	485	535	680	759
15	14	Assault (homicide)	360	404	387	376	383	294	364	416	430	416	409
11	15	Septicemia	528	425	321	319	354	336	436	505	461	382	339
<b>ALL CAUSES</b>			45,065	45,871	47,547	48,459	49,929	51,074	54,152	56,480	57,261	59,206	60,161

Notes: The cause-of-death titles are according to the Tenth Revision of the International Classification of Diseases (ICD-10). The causes of death for 2009-2019 are 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.

**TABLE 2B-2  
AGE-ADJUSTED MORTALITY RATES<sup>a</sup> BY GENDER AND YEAR FOR SELECTED LEADING CAUSES OF DEATH,  
ARIZONA, 2009-2019**

		2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
<b>TOTAL, ALL CAUSES</b>												
	<b>Total</b>	653.2	679.9	699.6	687.2	687.8	676.0	691.3	696.6	679.3	688.6	676.6
	<b>Male</b>	763.9	802.0	817.1	811.0	805.8	791.2	811.5	824.8	800.0	813.4	799.6
	<b>Female</b>	555.1	572.6	595.3	579.2	583.8	572.8	583.3	581.1	568.7	573.5	562.9
<b>CARDIOVASCULAR DISEASE</b>												
	<b>Total</b>	188.8	188.6	201.0	193.3	187.7	171.6	189.0	190.8	189.9	188.4	184.9
	<b>Male</b>	228.1	225.1	239.2	233.6	229.0	206.9	226.7	230.7	228.6	225.2	221.2
	<b>Female</b>	154.9	156.7	168.0	159.1	152.4	140.7	156.1	155.9	155.5	155.6	152.4
<b>-----DISEASES OF HEART</b>												
	<b>Total</b>	145.9	143.3	152.7	145.8	143.0	129.9	141.3	142.5	141.9	140.5	137.3
	<b>Male</b>	183.1	179.8	192.8	184.4	183.6	164.1	177.1	180.5	179.4	176.3	172.5
	<b>Female</b>	114.1	112.2	119.0	113.7	109.2	100.5	110.5	109.8	109.3	109.1	106.3
<b>-----CEREBROVASCULAR DISEASE</b>												
	<b>Total</b>	28.9	30.7	30.6	29.9	28.2	26.2	31.1	30.7	30.7	32.1	31.0
	<b>Male</b>	28.2	28.9	28.0	30.0	27.2	24.8	31.3	29.9	30.7	31.6	30.2
	<b>Female</b>	29.1	31.3	32.3	29.4	28.5	26.8	30.7	30.9	30.2	32.0	31.4
<b>MALIGNANT NEOPLASMS</b>												
	<b>Total</b>	147.2	150.5	151.3	149.8	149.6	136.3	144.0	140.7	136.6	135.9	134.7
	<b>Male</b>	174.9	180.6	179.3	180.3	175.0	160.8	169.0	166.3	161.0	161.8	156.7
	<b>Female</b>	125.8	127.1	129.5	125.9	129.9	116.8	123.8	120.0	116.6	114.7	116.4
<b>CHRONIC LOWER RESPIRATORY DISEASE</b>												
	<b>Total</b>	40.5	42.6	45.9	44.2	44.5	41.1	45.1	45.0	43.0	42.6	39.2
	<b>Male</b>	44.7	48.1	49.7	50.5	48.1	45.8	48.9	47.6	45.3	44.7	41.9
	<b>Female</b>	37.1	38.6	42.8	39.5	41.8	37.5	41.7	42.9	41.0	40.7	37.0
<b>ACCIDENTS (UNINTENTIONAL INJURIES)</b>												
	<b>Total</b>	43.1	43.8	45.5	42.4	46.3	43.3	48.1	53.7	55.3	55.9	59.2
	<b>Male</b>	56.6	56.6	58.3	54.0	60.1	56.7	62.7	73.1	73.7	76.4	82.6
	<b>Female</b>	29.8	31.6	32.6	31.0	32.8	30.1	34.1	34.9	37.0	35.6	36.0
<b>-----MOTOR VEHICLE ACCIDENTS</b>												
	<b>Total</b>	11.6	11.1	12.1	11.4	11.4	10.3	12.6	13.9	13.8	14.1	13.1
	<b>Male</b>	16.8	15.9	17.6	16.8	16.3	14.5	18.0	20.1	19.5	20.0	18.9
	<b>Female</b>	6.5	6.4	6.9	6.3	6.6	6.0	7.2	7.8	8.2	8.3	7.5
<b>INFLUENZA AND PNEUMONIA</b>												
	<b>Total</b>	14.6	10.9	9.7	9.1	10.0	8.9	9.4	10.4	9.9	12.7	10.4
	<b>Male</b>	15.6	12.8	11.5	7.4	11.6	10.4	10.9	11.8	11.1	15.0	12.3
	<b>Female</b>	13.7	9.3	8.2	5.6	8.8	7.7	8.2	9.4	8.9	10.8	8.9

**TABLE 2B-2 (continued)  
AGE-ADJUSTED MORTALITY RATES<sup>a</sup> BY GENDER AND YEAR FOR SELECTED LEADING CAUSES OF DEATH,  
ARIZONA, 2009-2019**

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
<b>ALZHEIMER'S DISEASE</b>											
<b>Total</b>	29.5	35.1	35.2	29.9	33.2	30.9	37.3	37.3	35.2	34.3	33.2
<b>Male</b>	24.5	28.5	28.9	41.5	27.2	25.7	31.1	31.1	29.2	26.7	26.3
<b>Female</b>	32.8	39.3	39.0	52.8	37.2	34.4	41.5	41.5	39.5	39.7	38.3
<b>DIABETES</b>											
<b>Total</b>	15.7	20.1	24.8	23.5	23.6	23.0	25.7	24.5	23.8	23.0	23.9
<b>Male</b>	18.2	24.9	30.3	29.2	29.1	28.9	31.8	31.5	30.1	29.8	30.5
<b>Female</b>	13.5	16.0	20.2	18.6	18.8	17.8	20.4	18.4	18.3	17.1	18.1
<b>CHRONIC LIVER DISEASE AND CIRRHOSIS</b>											
<b>Total</b>	12.2	12.3	13.4	13.6	14.5	13.2	14.9	15.1	14.2	14.2	14.7
<b>Male</b>	15.4	16.1	18.0	18.7	18.2	16.5	19.2	19.8	18.0	17.9	18.8
<b>Female</b>	9.1	8.8	9.2	9.0	11.1	10.1	11.0	10.8	10.7	10.9	10.8
<b>NEPHRITIS, NEPHROTIC SYNDROME, AND NEPHROSIS</b>											
<b>Total</b>	7.7	7.6	6.0	6.2	5.3	4.6	6.3	5.8	6.2	7.7	8.3
<b>Male</b>	9.2	9.0	7.2	8.9	6.1	5.2	7.7	6.9	7.7	9.0	10.3
<b>Female</b>	6.5	6.4	5.1	6.7	4.8	4.2	5.2	4.9	4.9	6.7	6.5
<b>INTENTIONAL SELF-HARM (SUICIDE)</b>											
<b>Total</b>	16.1	16.7	17.2	16.2	17.0	16.5	17.8	17.7	18.0	19.5	18.9
<b>Male</b>	24.6	27.1	27.4	25.9	26.6	25.6	27.5	28.0	28.1	31.5	29.7
<b>Female</b>	8.1	6.7	7.5	7.0	7.7	7.7	8.4	7.9	8.4	7.8	8.3
<b>ASSAULT (HOMICIDE)</b>											
<b>Total</b>	5.5	6.5	6.1	5.9	5.9	4.6	5.6	6.3	6.4	6.1	5.9
<b>Male</b>	8.0	10.5	9.6	8.6	9.2	7.1	8.6	9.9	10.0	9.8	9.1
<b>Female</b>	2.9	2.4	2.6	3.1	2.5	2.1	2.5	2.5	2.8	2.4	2.6
<b>SEPTICEMIA</b>											
<b>Total</b>	7.7	7.4	4.7	4.5	4.8	4.4	5.4	6.2	5.5	4.4	3.8
<b>Male</b>	8.2	10.8	5.4	6.1	5.6	5.0	6.4	7.1	5.9	5.0	4.4
<b>Female</b>	7.3	5.1	4.0	4.8	4.3	4.0	4.6	5.5	5.1	3.9	3.3

Notes: <sup>a</sup> 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.







**TABLE 2B-3 (continued)**  
**AGE-ADJUSTED<sup>a</sup> MORTALITY RATES FOR SELECTED CAUSES OF DEATH BY RACE/ETHNICITY**  
**AND GENDER, ARIZONA, 1990-2019**

	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>																		
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
2010	13.8	16.6	11.4	13.9	16.0	12.1	13.5	19.0	9.2	21.9	28.9	16.0	12.4	19.9	8.0	10.3	22.2	2.6
2011	13.4	15.4	11.6	14.4	15.3	11.4	13.6	16.5	11.2	20.2	12.6	25.6	9.9	12.0	7.4	14.3	16.2	12.7
2012	13.1	15.8	10.7	13.4	16.0	11.2	12.2	17.0	8.3	20.5	23.9	17.4	7.1	7.8	6.3	9.8	8.0	11.4
2013	13.6	15.3	12.3	13.7	15.5	12.2	12.5	14.3	10.9	21.7	19.6	23.0	11.3	7.3	14.0	12.1	13.0	11.7
2014	12.4	14.6	10.5	13.2	15.0	11.5	10.8	15.1	7.4	15.8	18.4	14.3	7.0	9.5	4.7	7.2	8.3	6.3
2015	12.9	15.6	10.5	12.9	15.1	10.9	11.8	16.6	8.0	19.5	25.1	15.0	13.3	18.8	9.6	9.4	17.1	4.9
2016	12.9	15.4	10.6	13.2	15.6	11.2	11.1	14.7	7.8	17.4	17.9	16.1	8.0	7.7	8.3	13.1	10.6	13.8
2017	13.0	16.0	10.2	13.2	16.4	10.3	12.7	16.6	9.5	15.1	13.8	16.1	11.1	14.1	8.4	6.0	11.3	2.4
2018	12.9	15.8	10.3	12.7	14.9	10.7	13.8	20.0	9.0	17.2	26.2	10.8	10.8	16.3	6.9	12.5	18.3	9.0
2019	12.3	14.6	10.1	12.4	15.0	10.0	11.2	12.5	9.8	14.2	17.3	11.3	12.9	17.2	10.4	11.0	10.2	11.6
<b>-----Female breast cancer</b>																		
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
2010	NA	NA	19.2	NA	NA	19.9	NA	NA	18.5	NA	NA	25.8	NA	NA	8.2	NA	NA	12.9
2011	NA	NA	19.7	NA	NA	20.8	NA	NA	12.2	NA	NA	24.1	NA	NA	7.5	NA	NA	15.6
2012	NA	NA	19.2	NA	NA	20.0	NA	NA	14.8	NA	NA	30.3	NA	NA	8.6	NA	NA	15.3
2013	NA	NA	20.7	NA	NA	21.3	NA	NA	19.7	NA	NA	23.3	NA	NA	13.1	NA	NA	11.4
2014	NA	NA	17.9	NA	NA	18.5	NA	NA	16.5	NA	NA	29.4	NA	NA	9.2	NA	NA	6.3
2015	NA	NA	19.2	NA	NA	20.7	NA	NA	12.9	NA	NA	23.1	NA	NA	12.8	NA	NA	13.3
2016	NA	NA	19.4	NA	NA	20.8	NA	NA	13.9	NA	NA	23.0	NA	NA	11.8	NA	NA	13.4
2017	NA	NA	18.2	NA	NA	18.7	NA	NA	13.3	NA	NA	36.7	NA	NA	13.0	NA	NA	14.5
2018	NA	NA	17.6	NA	NA	18.7	NA	NA	13.8	NA	NA	24.9	NA	NA	9.1	NA	NA	17.6
2019	NA	NA	18.8	NA	NA	19.1	NA	NA	15.2	NA	NA	39.3	NA	NA	17.6	NA	NA	13.8

**TABLE 2B-3 (continued)**  
**AGE-ADJUSTED<sup>a</sup> MORTALITY RATES FOR SELECTED CAUSES OF DEATH BY RACE/ETHNICITY**  
**AND GENDER, ARIZONA, 1990-2019**

	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>-----Prostate cancer</b>																		
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
2010	NA	19.1	NA	NA	18.4	NA	NA	23.9	NA	NA	35.2	NA	NA	21.6	NA	NA	12.6	NA
2011	NA	19.8	NA	NA	19.5	NA	NA	20.6	NA	NA	24.1	NA	NA	17.1	NA	NA	5.0	NA
2012	NA	18.9	NA	NA	18.8	NA	NA	22.0	NA	NA	26.7	NA	NA	12.4	NA	NA	9.8	NA
2013	NA	18.2	NA	NA	18.0	NA	NA	17.0	NA	NA	26.7	NA	NA	19.9	NA	NA	18.5	NA
2014	NA	17.0	NA	NA	17.0	NA	NA	15.5	NA	NA	24.0	NA	NA	23.0	NA	NA	7.4	NA
2015	NA	17.6	NA	NA	17.3	NA	NA	17.6	NA	NA	29.6	NA	NA	26.0	NA	NA	10.7	NA
2016	NA	18.8	NA	NA	18.6	NA	NA	19.4	NA	NA	39.5	NA	NA	15.9	NA	NA	6.4	NA
2017	NA	16.8	NA	NA	16.5	NA	NA	16.3	NA	NA	26.3	NA	NA	19.9	NA	NA	9.7	NA
2018	NA	17.4	NA	NA	17.1	NA	NA	15.8	NA	NA	30.5	NA	NA	23.7	NA	NA	12.1	NA
2019	NA	17.4	NA	NA	17.0	NA	NA	16.9	NA	NA	41.9	NA	NA	19.0	NA	NA	9.9	NA
<b>Chronic lower respiratory diseases<sup>b</sup></b>																		
1990	44.4	58.2	35.0	47.7	62.5	37.9	19.9	26.7	15.3	29.7	48.6	15.6	16.4	18.9	14.6	32.6	27.9	32.6
1991	46.4	63.6	35.0	49.4	67.2	37.8	25.6	38.8	16.4	55.1	89.9	27.9	18.3	16.9	19.2	9.1	19.9	0.0
1992	43.9	57.6	34.6	47.3	61.8	37.4	19.0	29.0	12.9	34.6	61.5	15.3	13.6	8.2	17.7	19.6	25.2	15.5
1993	48.5	63.4	38.0	51.3	66.4	40.8	28.4	43.3	17.7	44.9	75.3	21.9	21.4	25.2	18.8	30.3	29.4	31.4
1994	44.6	58.6	35.7	47.5	61.6	38.6	24.0	36.6	16.2	44.1	76.1	24.1	18.4	22.9	14.9	12.7	28.6	0.0
1995	46.9	57.2	39.7	49.4	59.6	42.2	29.6	42.4	20.4	39.6	72.4	20.4	22.9	21.1	24.5	25.7	55.4	2.7
1996	47.1	56.4	40.9	50.9	60.0	44.9	23.2	31.7	17.5	26.3	38.9	15.3	17.3	24.7	11.7	11.6	22.3	3.1
1997	50.1	61.5	42.2	53.9	65.4	46.1	23.2	40.4	12.2	41.8	40.3	42.2	16.7	24.3	10.6	25.7	27.6	24.0
1998	49.2	60.5	41.8	52.6	63.7	45.4	28.1	36.4	22.3	39.7	60.3	26.0	15.2	27.0	6.0	23.0	24.7	21.6
1999	50.1	59.8	43.8	53.6	63.0	47.6	23.1	33.5	16.4	44.9	76.8	26.4	19.2	15.2	22.1	15.5	23.4	9.7
2000	47.4	56.2	41.3	51.1	59.8	44.8	24.4	38.2	15.9	30.4	38.4	26.3	21.9	28.9	17.9	12.7	7.8	16.5
2001	46.9	53.9	42.2	51.0	58.1	46.2	17.7	25.4	12.5	37.9	48.9	32.2	26.8	30.0	24.3	21.4	19.2	23.0
2002	47.0	57.1	40.3	50.4	59.4	44.5	25.2	46.6	11.2	38.3	59.0	21.9	22.3	30.1	17.0	24.5	45.8	9.0
2003	45.4	53.8	40.0	48.3	56.5	42.9	28.7	39.9	22.1	30.3	39.7	23.1	19.4	20.8	18.4	15.5	34.4	2.1
2004	41.9	48.1	37.7	45.1	51.3	41.0	22.7	29.5	17.8	24.9	38.8	14.8	10.8	4.7	15.1	21.6	27.1	14.2
2005	46.8	51.3	43.5	49.6	53.6	46.7	31.6	42.7	24.0	43.9	49.4	37.9	12.0	12.9	11.4	17.9	22.6	13.8
2006	44.3	50.2	40.1	49.2	55.5	44.7	18.3	20.9	16.2	27.3	28.8	25.6	8.4	6.2	10.4	9.9	26.2	0.0
2007	39.2	43.5	36.0	43.7	47.9	40.7	18.8	26.4	13.4	18.7	10.1	26.7	13.0	20.1	8.4	7.5	19.9	6.1
2008	42.1	46.5	38.9	46.7	50.8	43.7	20.5	24.3	18.0	26.0	33.9	19.1	15.8	23.9	9.5	13.7	22.4	8.5
2009	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
2010	42.6	48.1	38.6	47.1	52.2	43.4	18.6	25.4	14.3	27.4	32.2	23.8	21.7	24.1	20.0	12.0	29.5	1.7
2011	45.9	49.7	42.8	55.3	53.3	48.5	19.5	26.5	14.7	34.8	48.5	24.7	14.4	14.7	14.4	17.2	26.4	11.9
2012	44.2	50.5	39.5	49.4	55.5	44.8	20.3	27.1	16.1	35.0	43.4	30.9	18.0	27.4	12.1	14.7	14.3	14.2
2013	44.5	48.1	41.8	49.3	52.5	47.0	20.9	24.6	18.2	46.7	56.4	37.5	15.5	11.7	18.4	19.4	32.0	12.4
2014	41.1	45.8	37.5	45.9	49.7	43.0	21.1	28.7	15.9	34.0	47.4	26.1	12.4	13.7	11.7	17.3	33.8	7.6
2015	45.1	48.9	41.7	50.8	53.7	48.0	21.5	27.9	16.8	34.0	51.8	20.6	14.8	16.5	13.0	18.1	17.5	18.4
2016	45.0	47.6	42.9	50.9	52.7	49.4	20.0	23.2	17.7	43.8	51.5	39.2	19.5	27.2	15.1	11.3	19.4	5.9
2017	43.0	45.3	41.0	48.0	49.7	46.5	19.9	23.7	17.1	28.8	21.3	34.3	22.9	27.4	19.9	20.1	29.6	14.3
2018	42.6	44.7	40.7	48.0	49.2	46.8	18.3	22.7	14.8	38.2	41.4	35.9	20.8	22.2	20.2	17.2	17.2	17.3
2019	39.2	41.9	37.0	43.7	45.1	42.5	20.1	25.9	16.1	34.2	49.7	23.4	18.1	21.5	15.6	11.6	13.2	10.6









**TABLE 2B-4  
NUMBER OF DEATHS AND AGE-ADJUSTED MORTALITY RATES\* FOR SELECTED CAUSES OF DEATH BY RACE/ETHNICITY AND  
GENDER, ARIZONA, 2019**

	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																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
<b>Total, all causes<sup>b</sup></b>	60,161	32,575	27,585	45,467	24,334	21,133	8,488	4,770	3,718	2,207	1,205	1,002	2,599	1,463	1,136	957	492	465	16,934	9,157	7,777	13,412	7,229	6,183	2,017	1,113	904	634	322	312	440	234	206	281	146	135	12,560	7,129	5,431	10,098	5,706	4,392	1,369	806	563	469	239	230	306	172	134	192	110	82	9,026	5,377	3,649	7,301	4,323	2,978	965	602	363	316	172	144	201	121	80	140	84	56	12,485	6,740	5,745	9,728	5,296	4,432	1,668	869	799	458	247	211	329	172	157	238	110	128	2,510	1,315	1,195	2,129	1,104	1,025	210	118	92	88	52	36	20	10	10	48	19	29	1,117	621	496	846	477	369	166	90	76	39	23	16	32	16	16	28	11	17	910 <sup>†</sup>	10 <sup>†</sup>	899	685	9	676	120 <sup>†</sup>	84	120	54	0	54	24	0	24	22	0	22	734	734	0	584	584	0	84	84	0	41	41	0	15	15	0	7	7	0	210 <sup>†</sup>	130 <sup>†</sup>	70 <sup>†</sup>	192	125	67	10 <sup>†</sup>	6	0	0 <sup>†</sup>	0	0	0	0	0	0	0	0	0	84	0	80 <sup>†</sup>	58	0	58	21	0	21	1	0	0	2	0	0	2	0	0	0	4,522	3,039	1,483	2,905	1,880	1,025	947	705	242	200	134	66	357	239	118	59	39	20	1,800 <sup>†</sup>	1,317	480 <sup>†</sup>	1,059	757	302	440	354	86	116	79	37	133	91	42	20 <sup>†</sup>	13	0	0	1,110 <sup>†</sup>	560 <sup>†</sup>	547	930	473	457	111	55	56	16	9	7	36	18	18	10 <sup>†</sup>	7	0	0	970 <sup>†</sup>	692	280 <sup>†</sup>	535	383	152	263	195	68	44	30	14	106	66	40	20 <sup>†</sup>	13	0	0	100 <sup>†</sup>	70 <sup>†</sup>	30 <sup>†</sup>	61	40	21	22	16	6	0	0	0	0	0	0	0	0	0	0	3,678	1,782	1,896	3,253	1,545	1,708	238	129	109	82	49	33	40	21	19	25	12	13	3,045	1,046	1,999	2,535	887	1,648	351	98	253	80	35	45	38	10	28	35	11	24	2,848	1,255	1,593	2,193	956	1,237	416	186	230	89	45	44	81	34	47	50	22	28	2,170	1,293	877	1,281	813	468	485	266	219	110	55	55	223	119	104	45	23	22	1,411	1,098	313	1,031	803	228	214	173	41	46	27	19	84	65	19	21	15	6	1,210 <sup>†</sup>	750 <sup>†</sup>	457	708	442	266	239	166	73	25	16	9	222	123	99	10 <sup>†</sup>	0	0	0	1,009	480	529	712	334	378	163	80	83	57	28	29	47	26	21	27	9	18	947	509	438	692	375	317	129	69	60	36	19	17	61	30	31	22	13	9	810 <sup>†</sup>	530 <sup>†</sup>	280 <sup>†</sup>	664	447	217	96	52	44	10 <sup>†</sup>	0	0	23	13	10	20 <sup>†</sup>	11	0	0	759	433	326	500	295	205	162	85	77	27	16	11	53	26	27	17	11	6	410 <sup>†</sup>	317	90 <sup>†</sup>	142	101	41	138	114	24	58	46	12	61	48	13	10 <sup>†</sup>	6	0	0	340 <sup>†</sup>	180 <sup>†</sup>	160 <sup>†</sup>	216	113	103	69	39	30	10 <sup>†</sup>	0	0	7	36	21	15	10 <sup>†</sup>	0	0	<b>Human immunodeficiency virus (HIV) disease</b>	70 <sup>†</sup>	50 <sup>†</sup>	20 <sup>†</sup>	38	29	9	10 <sup>†</sup>	11	0	0	0	0	10 <sup>†</sup>	0	0	0	0	0	<b>Injury by firearms</b>	1,130 <sup>†</sup>	953	180 <sup>†</sup>	762	639	123	234	199	35	71	56	15	44	37	7	10 <sup>†</sup>	11	0	0	<b>Drug-induced deaths</b>	2,000 <sup>†</sup>	1,397	610 <sup>†</sup>	1,243	837	406	482	379	103	132	85	47	98	60	38	20 <sup>†</sup>	13	0	0	<b>Opioid-induced deaths</b>	1,290 <sup>†</sup>	919	370 <sup>†</sup>	787	551	236	335	267	68	82	47	35	58	37	21	10 <sup>†</sup>	10	0	0	<b>Alcohol-induced deaths</b>	1,280 <sup>†</sup>	870 <sup>†</sup>	400 <sup>†</sup>	764	508	256	202	163	39	24	14	10	269	178	91	0 <sup>†</sup>	0	0	0
<b>Human immunodeficiency virus (HIV) disease</b>	70 <sup>†</sup>	50 <sup>†</sup>	20 <sup>†</sup>	38	29	9	10 <sup>†</sup>	11	0	0	0	0	10 <sup>†</sup>	0	0	0	0	0	<b>Injury by firearms</b>	1,130 <sup>†</sup>	953	180 <sup>†</sup>	762	639	123	234	199	35	71	56	15	44	37	7	10 <sup>†</sup>	11	0	0	<b>Drug-induced deaths</b>	2,000 <sup>†</sup>	1,397	610 <sup>†</sup>	1,243	837	406	482	379	103	132	85	47	98	60	38	20 <sup>†</sup>	13	0	0	<b>Opioid-induced deaths</b>	1,290 <sup>†</sup>	919	370 <sup>†</sup>	787	551	236	335	267	68	82	47	35	58	37	21	10 <sup>†</sup>	10	0	0	<b>Alcohol-induced deaths</b>	1,280 <sup>†</sup>	870 <sup>†</sup>	400 <sup>†</sup>	764	508	256	202	163	39	24	14	10	269	178	91	0 <sup>†</sup>	0	0	0																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
<b>Injury by firearms</b>	1,130 <sup>†</sup>	953	180 <sup>†</sup>	762	639	123	234	199	35	71	56	15	44	37	7	10 <sup>†</sup>	11	0	0	<b>Drug-induced deaths</b>	2,000 <sup>†</sup>	1,397	610 <sup>†</sup>	1,243	837	406	482	379	103	132	85	47	98	60	38	20 <sup>†</sup>	13	0	0	<b>Opioid-induced deaths</b>	1,290 <sup>†</sup>	919	370 <sup>†</sup>	787	551	236	335	267	68	82	47	35	58	37	21	10 <sup>†</sup>	10	0	0	<b>Alcohol-induced deaths</b>	1,280 <sup>†</sup>	870 <sup>†</sup>	400 <sup>†</sup>	764	508	256	202	163	39	24	14	10	269	178	91	0 <sup>†</sup>	0	0	0																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
<b>Drug-induced deaths</b>	2,000 <sup>†</sup>	1,397	610 <sup>†</sup>	1,243	837	406	482	379	103	132	85	47	98	60	38	20 <sup>†</sup>	13	0	0	<b>Opioid-induced deaths</b>	1,290 <sup>†</sup>	919	370 <sup>†</sup>	787	551	236	335	267	68	82	47	35	58	37	21	10 <sup>†</sup>	10	0	0	<b>Alcohol-induced deaths</b>	1,280 <sup>†</sup>	870 <sup>†</sup>	400 <sup>†</sup>	764	508	256	202	163	39	24	14	10	269	178	91	0 <sup>†</sup>	0	0	0																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
<b>Opioid-induced deaths</b>	1,290 <sup>†</sup>	919	370 <sup>†</sup>	787	551	236	335	267	68	82	47	35	58	37	21	10 <sup>†</sup>	10	0	0	<b>Alcohol-induced deaths</b>	1,280 <sup>†</sup>	870 <sup>†</sup>	400 <sup>†</sup>	764	508	256	202	163	39	24	14	10	269	178	91	0 <sup>†</sup>	0	0	0																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
<b>Alcohol-induced deaths</b>	1,280 <sup>†</sup>	870 <sup>†</sup>	400 <sup>†</sup>	764	508	256	202	163	39	24	14	10	269	178	91	0 <sup>†</sup>	0	0	0																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		

**TABLE 2B-4 (continued)  
NUMBER OF DEATHS AND AGE-ADJUSTED MORTALITY RATES<sup>a</sup> FOR SELECTED CAUSES OF DEATH BY RACE/ETHNICITY AND GENDER, ARIZONA, 2019**

	AGE-ADJUSTED MORTALITY RATES <sup>a</sup>																	
	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>Total, all causes</b>	676.6	799.6	562.9	674.5	792.5	563.3	602.8	720.7	500.0	841.5	970.2	727.5	1051.0	1311.8	836.8	421.6	519.6	351.0
<b>Major cardiovascular diseases</b>	184.9	221.2	152.4	185.9	221.9	152.9	160.4	196.4	131.0	254.7	270.6	237.7	192.7	238.6	156.7	128.0	159.5	104.4
<b>Diseases of heart</b>	137.3	172.5	106.3	140.4	175.7	108.5	107.9	141.6	81.1	188.3	201.7	175.5	132.8	176.0	100.6	86.7	118.0	63.8
Coronary heart disease	98.2	129.4	71.1	101.0	132.5	73.1	75.6	104.0	52.9	128.5	147.6	112.2	87.8	125.0	60.5	62.2	88.9	42.9
<b>Malignant neoplasms</b>	134.7	156.7	116.4	136.9	158.3	118.6	118.3	137.3	103.7	173.5	210.0	147.1	132.3	162.6	112.5	98.4	113.1	89.8
Malignant neoplasm of trachea, bronchus and lung	26.2	29.7	23.3	28.6	31.7	25.9	16.3	20.9	12.8	33.1	41.4	25.9	8.1	9.3	7.3	20.9	19.4	21.7
Malignant neoplasm of colon, rectum, and anus	12.3	14.6	10.1	12.4	15.0	10.0	11.2	12.5	9.8	14.2	17.3	11.3	12.9	17.2	10.4	11.0	10.2	11.6
Malignant neoplasm of breast	10.1	0.3	18.8	10.2	0.2	19.1	8.6	**	15.2	20.9	0.0	39.3	9.7	0.0	17.6	7.9	0.0	13.8
Malignant neoplasm of prostate	7.8	17.4	0.0	7.8	17.0	0.0	7.1	16.9	0.0	18.1	41.9	0.0	7.3	19.0	0.0	3.7	9.9	0.0
Malignant melanoma of skin	2.3	3.1	1.6	2.8	3.8	2.0	0.7	1.0	**	**	0.0	**	**	**	0.0	0.0	0.0	0.0
Malignant neoplasm of cervix uteri	1.0	0.0	2.0	1.1	0.0	2.2	1.2	0.0	2.3	**	0.0	**	**	0.0	**	**	0.0	**
<b>Accidents (unintentional injury)</b>	59.2	82.6	36.0	60.5	83.0	38.0	48.3	70.8	26.1	60.4	80.0	40.3	129.4	183.3	81.6	22.9	31.5	15.0
Accidental poisoning	25.8	37.7	13.7	28.3	40.2	16.0	19.4	30.7	7.8	33.6	44.3	22.0	46.1	66.1	28.1	6.1	9.0	**
Motor vehicle accidents	13.1	18.9	7.5	12.4	18.0	6.9	12.5	19.1	6.3	12.0	16.2	7.8	36.7	48.4	26.5	6.1	10.4	**
Falls	12.2	13.9	10.6	12.8	14.5	11.1	9.3	9.6	8.6	7.1	9.5	5.3	15.8	18.5	13.7	6.2	**	6.2
Accidental drowning and submersion	1.3	1.8	0.7	1.2	1.5	0.8	0.9	1.3	0.5	**	**	0.0	3.7	6.3	**	**	**	0.0
<b>Chronic lower respiratory diseases</b>	39.2	41.9	37.0	43.7	45.1	42.5	20.1	25.9	16.1	34.2	49.7	23.4	18.1	21.5	15.6	11.6	13.2	10.6
<b>Alzheimer's disease</b>	33.2	26.3	38.3	33.6	26.7	38.9	33.0	22.5	39.7	44.8	48.1	42.1	20.4	14.3	23.9	18.8	15.6	20.8
<b>Cerebrovascular diseases</b>	31.0	30.2	31.4	30.0	28.8	30.7	33.9	33.7	33.5	35.7	38.6	32.7	35.7	34.9	35.8	23.2	25.0	21.7
Diabetes	23.9	30.5	18.1	18.9	25.6	12.9	34.6	42.0	28.8	43.6	44.6	42.0	91.4	106.3	78.5	19.5	23.4	16.6
Intentional self-harm (suicide)	18.9	29.7	8.3	23.1	36.4	10.1	9.9	16.4	3.7	12.5	14.1	11.1	26.8	41.8	12.4	7.3	11.5	3.9
<b>Chronic liver disease and cirrhosis</b>	14.7	18.8	10.8	12.4	15.6	9.3	14.5	21.0	8.7	7.8	9.9	6.0	82.7	98.2	68.8	3.9	**	5.4
<b>Essential (primary) hypertension and hypertensive renal disease</b>	11.0	11.6	10.3	9.8	10.2	9.2	13.3	14.3	12.3	23.7	23.5	22.7	21.4	25.2	17.3	13.1	11.2	14.1
<b>Influenza and pneumonia</b>	10.4	12.3	8.9	9.7	11.4	8.2	9.9	12.3	8.1	12.6	12.5	11.8	27.6	32.6	24.4	9.9	16.2	6.4
<b>Parkinson's disease</b>	8.7	12.8	5.4	8.8	13.1	5.3	8.7	11.3	6.7	3.5	**	**	11.6	17.7	7.9	7.5	15.0	**
<b>Nephritis, nephrotic syndrome and nephrosis</b>	8.3	10.3	6.5	7.0	8.9	5.3	12.2	13.8	10.7	10.7	15.3	7.6	23.3	26.1	20.9	7.5	11.9	4.3
<b>Assault (homicide)</b>	5.9	9.1	2.6	3.7	5.5	1.9	5.8	9.3	2.1	15.2	**	6.6	20.3	32.6	8.6	2.3	**	**
<b>Septicemia</b>	3.8	4.4	3.3	3.1	3.5	2.8	4.4	5.3	3.7	3.8	3.1	4.5	14.0	19.6	9.6	2.4	2.4	**
<b>Human immunodeficiency virus (HIV) disease</b>	0.9	1.5	0.4	0.8	1.2	0.5	0.8	1.2	**	3.3	5.3	**	**	**	**	0.0	0.0	0.0
<b>Injury by firearms</b>	15.3	25.9	5.0	17.2	29.0	5.7	10.2	17.6	2.9	18.7	28.5	8.2	14.9	25.5	4.7	4.0	7.6	**
<b>Drug-induced deaths</b>	28.4	39.8	16.9	32.0	43.6	20.2	21.4	33.1	9.5	38.6	47.5	28.6	34.3	43.2	25.7	6.1	9.0	**
<b>Opioid-induced deaths</b>	18.6	26.5	10.4	21.5	30.4	12.3	14.4	22.3	6.1	23.4	25.2	21.1	20.0	25.2	14.6	4.7	6.8	**
<b>Alcohol-induced deaths</b>	16.2	22.6	10.1	14.9	20.0	10.1	11.3	19.4	4.1	7.5	8.9	6.3	96.5	136.2	61.8	**	**	**

Notes: \* Cell suppressed due to count less than 6; \*\* Cell suppressed due to rate/ratio/percent based on non-zero count less than 6; † Sum rounded to nearest tens unit due to addend less than 6; <sup>a</sup> The number of deaths per 100,000 resident population age-adjusted to the 2000 U.S. standard; The rates for cervical cancer are per 100,000 females; The rate for prostate cancer is per 100,000 males; <sup>b</sup> Includes records with unknown gender and race/ethnicity.

**TABLE 2B-5  
AGE-ADJUSTED MORTALITY RATES<sup>a</sup> FOR SELECTED CAUSES OF DEATH BY URBAN/RURAL AREA AND GENDER,  
ARIZONA, 2019**

	Arizona			Urban			Rural		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
	<b>Total, all causes</b>	676.6	799.6	562.9	657.3	775.1	549.4	765.8	909.2
<b>Major cardiovascular diseases</b>	184.9	221.2	152.4	182.8	217.9	151.7	193.2	233.0	155.9
<b>Diseases of heart</b>	137.3	172.5	106.3	134.9	168.9	105.4	146.7	186.2	110.2
Coronary heart disease	98.2	129.4	71.1	96.0	126.3	70.1	107.0	141.5	75.5
<b>Malignant neoplasms</b>	134.7	156.7	116.4	131.4	153.4	113.5	147.8	168.9	129.1
Malignant neoplasm of trachea, bronchus and lung	26.2	29.7	23.3	25.2	29.2	21.9	30.2	31.1	29.5
Malignant neoplasm of colon, rectum, and anus	12.3	14.6	10.1	11.7	14.0	9.7	14.1	16.7	11.7
Malignant neoplasm of breast	10.1	0.3	18.8	10.1	0.3	18.6	10.3	0.0	19.9
Malignant neoplasm of prostate	7.8	17.4	0.0	7.3	16.6	0.0	9.7	20.7	0.0
Malignant melanoma of skin	2.3	3.1	1.6	2.2	3.1	1.5	2.5	3.4	1.6
Malignant neoplasm of cervix uteri	1.0	0.0	2.0	1.1	0.0	2.1	0.9	0.0	1.8
<b>Accidents (unintentional injury)</b>	59.2	82.6	36.0	56.4	79.1	34.0	72.3	97.2	47.3
Accidental poisoning	25.8	37.7	13.7	25.8	38.2	13.3	24.2	31.6	16.5
Motor vehicle accidents	13.1	18.9	7.5	11.6	16.9	6.3	21.1	28.3	13.8
Falls	12.2	13.9	10.6	12.3	14.3	10.6	11.7	12.7	10.6
Accidental drowning and submersion	1.3	1.8	0.7	1.1	1.6	0.6	2.3	3.3	1.3
<b>Chronic lower respiratory diseases</b>	39.2	41.9	37.0	36.3	38.4	34.7	50.4	54.5	46.7
<b>Alzheimer's disease</b>	33.2	26.3	38.3	34.3	27.7	39.1	28.2	20.6	34.5
<b>Cerebrovascular diseases</b>	31.0	30.2	31.4	30.7	29.8	31.1	32.5	32.0	32.6
<b>Diabetes</b>	23.9	30.5	18.1	23.5	29.9	18.0	26.3	34.3	18.8
<b>Intentional self-harm (suicide)</b>	18.9	29.7	8.3	17.2	26.9	7.8	28.7	45.6	11.6
<b>Chronic liver disease and cirrhosis</b>	14.7	18.8	10.8	12.5	16.7	8.5	27.2	30.7	23.7
<b>Essential (primary) hypertension and hypertensive renal disease</b>	11.0	11.6	10.3	11.5	12.1	10.7	8.9	8.9	8.6
<b>Influenza and pneumonia</b>	10.4	12.3	8.9	10.2	12.0	8.6	11.5	13.9	9.5
<b>Parkinson's disease</b>	8.7	12.8	5.4	8.9	13.4	5.4	7.9	10.8	5.5
<b>Nephritis, nephrotic syndrome and nephrosis</b>	8.3	10.3	6.5	7.8	9.5	6.4	10.3	14.1	6.7
<b>Assault (homicide)</b>	5.9	9.1	2.6	5.9	9.2	2.5	5.4	7.3	3.3
<b>Septicemia</b>	3.8	4.4	3.3	3.3	3.7	3.1	5.7	7.8	3.8
<b>(HIV) disease</b>	0.9	1.5	0.4	0.9	1.4	0.4	1.1	1.8	0.3
<b>Injury by firearms</b>	15.3	25.9	5.0	14.6	24.7	4.7	18.6	30.3	6.9
<b>Drug-induced deaths</b>	28.4	39.8	16.9	28.6	40.7	16.4	25.5	31.2	19.5
<b>Opioid-induced deaths</b>	18.6	26.5	10.4	19.3	27.9	10.6	12.8	16.4	9.0
<b>Alcohol-induced deaths</b>	16.2	22.6	10.1	13.2	18.9	7.8	34.3	44.9	23.9

Notes: <sup>a</sup> The number of deaths per 100,000 population in specified group age-adjusted to the 2000 standard U.S.; The rates for cervical cancer are per 100,000 females; the rates for prostate cancer are per 100,000 males.

**TABLE 2B-6  
DEATHS AND DEATH RATES BY GENDER FOR SELECTED CAUSES,  
ARIZONA RESIDENTS, 2019**

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<sup>a</sup></b>	60,161	32,575	27,585	836.8	911.3	763.2
Salmonella infections	0†	0	*	**	0.0	**
Shigellosis and amebiasis	0	0	0	0.0	0.0	0.0
Certain other intestinal infections	186	87	99	2.6	2.4	2.7
Enterocolitis due to Clostridium difficile	112	49	63	1.6	1.4	1.7
Tuberculosis	10†	6	*	0.1	0.2	**
Respiratory tuberculosis	10†	*	*	**	**	**
Other tuberculosis	10†	*	*	**	**	**
Whooping cough	0	0	0	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
Septicemia	339	180	159	4.7	5.0	4.4
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	109	68	41	1.5	1.9	1.1
Human immunodeficiency virus (HIV) disease	68	53	15	0.9	1.5	0.4
Malaria	0	0	0	0.0	0.0	0.0
Other and unspecified infectious and parasitic diseases	237	138	99	3.3	3.9	2.7
Malignant neoplasms	12,485	6,740	5,745	173.7	188.5	158.9
Malignant neoplasm of lip, oral cavity and pharynx	187	141	46	2.6	3.9	1.3
Malignant neoplasm of esophagus	332	270	62	4.6	7.6	1.7
Malignant neoplasm of stomach	226	134	92	3.1	3.7	2.5
Malignant neoplasm of colon, rectum, and anus	1,117	621	496	15.5	17.4	13.7
Malignant neoplasm of liver and intrahepatic bile ducts	672	451	221	9.3	12.6	6.1
Malignant neoplasm of pancreas	1,018	541	477	14.2	15.1	13.2
Malignant neoplasm of larynx	58	49	9	0.8	1.4	0.2
Malignant neoplasm of trachea, bronchus and lung	2,510	1,315	1,195	34.9	36.8	33.1
Malignant melanoma of skin	206	133	73	2.9	3.7	2.0
Malignant neoplasm of breast	911	12	899	12.7	0.3	24.9
Malignant neoplasm of cervix uteri	84	0	84	1.2	0.0	2.3
Malignant neoplasm of corpus uteri and uterus, part unspecified	203	0	203	2.8	0.0	5.6
Malignant neoplasm of ovary	302	0	302	4.2	0.0	8.4
Malignant neoplasm of prostate	734	734	0	10.2	20.5	0.0
Malignant neoplasm of kidney and renal pelvis	308	202	106	4.3	5.7	2.9
Malignant neoplasm of bladder	362	267	95	5.0	7.5	2.6
Malignant neoplasm of meninges, brain and other parts of central nervous system	379	220	159	5.3	6.2	4.4
Malignant neoplasm of lymphoid, hematopoietic and related tissue	1,242	731	511	17.3	20.4	14.1
Hodgkin's disease	22	14	8	0.3	0.4	0.2
Non-Hodgkin's lymphoma	409	252	157	5.7	7.0	4.3
Leukemia	546	311	235	7.6	8.7	6.5
Multiple myeloma and immunoproliferative neoplasms	258	150	108	3.6	4.2	3.0
Other and unspecified malignant neoplasms of lymphoid tissue	10†	*	*	0.1	**	**
All other and unspecified malignant neoplasm	1,634	919	715	22.7	25.7	19.8
In situ neoplasms	383	207	176	5.3	5.8	4.9
Anemias	69	34	35	1.0	1.0	1.0
Diabetes	2,170	1,293	877	30.2	36.2	24.3

**TABLE 2B-6 (continued)**  
**DEATHS AND DEATH RATES BY GENDER FOR SELECTED CAUSES,**  
**ARIZONA RESIDENTS, 2019**

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	415	140	275	5.8	3.9	7.6
Malnutrition	387	132	255	5.4	3.7	7.1
Other nutritional deficiencies	28	8	20	0.4	0.2	0.6
Obesity	183	95	88	2.5	2.7	2.4
Meningitis	20†	11	*	0.2	0.3	**
Parkinson's disease	806	527	279	11.2	14.7	7.7
Alzheimer's disease	3,045	1,046	1,999	42.4	29.3	55.3
Major cardiovascular diseases	16,934	9,157	7,777	235.6	256.2	215.2
Diseases of heart	12,560	7,129	5,431	174.7	199.4	150.3
Acute rheumatic fever and chronic rheumatic heart disease	71	31	40	1.0	0.9	1.1
Hypertensive heart disease	1,409	735	674	19.6	20.6	18.6
Hypertensive heart and renal disease	165	77	88	2.3	2.2	2.4
Ischemic heart disease	7,617	4,642	2,975	106.0	129.9	82.3
Acute myocardial infarction	1,599	975	624	22.2	27.3	17.3
Other acute ischemic heart disease	52	29	23	0.7	0.8	0.6
Other forms of chronic ischemic heart disease	5,966	3,638	2,328	83.0	101.8	64.4
Atherosclerotic cardiovascular disease	1,542	1,003	539	21.4	28.1	14.9
All other forms of chronic ischemic heart disease	4,424	2,635	1,789	61.5	73.7	49.5
Other heart diseases	3,298	1,644	1,654	45.9	46.0	45.8
Acute and subacute endocarditis	42	29	13	0.6	0.8	0.4
Diseases of pericardium and acute myocarditis	24	14	10	0.3	0.4	0.3
Heart failure	838	409	429	11.7	11.4	11.9
All other forms of heart disease	2,394	1,192	1,202	33.3	33.3	33.3
Essential (primary) hypertension and hypertensive renal disease	1,009	480	529	14.0	13.4	14.6
Cerebrovascular diseases	2,848	1,255	1,593	39.6	35.1	44.1
Atherosclerosis	81	40	41	1.1	1.1	1.1
Other diseases of circulatory system	436	253	183	6.1	7.1	5.1
Aortic aneurysm and dissection	211	142	69	2.9	4.0	1.9
Other disease of arteries, arterioles and capillaries	225	111	114	3.1	3.1	3.2
Other disorders of circulatory system	120	65	55	1.7	1.8	1.5
Influenza and pneumonia	947	509	438	13.2	14.2	12.1
Influenza	82	41	41	1.1	1.1	1.1
Pneumonia	865	468	397	12.0	13.1	11.0
Other acute lower respiratory infections	10†	*	*	0.1	**	**
Acute bronchiolitis	10†	*	*	0.1	**	**
Unspecified acute lower respiratory infection	0†	0	*	**	0.0	**
Chronic lower respiratory diseases	3,678	1,782	1,896	51.2	49.9	52.5
Bronchitis, chronic and unspecified	10†	*	*	**	**	**
Emphysema	160	85	75	2.2	2.4	2.1
Asthma	87	39	48	1.2	1.1	1.3
Other chronic lower respiratory diseases	3,426	1,657	1,769	47.7	46.4	48.9
Pneumoconioses and chemical effects	13	13	0	0.2	0.4	0.0
Pneumonitis due to solids and liquids	225	129	96	3.1	3.6	2.7
Other disease of respiratory system	881	493	388	12.3	13.8	10.7
Peptic ulcer	115	65	50	1.6	1.8	1.4
Diseases of appendix	10†	*	*	0.1	**	**
Hernia	53	20	33	0.7	0.6	0.9



**TABLE 2B-6 (continued)  
DEATHS AND DEATH RATES BY GENDER FOR SELECTED CAUSES,  
ARIZONA RESIDENTS, 2019**

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	1,211	754	457	16.8	21.1	12.6
Alcoholic liver disease	769	491	278	10.7	13.7	7.7
Other chronic liver disease and cirrhosis	442	263	179	6.1	7.4	5.0
Cholelithiasis and other disorders of gallbladder	78	36	42	1.1	1.0	1.2
Nephritis, nephrotic syndrome and nephrosis	759	433	326	10.6	12.1	9.0
Acute and rapidly progressive nephritic and nephrotic syndrome	0†	0	*	**	0.0	**
Chronic glomerulonephritis	10†	*	*	0.1	**	**
Renal failure	747	430	317	10.4	12.0	8.8
Others disorders of kidney	0†	*	0	**	**	0.0
Infections of kidney	20	8	12	0.3	0.2	0.3
Hyperplasia of prostate	13	13	0	0.2	0.4	0.0
Inflammatory diseases of female pelvic organs	6	0	6	0.1	0.0	0.2
Pregnancy, childbirth and the puerperium	42	0	42	0.6	0.0	1.2
Pregnancy with abortive outcome	0	0	0	0.0	0.0	0.0
Other complications of pregnancy, childbirth and the puerperium	42	0	42	0.6	0.0	1.2
Perinatal conditions	183	112	71	2.5	3.1	2.0
Congenital malformations	199	102	97	2.8	2.9	2.7
Symptoms, signs, abnormal findings <sup>a</sup>	1,017	479	537	14.1	13.4	14.9
Total accidents	4,522	3,039	1,483	62.9	85.0	41.0
Transport accidents	1,055	764	291	14.7	21.4	8.1
Motor vehicle accidents	970	692	278	13.5	19.4	7.7
Other land transport accidents	38	32	6	0.5	0.9	0.2
Water, air, space	47	40	7	0.7	1.1	0.2
Nontransport accidents	3,467	2,275	1,192	48.2	63.6	33.0
Falls	1,109	562	547	15.4	15.7	15.1
Accidental discharge of firearms	10†	11	*	0.2	0.3	**
Accidental drowning and submersion	100	71	29	1.4	2.0	0.8
Accidental exposure to smoke, fire and flames	43	24	19	0.6	0.7	0.5
Accidental poisoning	1,797	1,317	480	25.0	36.8	13.3
Other and unspecified non-transport accidents	405	290	115	5.6	8.1	3.2
Intentional self-harm (suicide)	1,411	1,098	313	19.6	30.7	8.7
By discharge of firearms	808	687	121	11.2	19.2	3.3
By other means	603	411	192	8.4	11.5	5.3
Assault (homicide)	409	317	92	5.7	8.9	2.5
By discharge of firearms	285	229	56	4.0	6.4	1.5
By other means	124	88	36	1.7	2.5	1.0
Legal intervention	14	14	0	0.2	0.4	0.0
Events of undetermined intent	144	91	53	2.0	2.5	1.5
Discharge of firearms	20†	14	*	0.2	0.4	**
Other and unspecified events of undetermined intent	128	77	51	1.8	2.2	1.4
Operations of war	0	0	0	0.0	0.0	0.0
Complications of medical and surgical care	115	55	60	1.6	1.5	1.7
Injury by firearms	1,134	953	181	15.8	26.7	5.0
Drug-induced deaths	2,004	1,397	607	27.9	39.1	16.8
Opioid-induced deaths	1,286	919	367	17.9	25.7	10.2
Alcohol-induced deaths	1,275	872	403	17.7	24.4	11.1

Notes: \* Cell suppressed due to count less than 6; \*\* Cell suppressed due to rate/ratio/percent based on non-zero count less than 6; † Sum rounded to nearest tens unit due to addend less than 6; <sup>a</sup> Includes records with unknown gender; 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, 2009-2019**

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
<b>ALL FORMS OF HEART DISEASE</b>	<b>TOTAL</b>	10,151	9,719	10,423	10,366	10,497	9,953	11,274	11,820	12,285	12,410	12,560
	<b>Male</b>	5,558	5,351	5,748	5,731	5,910	5,575	6,286	6,702	6,973	7,030	7,129
	<b>Female</b>	4,593	4,368	4,675	4,635	4,587	4,378	4,988	5,118	5,312	5,380	5,431
<b>Acute rheumatic fever and chronic rheumatic heart disease</b>	<b>TOTAL</b>	51	42	69	51	64	74	52	77	79	98	71
	<b>Male</b>	16	15	22	19	17	26	20	33	27	41	31
	<b>Female</b>	35	27	47	32	47	48	32	44	52	57	40
<b>Hypertensive heart and renal disease</b>	<b>TOTAL</b>	35	36	49	51	49	65	71	111	147	153	165
	<b>Male</b>	18	16	22	28	27	31	36	56	73	81	77
	<b>Female</b>	17	20	27	23	22	34	35	55	74	72	88
<b>Ischemic heart disease</b>	<b>TOTAL</b>	7,372	7,043	7,498	7,294	7,159	6,650	7,264	7,734	7,814	7,540	7,617
	<b>Male</b>	4,233	4,076	4,409	4,279	4,259	3,957	4,391	4,703	4,829	4,670	4,642
	<b>Female</b>	3,139	2,967	3,089	3,015	2,900	2,693	2,873	3,031	2,985	2,870	2,975
<b>Hypertensive heart disease</b>	<b>TOTAL</b>	698	644	739	761	943	991	1,118	1,114	1,122	1,400	1,409
	<b>Male</b>	340	302	348	375	462	491	517	554	526	711	735
	<b>Female</b>	358	342	391	386	481	500	601	560	596	689	674
<b>Other heart diseases</b>	<b>TOTAL</b>	1,995	1,954	2,069	2,209	2,282	2,173	2,769	2,784	3,123	3,219	3,298
	<b>Male</b>	951	942	947	1,030	1,145	1,070	1,322	1,356	1,518	1,527	1,644
	<b>Female</b>	1,044	1,012	1,121	1,179	1,137	1,103	1,447	1,428	1,605	1,692	1,654

**TABLE 2B-8  
NUMBER OF DEATHS FOR SELECTED SUBCATEGORIES OF MALIGNANT NEOPLASMS BY GENDER AND YEAR,  
ARIZONA, 2009-2019**

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
<b>ALL CANCERS<sup>a</sup></b>											
<b>TOTAL<sup>b</sup></b>	10,147	10,423	10,543	10,871	11,193	10,600	11,624	11,801	11,917	12,097	12,485
Male	5,432	5,639	5,639	5,932	5,950	5,731	6,263	6,429	6,493	6,675	6,740
Female	4,715	4,784	4,903	4,939	5,243	4,869	5,361	5,372	5,424	5,422	5,745
<b>ICD-9 140-149/ICD-10 C00-C14 - Malignant neoplasm of lip, oral cavity and pharynx (oropharyngeal cancer)</b>											
<b>TOTAL</b>	125	134	132	144	150	137	160	205	180	165	187
Male	89	98	105	106	101	98	109	157	128	127	141
Female	36	36	27	38	49	39	51	48	52	38	46
<b>ICD-9 150/ICD-10 C15 - Malignant neoplasm of esophagus</b>											
<b>TOTAL</b>	266	273	288	325	320	286	303	310	333	332	332
Male	214	220	232	260	257	230	249	246	273	271	270
Female	52	53	56	65	63	56	54	64	60	61	62
<b>ICD-9 151/ICD-10 C16 - Malignant neoplasm of stomach</b>											
<b>TOTAL</b>	179	199	211	204	202	186	211	226	203	236	226
Male	105	123	131	118	122	109	121	128	124	134	134
Female	74	76	80	86	80	77	90	98	79	102	92
<b>ICD-9 153, 154/ICD-10 C18-C21 - Malignant neoplasm of colon, rectum, rectosigmoid junction and anus</b>											
<b>TOTAL</b>	887	952	927	946	997	953	1,022	1,069	1,118	1,126	1,117
Male	463	520	482	523	510	510	568	591	639	641	621
Female	424	432	445	423	487	443	454	478	479	485	496
<b>ICD-9 157/ICD-10 C25 - Malignant neoplasm of pancreas</b>											
<b>TOTAL</b>	622	707	708	813	755	769	852	901	914	952	1,018
Male	304	373	355	450	392	400	461	494	484	513	541
Female	318	334	353	363	363	369	391	407	430	439	477
<b>ICD-9 162/ICD-10 C33-C34 - Malignant neoplasm of trachea, bronchus and lung</b>											
<b>TOTAL</b>	2,691	2,655	2,654	2,772	2,763	2,543	2,885	2,689	2,754	2,640	2,510
Male	1,480	1,465	1,474	1,512	1,485	1,385	1,533	1,452	1,487	1,436	1,315
Female	1,211	1,190	1,180	1,260	1,278	1,158	1,352	1,237	1,267	1,204	1,195
<b>ICD-9 172/ICD-10 C43 - Malignant melanoma of skin</b>											
<b>TOTAL</b>	226	191	187	216	222	215	213	191	190	209	206
Male	160	133	125	147	137	147	142	131	129	150	133
Female	66	58	62	69	85	68	71	60	61	59	73
<b>ICD-9 174,175/ICD-10 C50 - Malignant neoplasm of breast</b>											
<b>TOTAL</b>	716	732	747	740 <sup>+</sup>	836	729	810 <sup>+</sup>	853	834	815	911
Male	8	12	6	*	9	6	*	9	8	10	12
Female	708	720	741	740	827	723	809	844	826	805	899

**TABLE 2B-8 (continued)  
NUMBER OF DEATHS FOR SELECTED SUBCATEGORIES OF MALIGNANT NEOPLASMS BY GENDER AND YEAR,  
ARIZONA, 2009-2019**

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
<b>ICD-9 180/ICD-10 C53 - Malignant neoplasm of cervix uteri</b>	TOTAL	64	68	72	73	86	75	84	82	78	78	84
	Female	64	68	72	73	86	75	84	82	78	78	84
<b>ICD-9 179, 182/ ICD-10 C54-C55 - Malignant neoplasm of body of uterus and of uterus, part unspecified</b>	TOTAL	108	138	159	131	140	176	180	168	200	180	203
	Female	108	138	159	131	140	176	180	168	200	180	203
<b>ICD-9 185/ICD-10 C61 - Malignant neoplasm of prostate</b>	TOTAL	551	549	574	581	570	572	633	697	659	695	734
	Male	551	549	574	581	570	572	633	697	659	695	734
<b>ICD-9 188/ICD-10 C67 - Malignant neoplasm of bladder</b>	TOTAL	264	247	355	316	293	305	355	367	362	358	362
	Male	206	183	245	244	221	241	255	267	279	276	267
	Female	58	64	109	72	72	64	100	100	83	82	95
<b>ICD-9 189/ICD-10 C64-C65 - Malignant neoplasm of kidney and other and unspecified urinary organs</b>	TOTAL	240	286	267	252	274	254	309	308	323	351	308
	Male	161	189	178	171	179	177	224	205	208	250	202
	Female	79	97	89	81	95	77	85	103	115	101	106
<b>ICD-9 191, 192/ICD-10 C70-C72 - Malignant neoplasm of brain</b>	TOTAL	275	268	275	337	325	339	323	340	339	366	379
	Male	151	153	145	196	172	194	190	195	194	206	220
	Female	124	115	130	141	153	145	133	145	145	160	159
<b>ICD-9 201/ICD-10 81 - Hodgkin's disease</b>	TOTAL	16	22	19	17	26	10†	30	22	29	22	22
	Male	9	12	9	8	16	10	21	10	15	12	14
	Female	7	10	10	9	10	*	9	12	14	10	8
<b>ICD-9 200, 202/ICD-10 C82-C85 - Malignant lymphoma other than Hodgkin's disease</b>	TOTAL	388	379	392	372	416	371	397	399	388	398	409
	Male	212	219	212	214	251	196	216	221	240	235	252
	Female	176	160	180	158	165	175	181	178	148	163	157
<b>ICD-9 203/ICD-10 C88, C90 - Multiple myeloma and immunoproliferative neoplasms</b>	TOTAL	189	206	219	221	247	221	240	243	270	297	258
	Male	107	117	133	128	129	133	139	149	162	181	150
	Female	82	89	86	93	118	88	101	94	108	116	108
<b>Other malignant neoplasms</b>	TOTAL	2,340	2,417	2,357	2,409	2,571	2,455	2,613	2,731	2,743	2,877	3,219
	Male	1,212	1,273	1,234	1,273	1,400	1,323	1,397	1,477	1,464	1,538	1,734
	Female	1,128	1,144	1,123	1,136	1,171	1,132	1,216	1,254	1,279	1,339	1,485

Notes: \* Cell suppressed due to count less than 6; † Sum rounded to nearest tens unit due to addend less than 6; ‡ Includes other forms of cancer; § Total includes records with unknown gender.

**TABLE 2B-9  
NUMBER OF DEATHS FROM UNINTENTIONAL INJURIES IN ACCIDENTS BY CATEGORY AND YEAR AMONG  
ARIZONA RESIDENTS, 2009-2019**

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
<b>Total unintentional injury deaths</b>	2,887	2,834	2,959	2,804	3,137	3,011	3,403	3,899	4,085	4,211	4,522
<b>Railway accident</b>	8	12	6	7	7	8	6	11	9	7	10
<b>Motor vehicle accident</b>	771	711	787	747	767	702	855	967	979	1,032	970
<b>Water transport accident</b>	*	*	*	*	*	0	*	*	7	7	*
<b>Accident involving aircraft</b>	15	16	21	13	9	*	7	10	17	10	13
<b>Poisoning by drugs/medicaments</b>	802	798	781	731	853	885	955	1,095	1,269	1,425	1,679
<b>Poisoning by gases and vapors</b>	85	81	102	86	112	94	105	153	105	120	118
<b>Falls</b>	731	762	776	782	870	881	1,014	1,103	1,076	1,090	1,109
<b>Fire, flames, smoke</b>	31	25	33	43	68	30	25	40	51	23	43
<b>Excessive natural heat</b>	39	51	57	51	56	32	43	99	108	94	118
<b>Excessive natural cold</b>	24	17	22	9	28	19	20	21	24	15	37
<b>Contact with venomous snakes and lizards</b>	0	*	0	*	0	0	0	0	*	*	0
<b>Contact with venomous spiders</b>	0	0	0	0	*	0	0	0	*	0	0
<b>Contact with scorpions</b>	0	0	0	0	*	0	0	0	0	0	0
<b>Contact with hornets, wasps, bees</b>	0	0	0	0	*	0	*	*	*	*	*
<b>Bitten or struck by dog</b>	*	*	*	*	*	*	*	*	*	*	*
<b>Lightning</b>	*	*	*	*	*	0	*	*	*	0	0
<b>Storms and floods</b>	0	*	0	0	0	0	0	0	12	*	*
<b>Accidental drowning and submersion</b>	99	86	86	83	72	78	81	105	106	92	100
<b>Choked on food</b>	43	39	34	38	29	33	34	33	38	40	38
<b>Choked on other objects</b>	49	57	44	44	57	56	53	38	39	29	40
<b>Mechanical suffocation</b>	25	28	25	23	21	35	40	35	41	25	37
<b>Accidental discharge of firearms</b>	7	11	8	*	9	6	*	7	8	10	13
<b>Exposure to electric current</b>	7	*	6	0	6	*	*	10	*	*	*
<b>Overexertion</b>	0	*	0	0	0	0	0	0	*	0	0
<b>Adverse effects of drugs in therapeutic use</b>	8	10	*	6	10	10	12	*	*	11	7
<b>Misadventures to patients during medical/surgical care</b>	42	41	45	42	46	32	20	43	96	103	108

Notes: \* Cell suppressed due to count less than 6; Beginning in 2000, the data are classified by the Tenth Revision of the International Classification of Diseases (ICD-10).

**TABLE 2B-10  
NUMBER OF DEATHS FROM MOTOR VEHICLE-RELATED INJURIES BY PERSON INJURED, GENDER, AND YEAR,  
ARIZONA RESIDENTS, 2009-2019**

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
<b>TOTAL</b>											
<b>Total</b>	771	711	787	747	767	702	855	967	979	1,032	970
<b>Male</b>	554	501	562	541	541	492	605	693	691	729	692
<b>Female</b>	217	210	225	206	226	210	250	274	288	303	278
<b>Motorcyclist</b>											
<b>Total</b>	100†	69	113	130	111	100	121	126	137	130	130†
<b>Male</b>	94	61	96	113	98	93	106	118	122	114	130
<b>Female</b>	*	8	17	17	13	7	15	8	15	16	*
<b>Pedestrian</b>											
<b>Total</b>	122	152	153	128	152	138	160	218	245	251	227
<b>Male</b>	90	115	111	88	105	100	115	150	161	171	166
<b>Female</b>	32	37	42	40	47	38	45	68	84	80	61
<b>Pedal cyclist</b>											
<b>Total</b>	20†	20†	20†	11	20†	20†	20†	20†	30†	20†	20†
<b>Male</b>	19	20	16	11	19	15	15	18	24	18	18
<b>Female</b>	*	*	*	0	*	*	*	*	*	*	*
<b>Other person</b>											
<b>Total</b>	528	469	502	478	481	445	558	601	568	630	587
<b>Male</b>	351	305	339	329	319	284	369	407	384	426	378
<b>Female</b>	177	164	163	149	162	161	189	194	184	204	209

Notes: \* Cell suppressed due to count less than 6; † Sum rounded to nearest tens unit due to addend less than 6; Beginning in 2000, the data are classified by the Tenth Revision of the International Classification of Diseases (ICD-10).

**TABLE 2B-11  
LEADING CAUSES OF DEATH BY PLACE OF DEATH AND DECEDENT STATUS, ARIZONA, 2019**

Causes of death	TOTAL	IN HOSPITAL					NOT IN HOSPITAL				
		In-patient	Out-patient <sup>a</sup>	Died on arrival	Status Unknown	Subtotal	Nursing home <sup>b</sup>	Residence	Other <sup>c</sup>	Subtotal	
<b>TOTAL, ALL CAUSES</b>	60,161	13,598	3,098	27	20,960	37,683	6,579	4,307	11,592	22,478	
Diseases of heart	12,560	2,760	973	13	4,702	8,448	851	941	2,320	4,112	
Coronary heart disease	9,026	1,709	759	12	3,611	6,091	546	640	1,749	2,935	
Malignant neoplasms	12,485	1,991	132	0	5,772	7,895	2,387	631	1,572	4,590	
Malignant neoplasm of trachea, bronchus and lung	2,510	396	23	0	1,202	1,621	468	123	298	889	
Malignant neoplasm of colon, rectum, and anus	1,117	144	15	0	490	649	237	69	162	468	
Malignant neoplasm of breast	911	159	7	0	406	572	160	49	130	339	
Malignant neoplasm of prostate	734	76	6	0	406	488	114	49	83	246	
Malignant neoplasm of cervix uteri	80†	14	*	0	32	50†	26	*	8	40†	
Malignant neoplasm of uterus	4,520†	1,034	642	*	1,158	2,840†	337	101	1,248	1,686	
Accidents (unintentional injury)	1,800†	207	284	*	848	1,340†	12	*	440	460†	
Accidental poisoning	1,109	413	46	0	136	595	281	74	159	514	
Falls	970†	250	236	*	7	490†	23	10	443	476	
Motor vehicle accidents	100	18	11	0	27	56	0	0	44	44	
Accidental drowning and submersion	3,680†	708	120	*	1,461	2,290†	411	351	623	1,385	
Chronic lower respiratory diseases	3,045	52	12	0	820	884	194	466	1,501	2,161	
Alzheimer's disease	2,848	719	56	0	598	1,373	546	294	635	1,475	
Cerebrovascular diseases	2,170†	405	216	*	939	1,560†	203	159	246	608	
Diabetes	1,410†	99	88	*	802	990†	7	*	409	420†	
Intentional self-harm (suicide)	1,210†	476	29	*	318	820†	219	65	103	387	
Chronic liver disease and cirrhosis	1,009	155	62	0	442	659	76	107	167	350	
Essential (primary) hypertension & hypertensive renal disease	947	629	41	0	92	762	81	40	64	185	
Influenza and pneumonia	810†	38	*	0	297	340†	77	116	274	467	
Parkinson's disease	759	283	24	0	224	531	58	72	98	228	
Nephritis, nephrotic syndrome and nephrosis	410†	80	107	0	82	269	8	*	130	140†	
Assault (homicide)	339	248	13	0	22	283	36	14	6	56	
Septicemia	70†	31	*	0	13	50†	10	7	6	23	
Human immunodeficiency virus (HIV) disease	1,130†	98	144	0	537	779	*	*	347	360†	
Injury by firearms	2,000†	275	301	*	957	1,530†	29	10	431	470	
Drug-induced deaths	1,290†	136	201	*	677	1,020†	*	*	262	270†	
Opioid-induced deaths	1,280†	349	64	*	485	900†	190	40	146	376	
Alcohol-induced deaths											

Notes: \* Cell suppressed due to count less than 6; † Sum rounded to nearest tens unit due to addend less than 6; <sup>a</sup> Includes Emergency Room; <sup>b</sup> Includes other long-term care facilities; <sup>c</sup> 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:

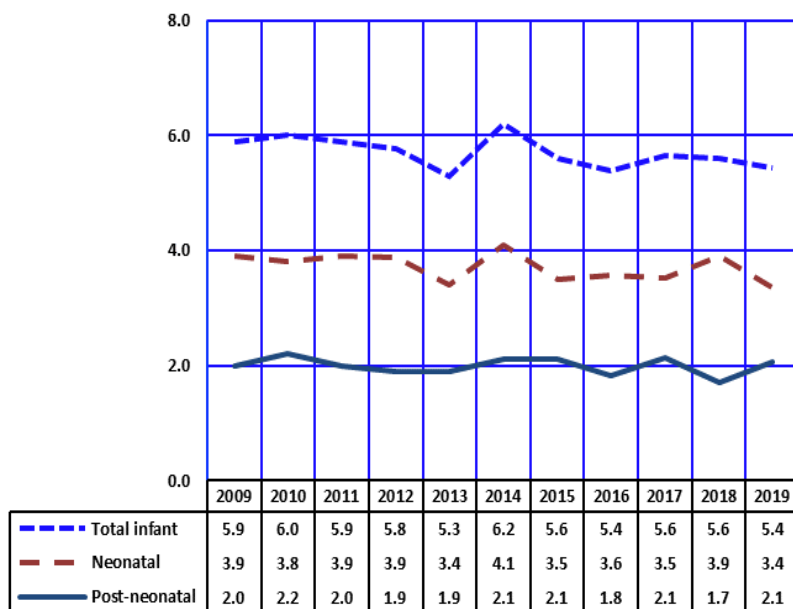
- **Infants** less than one year of age
- **Children** 1 to 14 years old
- **Adolescents** or persons 15 to 19 years old
- **Young adults** or persons 20 to 44 years old
- **Middle-aged adults** or persons 45 to 64 years old
- **Elderly** or persons 65 years or older.

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 causes of death is provided in **Table 2C-27**. A comparison of age-specific mortality rates is presented in **Table 2C-28**.

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

**Figure 2C-1**  
**Infant Mortality Rates by Neonatal/Postneonatal Age and Year, Arizona, 2009-2019**



Notes: Neonatal deaths are those deaths affecting infants age 0-27 days; Post-neonatal deaths are deaths to infants aged 28 days-1 year.

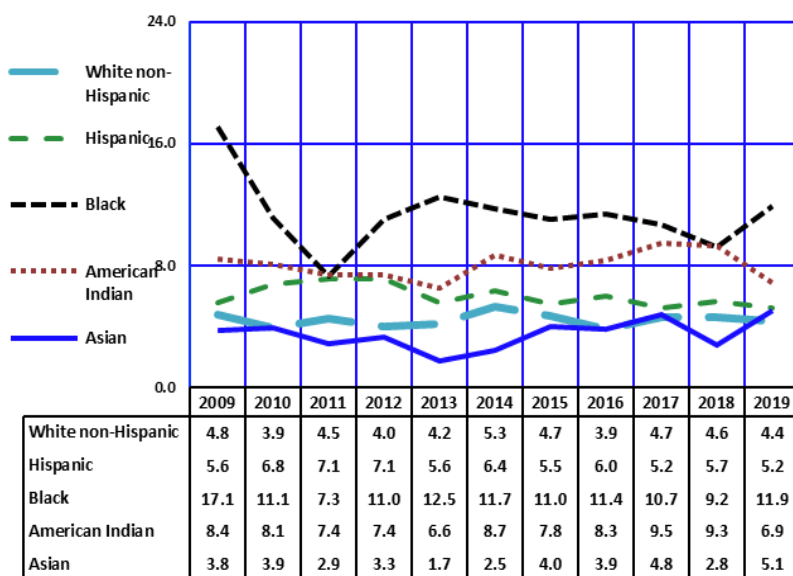
Infant mortality is defined as the number of deaths within the first year of life. The infant mortality rate is computed as the number of infant deaths in a calendar year per 1,000 live births recorded for the same period.

In 2019, 430 Arizona infants died before reaching their first birthday, 271 fewer than the latest peak of 701 infant deaths in 2007, and a decrease of 17 deaths in comparison to 2018 (**Table 2C-2**).

Even if the infant mortality rate remained the same as it was in 2007, 160 fewer infant deaths can be attributed to the absolute reduction in the number of births by 23,504 from 2007 to 2019  $((23,504 \times 6.8)/1,000) = 160$ .

Based on the actual number of infant deaths and live births in 2019, the infant mortality was lower at 5.4 deaths per 1,000 in 2019 than in 2018 (**Figure 2C-1**).

**Figure 2C-2**  
**Infant Mortality Rates<sup>a</sup> by Race/Ethnicity and Year, Arizona, 2009-2019**



Note: <sup>a</sup> Number of infant deaths per 1,000 live births in specified group.

In 2019, 93.7 percent (403/430)\* of all infant death records were successfully matched to their corresponding birth records.

The mortality risk for infants varies by race/ethnicity. During the 11-year period (2009-2019), infants born to Asian or Pacific Islander mothers witnessed the lowest mortality rates among all racial/ethnic groups for the most part (**Figure 2C-2, Table 2C-2**). The exception being 2019, as the infant mortality for Whites was the lowest of all racial/ethnic groups.

In parallel, in each year from 2009 to 2019, Black or African American and American Indian infants had the worst survival chances among the racial/ethnic groups (**Figure 2C-2**).

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

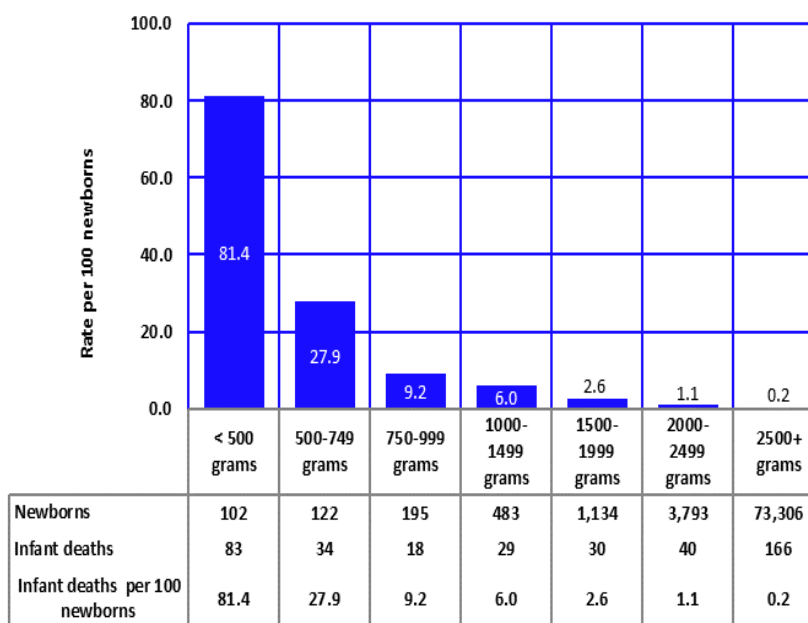
2C.AGE-SPECIFIC MORTALITY  
**Infant mortality**

Newborn weight at birth is one of the most important predictors of an infant's survival chances. In 2019, the mortality rate of very low birth weight babies (birthweight less than 500 grams) was 81.4 per 100 live births (**Figure 2C-3**).

The absolute number of low birthweight births remained lower in 2019 at 5,829 than at its peak in 2007 (7,285). The proportion of babies whose weight at birth was less than 1,000 grams decreased slightly from 7.8 percent of all low birthweight births in 2018 to 7.2 percent in 2019 (**Table 1B-3**).

In summary, infants with low birth weight (weighing less than 2,500 grams at birth) accounted for 8.5 percent of births and 58.1 percent of all infant deaths with a matching birth record.

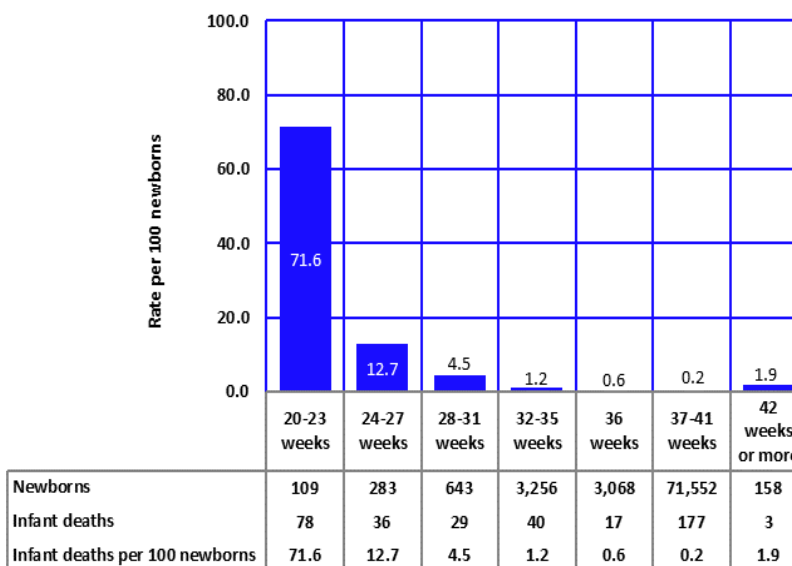
**Figure 2C-3**  
**Proportion of Infant Deaths by Birthweight, Arizona, 2019**



Note: 48 cases in the complete 2019 birth file had missing birthweight estimates.

Similar to low birthweight infants, preterm and very preterm babies contribute greatly to the total infant mortality rate because of their higher risk of mortality. For example, in 2019 births occurring between 20-27 weeks of gestation accounted for only 0.5 percent of all births but 28.3 percent of infant deaths with a matching death record. Births at 20-23 weeks of gestation have a very high infant mortality rate of 71.6 per 100 live births (**Figure 2C-4**). Overall, in 2019 preterm infants (those born before 37 weeks of gestation) accounted for 9.3 percent of all births (**Table 1B-2**) and 49.6 percent of all infant deaths (only those with matching death records).

**Figure 2C-4.1**  
**Proportion of Infant Deaths by Gestational Age, Arizona, 2019**

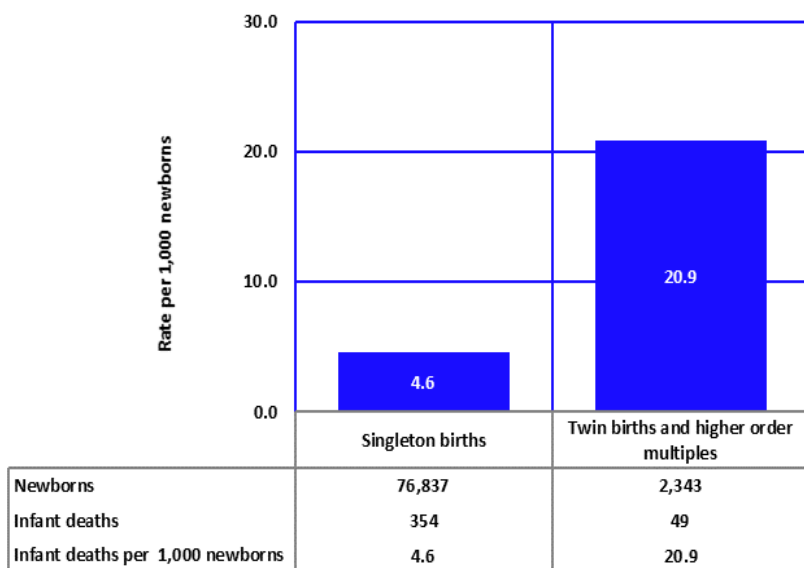


Note: Counts of newborns listed in Figures 2C-3 and 2C-4 of the 2017 printed report have been adjusted in the online version of the report to reflect the actual numbers of resident births.

Note: 77 cases in the complete 2019 birth file had missing gestational age. Zero of which were missing in the linked infant death file.

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

**Figure 2C-4.2**  
**Infant Mortality Rates for Single and Multiple Births, Arizona, 2019**



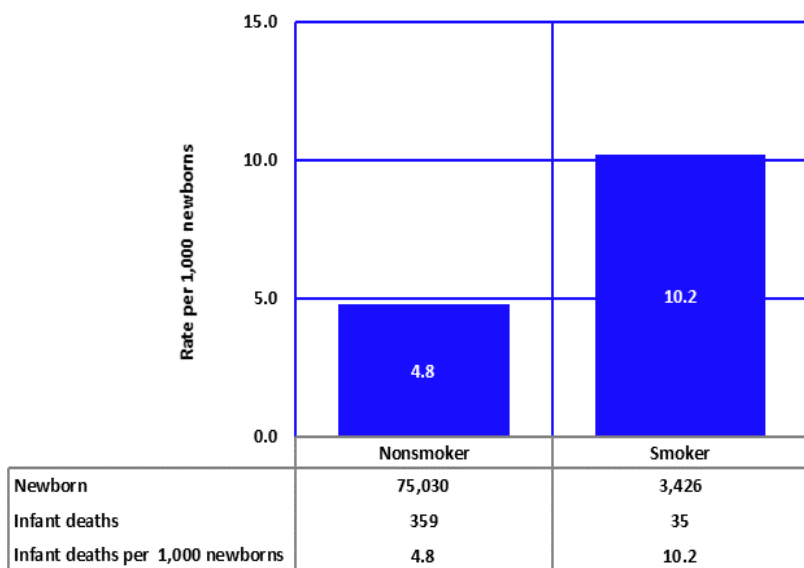
Note: 3 cases in the complete 2019 birth file were missing plurality.

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 2019, infants born in multiple deliveries were 11.9 times more likely (45.3 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 4.6/1,000 live births in 2019 (**Figure 2C-4.2**). The infant mortality rate for twin births or higher order multiples (20.9/1,000 live births) was 4.5 times higher than the infant mortality for singleton births.

Babies born in multiple deliveries accounted for 3.0 percent of births (**Table 1B-16**), but 12.2 percent of all infant deaths in Arizona in 2019 (only those with matching birth and death records).

**Figure 2C-4.3**  
**Infant Mortality Rates by Mother's Smoking Status during Pregnancy, Arizona, 2019**



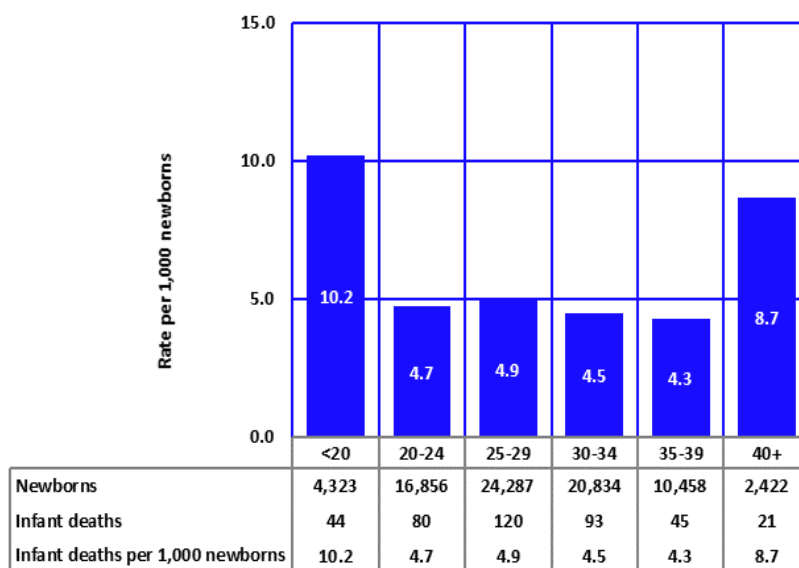
Note: 727 cases in the complete 2019 birth file were missing mothers' smoking status.

Smoking during pregnancy has been shown to increase the risk of preterm delivery, low birth weight and infant mortality. In 2018, among the 3,626 mothers who smoked during pregnancy, the risk of infant mortality was 1.3 times higher than among nonsmoker mothers (**Figure 2C-4.3**). Smoking during pregnancy has been shown to increase the risk of preterm delivery, low birth weight and infant mortality. In 2019, among the 3,426 mothers who smoked during pregnancy, the risk of infant mortality was 2.1 times higher than among nonsmoker mothers (**Figure 2C-4.3**).

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

**Figure 2C-4.4**  
**Infant Mortality Rates by Mother's Age Group, Arizona, 2019**

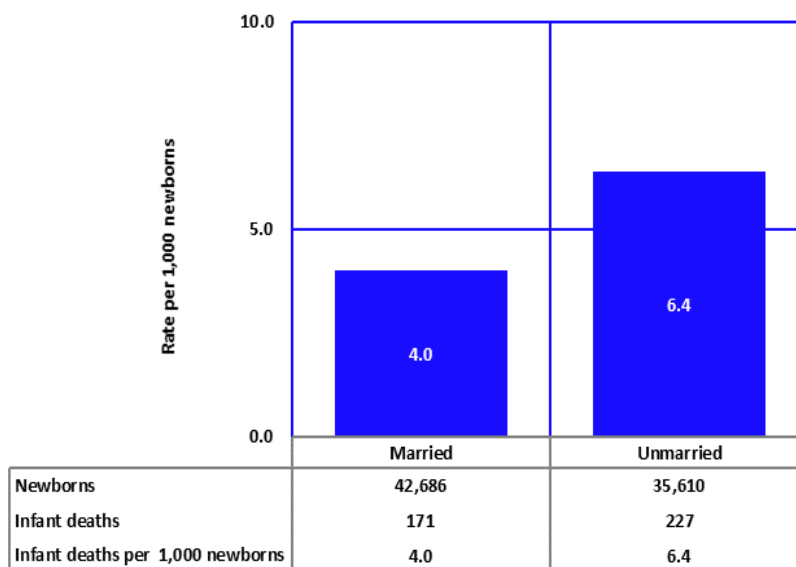
Infant mortality rates vary with maternal age. In 2019, infants born to younger mothers (less than 20 years) and older mothers (40 years or over) had the highest infant mortality rates of all age groups, 10.2/1,000 and 8.7/1,000 respectively (**Figure 2C-4.4**). For mothers aged 20 through 39 years, the infant mortality rates were consistently lower than 5 deaths/1,000.



Note: 3 cases in the complete 2019 birth file were missing mother's age.

Infants born to unmarried mothers accounted for the absolute majority of infant deaths in 2019 (227 infant deaths) compared to married mothers (171 infant deaths). In 2019, more children were born to married women (42,686) than their unmarried counterparts (35,610; **Table 1B-25**). Infants of unmarried mothers had an infant mortality rate of 6.4 deaths per 1,000 live births, 1.6 times higher than the rate for infants of married mothers (4.0 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 and social support. Mother's marital status may signify the presence or absence of emotional, social, and financial resources.

**Figure 2C-4.5**  
**Infant Mortality Rates by Mother's Marital Status, Arizona, 2019**



Note: 887 cases in the complete 2019 birth file were missing mother's marital status.

**TABLE 2C-1  
 INFANT, NEONATAL, AND POSTNEONATAL MORTALITY RATES AND PERCENT OF POSTNEONATAL DEATHS,  
 UNITED STATES, ARIZONA AND URBAN/RURAL COUNTIES OF ARIZONA, 2009-2019**

UNITED STATES	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Infant mortality <sup>a</sup>	6.4	6.1	6.0	6.0	6.0	5.8	5.9	5.8	5.8	5.7	5.7
Neonatal mortality <sup>a</sup>	4.2	4.0	4.0	4.0	4.0	3.9	3.9	3.8	3.8	3.8	3.7
Postneonatal mortality <sup>a</sup>	2.2	2.1	2.0	2.0	2.0	1.8	1.9	2.0	1.9	1.9	1.9
Percent postneonatal mortality <sup>b</sup>	33.3	34.4	33.3	33.3	33.3	31.0	32.2	34.5	32.8	33.3	33.9
<b>ARIZONA, STATEWIDE TOTAL</b>											
Infant mortality <sup>a</sup>	5.9	6.0	5.9	5.8	5.3	6.2	5.6	5.4	5.6	5.6	5.4
Neonatal mortality <sup>a</sup>	3.9	3.8	3.9	3.9	3.4	4.1	3.5	3.6	3.5	3.9	3.4
Postneonatal mortality <sup>a</sup>	2.0	2.2	2.0	1.9	1.9	2.1	2.1	1.8	2.1	1.7	2.1
Percent postneonatal mortality <sup>b</sup>	34.0	36.7	34.3	32.9	35.3	33.4	37.8	33.7	37.7	30.4	38.1
<b>URBAN COUNTIES</b>											
Infant mortality <sup>a</sup>	5.9	5.7	5.8	5.7	5.2	6.1	5.3	5.2	5.4	5.5	5.2
Neonatal mortality <sup>a</sup>	4.0	3.7	3.9	3.9	3.3	4.0	3.3	3.5	3.4	3.8	3.3
Postneonatal mortality <sup>a</sup>	2.0	2.0	1.9	1.9	1.8	2.1	2.0	1.7	2.0	1.6	2.0
Percent postneonatal mortality <sup>b</sup>	33.0	35.1	32.6	32.9	35.1	34.1	37.4	32.5	36.6	29.9	37.8
<b>RURAL COUNTIES</b>											
Infant mortality <sup>a</sup>	5.5	7.4	6.6	5.9	5.8	6.6	7.3	5.6	6.9	6.2	6.5
Neonatal mortality <sup>a</sup>	3.9	4.5	3.7	3.9	3.7	4.5	4.4	3.1	3.7	4.1	4.0
Postneonatal mortality <sup>a</sup>	2.0	2.9	2.9	2.0	2.2	2.1	3.0	2.4	3.2	2.1	2.5
Percent postneonatal mortality <sup>b</sup>	38.7	37.7	43.8	33.8	37.3	31.6	40.5	43.8	46.7	33.3	38.8

Notes: <sup>a</sup> Rates per 1,000 live births; the U.S. rates are from the National Center for Health Statistics; <sup>b</sup> Total infant mortality = 100 percent; Urban = Maricopa, 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 RATES OF INFANT DEATHS BY RACE/ETHNICITY AND GENDER, ARIZONA, 2009-2019  
NUMBER OF INFANT DEATHS**

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
<b>White non-Hispanic</b>											
<b>Total</b>	192	151	171	154	161	213	181	146	166	160	151
<b>Male</b>	109	88	98	81	93	122	99	87	93	94	81
<b>Female</b>	83	63	73	73	68	91	82	59	73	66	70
<b>Hispanic or Latino</b>											
<b>Total</b>	215	235	229	236	185	216	189	203	173	187	170
<b>Male</b>	115	144	122	138	97	108	94	111	98	110	99
<b>Female</b>	100	91	107	98	88	108	95	92	74	76	71
<b>Black or African American</b>											
<b>Total</b>	75	48	32	52	59	53	48	50	49	43	58
<b>Male</b>	41	20	16	22	30	35	24	23	30	18	33
<b>Female</b>	34	28	16	30	29	24	24	27	19	25	25
<b>American Indian or Alaska Native</b>											
<b>Total</b>	52	47	43	41	36	45	39	42	46	44	31
<b>Male</b>	28	28	15	22	19	24	21	22	23	20	19
<b>Female</b>	24	19	28	19	17	21	18	20	23	23	12
<b>Asian or Pacific Islander</b>											
<b>Total</b>	13	10†	10†	10†	10†	10†	10†	13	16	10†	20†
<b>Male</b>	6	9	8	8	*	6	*	7	10	*	13
<b>Female</b>	7	*	*	*	*	*	9	6	6	*	*
<b>All groups<sup>b</sup></b>											
<b>Total</b>	547	519	504	495	447	535	473	454	461	447	430
<b>Male</b>	299	302	267	271	242	295	243	250	262	250	247
<b>Female</b>	248	217	237	224	205	240	230	204	198	195	183

**INFANT MORTALITY RATES**

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
<b>White non-Hispanic</b>											
<b>Total</b>	4.8	3.9	4.5	4.0	4.2	5.3	4.7	3.9	4.7	4.6	4.4
<b>Male</b>	5.4	4.4	5.0	4.1	4.7	5.9	5.0	4.5	5.1	5.2	4.6
<b>Female</b>	4.3	3.3	3.9	3.9	3.7	4.7	4.4	3.2	4.2	3.9	4.2
<b>Hispanic or Latino</b>											
<b>Total</b>	5.6	6.8	7.1	7.1	5.6	6.4	5.5	6.0	5.2	5.7	5.2
<b>Male</b>	5.8	8.3	7.3	8.1	5.7	6.2	5.4	6.4	5.8	6.5	6.0
<b>Female</b>	5.3	5.4	6.8	6.1	5.5	6.6	5.6	5.5	4.5	4.7	4.4
<b>Black or African American</b>											
<b>Total</b>	17.1	11.1	7.3	11.0	12.5	11.7	11.0	11.4	10.7	9.2	11.9
<b>Male</b>	18.0	9.1	7.3	9.2	12.3	14.9	10.7	10.3	12.6	7.9	13.1
<b>Female</b>	16.2	13.1	7.4	12.8	12.7	8.3	11.3	12.5	8.6	10.5	10.6
<b>American Indian or Alaska Native</b>											
<b>Total</b>	8.4	8.1	7.4	7.4	6.6	8.7	7.8	8.3	9.5	9.3	6.9
<b>Male</b>	9.0	9.5	5.1	7.8	6.7	9.4	8.3	8.7	9.2	8.2	8.3
<b>Female</b>	7.8	6.6	9.7	6.9	6.4	8.1	7.3	8.0	9.8	10.2	5.5
<b>Asian or Pacific Islander</b>											
<b>Total</b>	3.8	3.9	2.9	3.3	1.7	2.5	4.0	3.9	4.8	2.8	5.1
<b>Male</b>	3.4	5.4	4.4	4.2	**	3.7	**	4.0	5.9	**	7.9
<b>Female</b>	4.3	**	**	**	**	**	5.7	3.7	3.7	**	**
<b>All groups<sup>b</sup></b>											
<b>Total</b>	5.9	6.0	5.9	5.8	5.3	6.2	5.6	5.4	5.6	5.6	5.4
<b>Male</b>	6.3	6.8	6.1	6.2	5.5	6.6	5.6	5.8	6.3	6.1	6.1
<b>Female</b>	5.5	5.1	5.7	5.4	5.0	5.7	5.5	4.9	4.9	5.0	4.7

Notes: \* Cell suppressed due to count less than 6; \*\* Cell suppressed due to rate/ratio/percent based on non-zero count less than 6; † Sum rounded to nearest tens unit due to addend less than 6; <sup>a</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>b</sup> Includes records with other and unknown ethnic group.

**TABLE 2C-3  
NUMBER AND RATES<sup>a</sup> OF INFANT DEATHS BY RACE/ETHNICITY AND AGE GROUP, 2009-2019  
NUMBER OF INFANT DEATHS**

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
<b>White non-Hispanic</b>											
Total	192	151	171	154	161	213	181	146	166	160	151
Neonatal	129	96	120	100	97	138	108	92	106	116	92
Postneonatal	63	55	51	54	64	75	73	54	60	44	59
<b>Hispanic or Latino</b>											
Total	215	235	229	236	185	216	189	203	173	187	170
Neonatal	150	156	152	170	131	149	130	142	115	136	109
Postneonatal	65	79	77	66	54	67	59	61	58	51	61
<b>Black or African American</b>											
Total	75	48	32	52	59	53	48	50	49	43	58
Neonatal	46	32	20	34	38	34	25	33	30	25	37
Postneonatal	29	16	12	18	21	19	23	17	19	18	21
<b>American Indian or Alaska Native</b>											
Total	52	47	43	41	36	45	39	42	46	44	31
Neonatal	26	22	19	21	20	26	16	21	20	25	14
Postneonatal	26	25	24	20	16	19	23	21	26	19	17
<b>Asian or Pacific Islander</b>											
Total	10†	10†	10	10†	10†	10†	10†	13	16	10†	20†
Neonatal	10	11	10	7	*	7	12	13	7	*	11
Postneonatal	*	*	0	*	*	*	*	0	9	*	*
<b>All groups<sup>b</sup></b>											
Total	547	519	504	495	447	535	473	454	461	447	430
Neonatal	361	330	331	332	289	354	294	301	287	311	266
Postneonatal	186	189	173	163	158	181	179	153	174	136	164

**INFANT MORTALITY RATES**

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
<b>White non-Hispanic</b>											
Total	4.8	3.9	4.5	4.0	4.2	5.3	4.7	3.9	4.7	4.6	4.4
Neonatal	3.2	2.5	3.1	2.6	2.5	3.4	2.8	2.4	3.0	3.3	2.7
Postneonatal	1.6	1.4	1.3	1.4	1.7	1.9	1.9	1.4	1.7	1.3	1.7
<b>Hispanic or Latino</b>											
Total	5.6	6.8	7.1	7.1	5.6	6.4	5.5	6.0	5.2	5.7	5.2
Neonatal	3.9	4.5	4.7	5.1	4.0	4.4	3.8	4.2	3.5	4.1	3.3
Postneonatal	1.7	2.3	2.4	2.0	1.6	2.0	1.7	1.8	1.7	1.5	1.9
<b>Black or African American</b>											
Total	17.1	11.1	7.3	11.0	12.5	11.7	11.0	11.4	10.7	9.2	11.9
Neonatal	10.5	7.4	4.6	7.2	8.0	7.5	5.7	7.5	6.5	5.4	7.6
Postneonatal	6.6	3.7	2.7	3.8	4.4	4.2	5.3	3.9	4.1	3.9	4.3
<b>American Indian or Alaska Native</b>											
Total	8.4	8.1	7.4	7.4	6.6	8.7	7.8	8.3	9.5	9.3	6.9
Neonatal	4.2	3.8	3.3	3.8	3.7	5.1	3.2	4.2	4.1	5.3	3.1
Postneonatal	4.2	4.3	4.1	3.6	2.9	3.7	4.6	4.2	5.3	4.0	3.8
<b>Asian or Pacific Islander</b>											
Total	3.8	3.9	2.9	3.3	1.7	2.5	4.0	3.9	4.8	2.8	5.1
Neonatal	2.9	3.3	2.9	1.9	**	2.2	3.7	3.9	2.1	**	3.5
Postneonatal	**	**	0.0	**	**	**	**	0.0	2.7	**	**
<b>All groups<sup>b</sup></b>											
Total	5.9	6.0	5.9	5.8	5.3	6.2	5.6	5.4	5.6	5.6	5.4
Neonatal	3.9	3.8	3.9	3.9	3.4	4.1	3.5	3.6	3.5	3.9	3.4
Postneonatal	2.0	2.2	2.0	1.9	1.9	2.1	2.1	1.8	2.1	1.7	2.1

Notes: \* Cell suppressed due to count less than 6; \*\* Cell suppressed due to rate/ratio/percent based on non-zero count less than 6; † Sum rounded to nearest tens unit due to addend less than 6;<sup>a</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>b</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, 2019**

	NUMBER OF DEATHS BY AGE			MORTALITY RATES <sup>a</sup>		
	Total	Neonatal	Postneonatal	Total	Neonatal	Postneonatal
<b>TOTAL, ALL GROUPS</b>	430	266	164	5.4	3.4	2.1
<b>Male</b>	247	151	96	6.1	3.7	2.4
<b>Female</b>	183	115	68	4.7	3.0	1.8
<b>White non-Hispanic</b>	151	92	59	4.4	2.7	1.7
<b>Male</b>	81	50	31	4.6	2.8	1.8
<b>Female</b>	70	42	28	4.2	2.5	1.7
<b>Hispanic or Latino</b>	170	109	61	5.2	3.3	1.9
<b>Male</b>	99	62	37	6.0	3.8	2.2
<b>Female</b>	71	47	24	4.4	2.9	1.5
<b>Black or African American</b>	58	37	21	11.9	7.6	4.3
<b>Male</b>	33	21	12	13.1	8.3	4.8
<b>Female</b>	25	16	9	10.6	6.8	3.8
<b>American Indian or Alaska Native</b>	31	14	17	6.9	3.1	3.8
<b>Male</b>	19	7	12	8.3	3.1	5.2
<b>Female</b>	10 <sup>†</sup>	7	*	5.5	3.2	**
<b>Asian or Pacific Islander</b>	20 <sup>†</sup>	11	*	5.1	3.5	**
<b>Male</b>	10 <sup>†</sup>	9	*	7.9	5.5	**
<b>Female</b>	0 <sup>†</sup>	*	*	**	**	**

Notes: \* Cell suppressed due to count less than 6; \*\* Cell suppressed due to rate/ratio/percent based on non-zero count less than 6; † Sum rounded to nearest tens unit due to addend less than 6; <sup>a</sup> Number of deaths per 1,000 live births in specified gender group by mother's race/ethnicity; denominators are from Table 5B-8.

**TABLE 2C-5  
NUMBER OF DEATHS FOR SELECTED LEADING CAUSES OF INFANT MORTALITY<sup>a</sup> BY YEAR, ARIZONA, 2009-2019**

Causes of death	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
<b>Congenital malformations, deformations and chromosomal abnormalities</b>	122	114	107	118	101	121	117	105	92	122	103
<b>of respiratory system</b>	*	9	*	6	*	*	8	7	*	13	13
<b>of brain, spinal cord or nervous system</b>	15	21	13	19	13	24	20	14	18	17	12
<b>Short gestation and low birth weight</b>	101	64	60	62	56	63	53	55	64	73	54
<b>Maternal complications</b>	31	27	33	46	28	39	39	28	31	21	23
<b>Accidents (unintentional injuries)</b>	18	18	23	16	14	27	29	16	23	13	20
<b>Sudden infant death syndrome</b>	42	34	25	13	14	13	15	7	14	14	17
<b>Assault (homicide)</b>	*	6	6	*	*	6	*	*	10	*	8
<b>Intrauterine hypoxia or birth asphyxia</b>	*	*	11	*	6	9	*	6	11	*	6
<b>Respiratory distress syndrome</b>	8	7	*	*	*	*	*	*	6	*	*
<b>Influenza and pneumonia</b>	10	*	*	*	*	*	*	*	*	*	*
<b>Total, all causes</b>	547	519	504	495	447	535	473	454	461	447	430

Notes: \* Cell suppressed due to count less than 6; <sup>a</sup> 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).

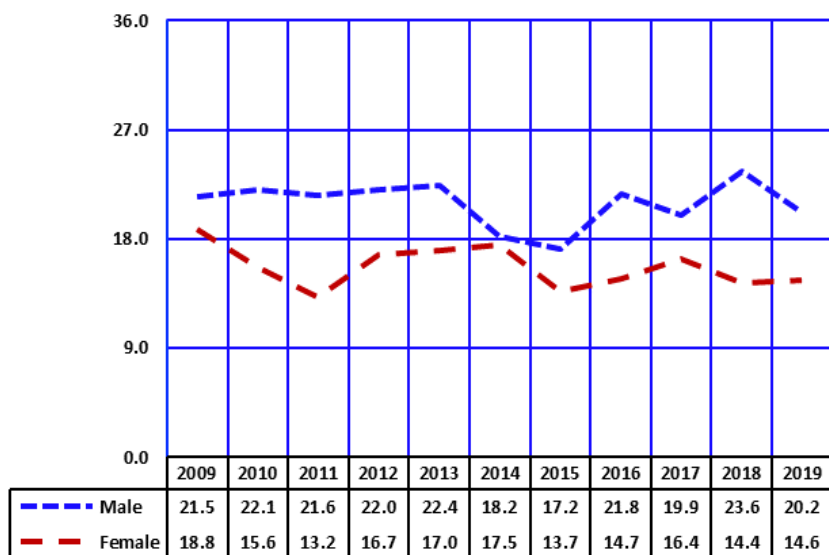
**TABLE 2C-6  
INFANT MORTALITY RATES<sup>a</sup> FOR SELECTED LEADING CAUSES OF DEATH BY YEAR, ARIZONA, 2009-2019**

Causes of death	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
<b>Congenital malformations, deformations and chromosomal abnormalities</b>	1.3	1.3	1.3	1.4	1.2	1.4	1.4	1.2	1.1	1.5	1.3
<b>of respiratory system</b>	**	0.1	**	0.1	**	**	0.1	0.1	**	0.2	0.2
<b>of brain, spinal cord or nervous system</b>	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2
<b>Short gestation and low birth weight</b>	1.1	0.7	0.7	0.7	0.7	0.7	0.6	0.7	0.8	0.9	0.7
<b>Maternal complications</b>	0.3	0.3	0.4	0.5	0.3	0.5	0.5	0.3	0.4	0.3	0.3
<b>Accidents (unintentional injuries)</b>	0.2	0.2	0.3	0.2	0.2	0.3	0.3	0.2	0.3	0.2	0.3
<b>Sudden infant death syndrome</b>	0.4	0.4	0.3	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2
<b>Assault (homicide)</b>	**	0.1	0.1	**	**	0.1	**	**	0.1	**	0.1
<b>Intrauterine hypoxia or birth asphyxia</b>	**	**	0.1	**	0.1	0.1	**	0.1	0.1	**	0.1
<b>Respiratory distress syndrome</b>	0.1	0.1	**	**	**	**	**	**	0.1	**	**
<b>Influenza and pneumonia</b>	0.1	**	**	**	**	**	**	**	**	**	**
<b>Total, all causes</b>	5.9	6.0	5.9	5.8	5.3	6.2	5.6	5.4	5.6	5.6	5.4

Notes: \*\* Cell suppressed due to rate/ratio/percent based on non-zero count less than 6; <sup>a</sup> Number of infant deaths per 1,000 live births; 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).

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

**Figure 2C-5**  
**Mortality Rates<sup>a</sup> by Gender and Year among Children 1-14 Years,**  
**Arizona, 2009-2019**

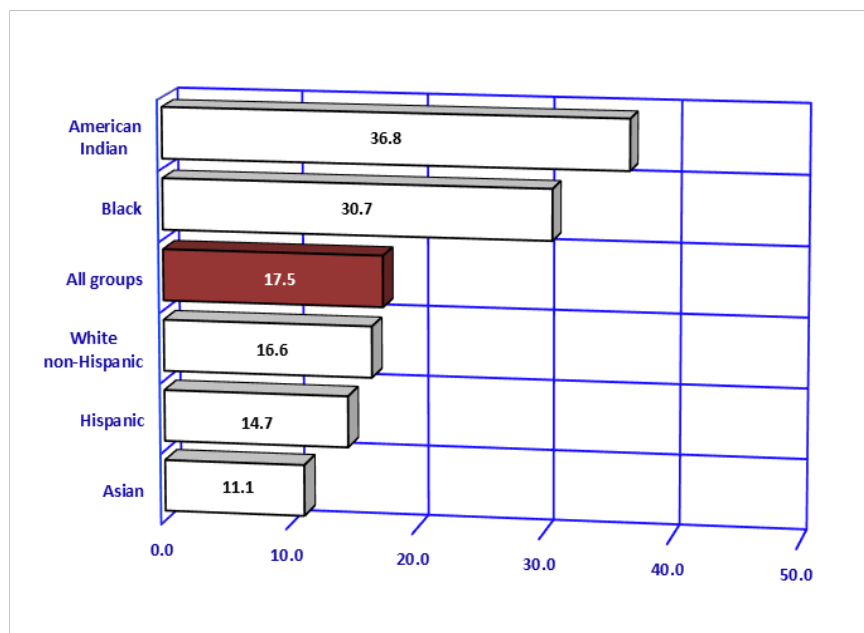


In 2019, a total of 224 deaths were recorded among 1,283,310 children aged 1-14 years residing in Arizona. The 2019 childhood mortality rate was 17.5 per 100,000, representing an increase from 19.1 the rate recorded in 2018 (**Table 2C-7**). Between 2018 and 2019 the mortality rate for male children witnessed a decrease while the rate for female children increased (**Figure 2C-5**, **Table 2C-7**).

The five causes with the greatest mortality rates in childhood from 2009-2019 were *accidents* (unintentional injuries), *malignant neoplasms*, *congenital malformations*, *homicide*, and *suicide* (**Table 2C-7**).

Note: <sup>a</sup> Number of deaths per 100,000 persons, 1-14 years old in specified group.

**Figure 2C-6**  
**Mortality Rates<sup>a</sup> by Race/Ethnicity among Children 1-14 Years,**  
**Arizona, 2019**



American Indian children had the highest total mortality rate (36.8 deaths per 100,000) in 2019, followed by Black or African American children (30.7/100,000; **Figure 2C-6**). The mortality rates of Asian, Hispanic or Latino and White non-Hispanic children were lower than the average rate for all groups.

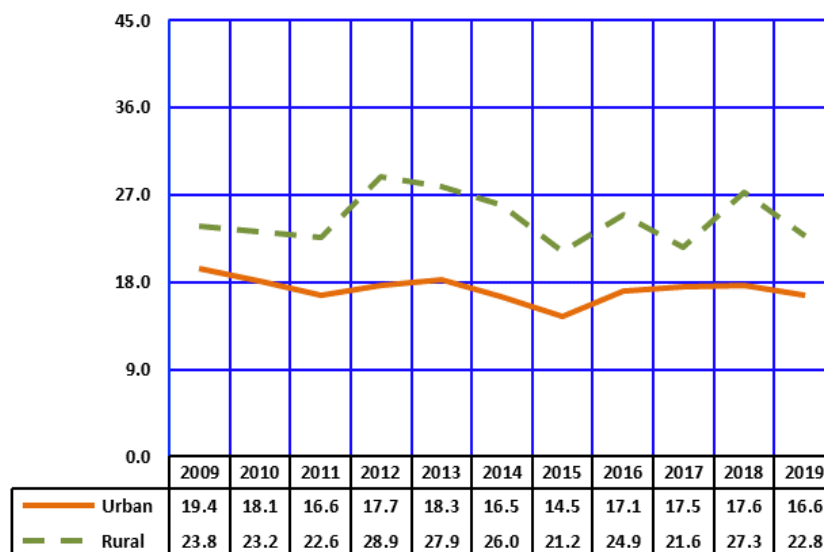
It is important to note that the mortality rate of Asians is based on a very low death count (**Table 2C-10**) thus not statistically reliable. In 2019, there were fewer than 6 children who died from congenital anomalies or by means of suicide among this age group (**Table 2C-10**).

Note: <sup>a</sup> 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<sup>a</sup> by Urban/Rural Area<sup>b</sup> and Year among Children 1-14 Years, Arizona, 2009-2019**

From 2018 to 2019, mortality rates decreased for both rural and urban children (**Figure 2C-7, Table 2C-8**). Between 2009 and 2019, urban childhood mortality rates have been lower than rural childhood mortality rates in each year during the 11-year period. During the same period, both urban and rural children witnessed a decrease in their mortality rate. However, the decline was more pronounced among urban children (14.4 percent) than their rural counterparts (4.2 percent).



Notes: <sup>a</sup> Number of deaths per 100,000 persons, 1-14 years old in specified group; <sup>b</sup> Urban counties are Maricopa, Pima, Pinal, and Yuma Counties. Rural counties are those remaining.

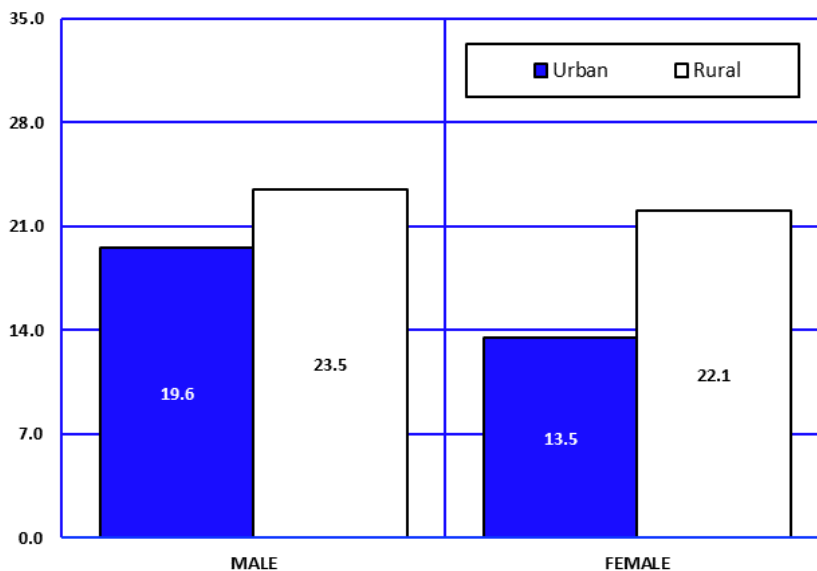
The overall mortality rate for unintentional injuries decreased from 2018 (5.9/ 100,000 children 1-14 years) to 2019 (4.6 100,000 children 1-14 years).

An analysis by gender shows a decrease in accidental mortality for urban children but an increase for rural children during the same period (**Table 2C-8**). In 2019, the mortality rate for unintentional injuries among rural children (8.0/100,000) was two times higher than the rate among urban children (4.1/100,000; **Table 2C-8**).

In the same year, accidental drowning claimed more lives among children in urban areas than rural settings (**Table 2C-10**).

Urban females aged 1-14 years had the lowest mortality risk among gender by area groups in 2019, followed by urban males, rural females, and rural males.

**Figure 2C-8**  
**Mortality Rates<sup>a</sup> for Unintentional Injuries by Gender in Urban/Rural<sup>b</sup> Areas among Children 1-14 Years, Arizona, 2019**



Notes: <sup>a</sup> Number of deaths per 100,000 persons, 1-14 years old in specified group; <sup>b</sup> Urban counties include Maricopa, Pima, Pinal, and Yuma Counties. Rural counties are those remaining.

**TABLE 2C-7  
MORTALITY RATES<sup>a</sup> FOR THE SELECTED FIVE LEADING CAUSES<sup>b</sup> OF DEATH AMONG CHILDREN (1-14 YEARS) BY GENDER,  
ARIZONA, 2009-2019**

Gender/Cause	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	% change from 2009
<b>MALE</b>												
Accidents (unintentional injuries)	8.0	8.2	9.6	7.4	8.6	6.5	5.7	7.0	6.8	8.4	5.0	-37.5
Motor vehicle accidents	4.2	3.1	4.0	3.5	4.5	2.5	2.0	4.0	2.9	3.2	2.9	-31.0
Other	1.2	2.6	3.1	1.7	2.3	1.9	1.9	0.6	1.5	2.0	1.4	16.7
Drowning	2.6	2.5	2.6	2.2	1.8	2.2	1.9	2.3	2.3	3.2	0.8	-69.2
Malignant neoplasms	3.1	1.9	1.7	2.8	2.5	1.7	1.7	1.6	2.3	2.3	3.1	0.0
Assault (homicide)	0.9	2.0	0.9	0.9	1.4	0.9	1.2	0.9	0.6	0.5	1.8	100.0
Congenital malformations	1.5	1.5	1.7	1.8	0.9	0.9	0.9	1.1	0.9	1.2	1.5	0.0
Intentional self-harm (suicide)	0.4	1.2	1.1	1.1	0.6	1.1	1.1	0.8	1.7	2.0	1.4	250.0
ALL CAUSES	21.5	22.1	21.6	22.0	22.4	18.2	17.2	21.8	19.9	23.6	20.2	-6.0
(Number of all deaths)	(148)	(143)	(141)	(143)	(146)	(118)	(111)	(140)	(129)	(154)	(132)	(-10.8)
<b>FEMALE</b>												
Accidents (unintentional injuries)	5.5	5.1	3.2	3.7	4.5	3.7	4.3	4.5	5.1	3.3	4.1	-25.5
Motor vehicle accidents	2.9	2.4	1.1	1.8	2.6	2.6	1.9	2.7	2.2	2.4	2.1	-27.6
Other	2.0	1.4	0.8	1.1	0.6	0.6	1.8	1.0	1.6	0.5	1.4	-30.0
Drowning	0.6	1.3	1.3	0.8	1.3	0.5	0.6	0.8	1.3	0.5	0.6	0.0
Malignant neoplasms	1.8	2.2	2.4	2.4	2.1	2.9	0.5	1.3	2.4	2.6	2.1	16.7
Assault (homicide)	1.8	0.3	1.3	1.1	1.6	1.3	1.3	1.3	1.0	1.3	1.1	-38.9
Congenital malformations	1.4	1.6	1.0	2.3	2.4	1.3	2.1	0.6	1.1	1.3	1.0	-28.6
Influenza and pneumonia	0.5	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.0	-100.0
ALL CAUSES	18.8	15.6	13.2	16.7	17.0	17.5	13.7	14.7	16.4	14.4	14.6	-22.3
(Number of all deaths)	(123)	(97)	(83)	(104)	(106)	(109)	(85)	(91)	(102)	(90)	(92)	(-25.2)
<b>TOTAL</b>												
Accidents (unintentional injuries)	6.8	6.7	6.5	5.6	6.6	5.1	5.0	5.8	6.0	5.9	4.6	-32.4
Motor vehicle accidents	3.6	2.8	2.6	2.7	3.5	2.5	2.0	3.4	2.6	2.8	2.5	-30.6
Other	1.6	2.0	2.0	1.4	1.5	1.3	1.8	0.8	1.6	1.3	1.4	-12.5
Drowning	1.6	1.9	2.0	1.5	1.6	1.3	1.3	1.6	1.8	1.9	0.7	-56.3
Malignant neoplasms	2.5	2.0	2.0	2.6	2.3	2.3	1.1	1.4	2.4	2.4	2.6	4.0
Assault (homicide)	1.3	1.2	1.1	1.0	1.5	1.1	1.3	1.1	0.8	0.9	1.5	15.4
Congenital malformations	1.4	1.6	1.3	2.0	1.6	1.1	1.5	0.9	1.0	1.3	1.2	-14.3
Intentional self-harm (suicide)	0.3	0.7	0.9	0.6	0.6	0.9	0.9	0.7	1.3	1.3	1.2	300.0
ALL CAUSES	20.2	18.9	17.5	19.4	19.8	17.9	15.4	18.3	18.2	19.1	17.5	-13.4
(Number of all deaths)	(271)	(240)	(224)	(247)	(252)	(227)	(196)	(231)	(231)	(244)	(224)	(-17.3)

Notes: <sup>a</sup> Number of deaths per 100,000 children 1-14 years old; <sup>b</sup> The five causes with the greatest number of deaths over the 2009-2019 period; the cause-of-death titles are according to the Tenth Revision of the International Classification of Diseases (ICD-10); the causes of death for 2009-2019 are classified by ICD-10, replacing the Ninth Revision (ICD-9); 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-8  
MORTALITY RATES<sup>a</sup> FOR THE SELECTED FIVE LEADING CAUSES<sup>b</sup> OF DEATH AMONG CHILDREN (1-14 YEARS)  
IN URBAN AND RURAL AREAS<sup>c</sup>, ARIZONA, 2009-2019**

Area/Cause	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	% change from 2009
<b>URBAN</b>												
Accidents (unintentional injuries)	6.4	6.0	5.7	4.7	5.5	4.5	4.3	5.0	5.8	5.4	4.1	-35.9
Motor vehicle accidents	3.2	2.5	1.7	1.9	2.6	2.0	1.7	2.6	2.1	2.1	2.1	-34.4
Other	1.5	1.7	1.7	1.3	1.1	1.1	1.4	0.6	1.6	1.4	1.3	-13.3
Drowning	1.8	1.8	2.2	1.5	1.8	1.4	1.2	1.8	2.1	2.0	0.7	-61.1
Malignant neoplasms	2.6	2.3	2.1	2.6	2.4	2.3	1.1	1.4	2.5	2.5	2.5	-3.8
Assault (homicide)	1.3	1.3	1.2	0.9	1.5	1.0	1.2	1.1	0.6	0.7	1.6	23.1
Congenital malformations	1.3	1.8	1.3	2.1	1.8	1.0	1.5	0.9	1.0	1.4	1.3	0.0
Diseases of heart	0.3	0.3	0.4	0.6	0.3	0.3	0.3	0.5	0.2	0.5	0.3	0.0
ALL CAUSES	19.4	18.1	16.6	17.7	18.3	16.5	14.5	17.1	17.5	17.6	16.6	-14.4
(Number of all deaths)	(221)	(197)	(182)	(192)	(200)	(180)	(158)	(186)	(192)	(194)	(184)	-16.7
<b>RURAL</b>												
Accidents (unintentional injuries)	8.8	10.8	11.3	10.9	12.6	8.9	9.5	10.8	6.8	8.5	8.0	-9.1
Motor vehicle accidents	5.8	4.3	7.5	7.1	8.7	5.5	3.3	8.5	5.1	7.4	5.1	-12.1
Other	1.9	4.3	3.2	2.2	3.8	2.2	4.5	2.3	1.7	0.0	2.3	21.1
Drowning	1.0	2.2	0.5	1.6	0.0	1.1	1.7	0.0	0.0	1.1	0.6	-40.0
Malignant neoplasms	1.9	0.5	1.6	2.2	1.6	2.2	1.1	1.7	1.7	1.7	2.8	47.4
Intentional self-harm (suicide)	0.5	1.1	0.5	1.1	1.6	2.2	2.8	1.7	4.0	3.4	2.3	360.0
Congenital malformations	1.9	0.5	1.6	1.6	0.5	1.7	1.7	0.6	1.1	0.0	1.1	-42.1
Assault (homicide)	1.5	0.5	0.5	1.6	1.6	1.7	1.7	1.1	1.7	1.7	0.6	-60.0
ALL CAUSES	23.8	23.2	22.6	28.9	27.9	26.0	21.2	24.9	21.6	27.3	22.8	-4.2
(Number of all deaths)	(49)	(43)	(42)	(53)	(51)	(47)	(38)	(44)	(38)	(48)	(40)	-18.4
<b>TOTAL</b>												
Accidents (unintentional injuries)	6.8	6.7	6.5	5.6	6.6	5.1	5.0	5.8	6.0	5.9	4.6	-32.4
Motor vehicle accidents	3.6	2.8	2.6	2.7	3.5	2.5	2.0	3.4	2.6	2.8	2.5	-30.6
Other	1.6	2.0	2.0	1.4	1.5	1.3	1.8	0.8	1.6	1.3	1.4	-12.5
Drowning	1.6	1.9	2.0	1.5	1.6	1.3	1.3	1.6	1.8	1.9	0.7	-56.3
Malignant neoplasms	2.5	2.0	2.0	2.6	2.3	2.3	1.1	1.4	2.4	2.4	2.6	4.0
Assault (homicide)	1.3	1.2	1.1	1.0	1.5	1.1	1.3	1.1	0.8	0.9	1.5	15.4
Congenital malformations	1.4	1.6	1.3	2.0	1.6	1.1	1.5	0.9	1.0	1.3	1.2	-14.3
Intentional self-harm (suicide)	0.3	0.7	0.9	0.6	0.6	0.9	0.9	0.7	1.3	1.3	1.2	300.0
ALL CAUSES	20.2	18.9	17.5	19.4	19.8	17.9	15.4	18.3	18.2	19.1	17.5	-13.4
(Number of all deaths)	(271)	(240)	(224)	(247)	(252)	(227)	(196)	(231)	(231)	(244)	(224)	-17.3

Notes: <sup>a</sup> Number of deaths per 100,000 children 1-14 years old; <sup>b</sup> The five causes with the greatest number of deaths over the 2009-2019 period; <sup>c</sup> Urban = Maricopa, Pima, Pinal, and Yuma counties; the remaining counties comprise Arizona's rural areas; see **Technical Notes** for more information; 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 2009-2019 are classified by ICD-10; 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>a</sup> FOR THE SELECTED FIVE LEADING CAUSES OF DEATH AMONG CHILDREN (1-14 YEARS) BY GENDER  
IN URBAN AND RURAL AREAS<sup>b</sup>, ARIZONA, 2009-2019**

Area/Gender	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	% change from 2009
<b>URBAN</b>												
Male	20.6	20.0	20.8	20.0	21.3	16.2	16.2	19.9	18.4	22.2	19.6	-4.9
Female	18.2	16.2	12.3	15.2	15.2	16.8	12.7	14.3	16.6	12.8	13.5	-25.8
TOTAL	19.4	18.1	16.6	17.7	18.3	16.5	14.5	17.1	17.5	17.6	16.6	-14.4
<b>RURAL</b>												
Male	25.7	33.9	26.4	32.1	29.0	30.5	23.1	33.5	27.9	32.5	23.5	-8.6
Female	21.8	12.1	18.7	25.5	26.6	21.3	19.3	16.1	15.0	21.9	22.1	1.4
TOTAL	23.8	23.2	22.6	28.9	27.9	26.0	21.2	24.9	21.6	27.3	22.8	-4.2
<b>TOTAL</b>												
Male	21.5	22.1	21.6	22.0	22.4	18.2	17.2	21.8	19.9	23.6	20.2	-6.0
Female	18.8	15.6	13.2	16.7	17.0	17.5	13.7	14.7	16.4	14.4	14.6	-22.3
TOTAL	20.2	18.9	17.5	19.4	19.8	17.9	15.4	18.3	18.2	19.1	17.5	-13.4

Notes: <sup>a</sup> Rates are presented per 100,000 children 1-14 years old; <sup>b</sup> 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.



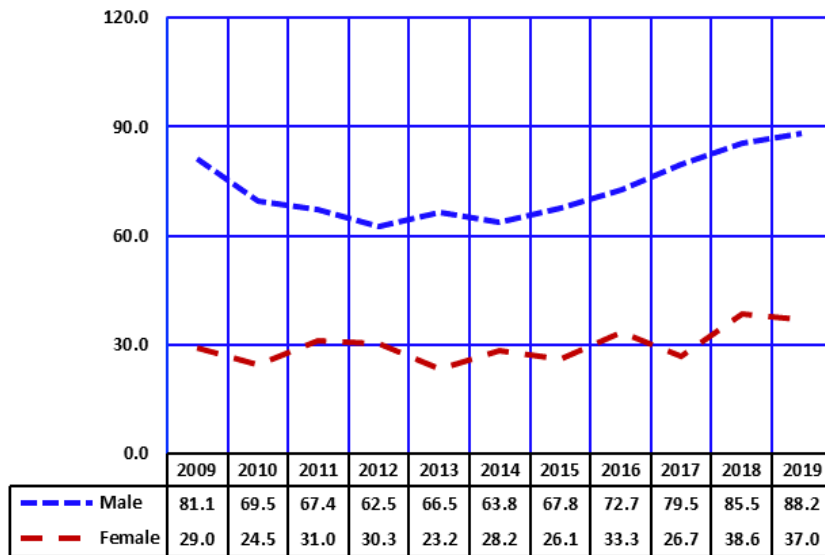
**TABLE 2C-10  
LEADING CAUSES OF DEATH AMONG CHILDREN (1-14 YEARS) BY GENDER, AREA, AND RACE/ETHNICITY, ARIZONA, 2019**

Cause of death	Total	Gender		Area <sup>a</sup>		Race/ethnicity				
		Male	Female	Urban	Rural	White non-Hispanic	Hispanic or Latino	Black or African American	American Indian or Alaska Native	Asian or other Pacific Islander
<b>Accidents (unintentional injury)</b>	60 <sup>†</sup>	33	26	45	14	27	19	*	6	*
<b>Motor vehicle accidents</b>	30 <sup>†</sup>	19	13	23	9	14	12	*	*	*
<b>Accidental drowning and submersion</b>	10 <sup>†</sup>	*	*	8	*	*	*	*	0	0
<b>Malignant neoplasms</b>	30 <sup>†</sup>	20	13	28	*	11	15	*	*	*
<b>Leukemia</b>	10 <sup>†</sup>	7	*	12	0	*	6	0	0	*
<b>Assault (homicide)</b>	20 <sup>†</sup>	12	7	18	*	*	*	*	*	0
<b>By other means</b>	10 <sup>†</sup>	7	*	10	*	*	*	*	*	0
<b>By discharge of firearms</b>	10 <sup>†</sup>	*	*	8	0	*	*	*	0	0
<b>Congenital malformations</b>	20 <sup>†</sup>	10	6	14	*	7	*	*	*	0
<b>Intentional self-harm (suicide)</b>	20 <sup>†</sup>	9	6	11	*	*	7	0	*	0
<b>Chronic lower respiratory diseases</b>	0 <sup>†</sup>	*	*	*	*	*	0	0	*	0
<b>Asthma</b>	0 <sup>†</sup>	*	*	*	*	*	0	0	0	0
<b>Influenza and pneumonia</b>	0 <sup>†</sup>	*	0	*	0	0	*	0	0	0
<b>Total, all causes</b>	224	132	92	184	40	86	84	24	25	5

Notes: \* Cell suppressed due to count less than 6; † Sum rounded to nearest tens unit due to addend less than 6; <sup>a</sup> 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<sup>a</sup> by Gender and Year among Adolescents 15-19 Years,**  
**Arizona, 2009-2019**

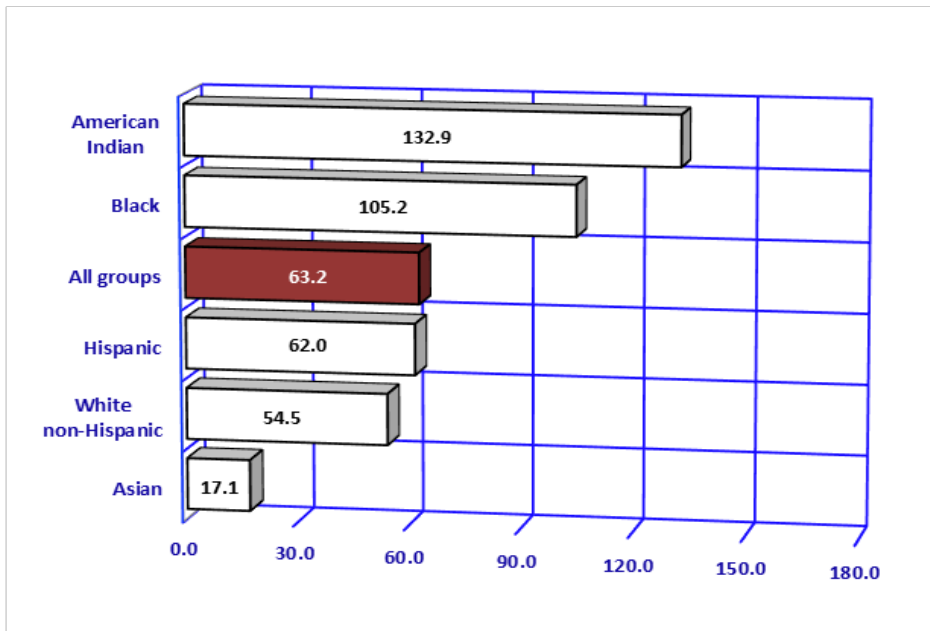


Adolescence refers to individuals between the ages of 15 and 19, an important developmental period marking the transition from childhood to adulthood. In 2019, an estimated 474,952 adolescents resided in Arizona, comprising 6.6 percent of the State's population (**Table 10A-1**). The lives of 300 resident adolescents prematurely ended in 2019, resulting in a total mortality rate of 63.2 deaths per 100,000 adolescents. This mortality rate was 13.1 percent higher than the 2009 rate (**Table 2C-11**).

The likelihood of dying was over two-fold greater for adolescent boys than for adolescent girls in 2019 (**Figure 2C-9, Table 2C-11**).

Notes: <sup>a</sup> Number of deaths per 100,000 persons, 15 - 19 years old in specified group.

**Figure 2C-10**  
**Mortality Rates<sup>a</sup> by Race/Ethnicity among Adolescents 15-19 Years,**  
**Arizona, 2019**



The five causes with the greatest number of deaths over the 2009-2019 period were *unintentional injuries in accidents, suicide, homicide, malignant neoplasms, and diseases of heart* (**Table 2C-14**).

In 2019, adolescents who were Asian, Hispanic, or White had greater survival chances than the state average for all adolescents. American Indian had the lowest survival chances of all racial/ethnic groups (**Figure 2C-10**). If the 2019 mortality risk of Asian adolescents (i.e., their mortality rate) was applied to all adolescents, only 219 would have died: 81 less than the 300 who actually did.

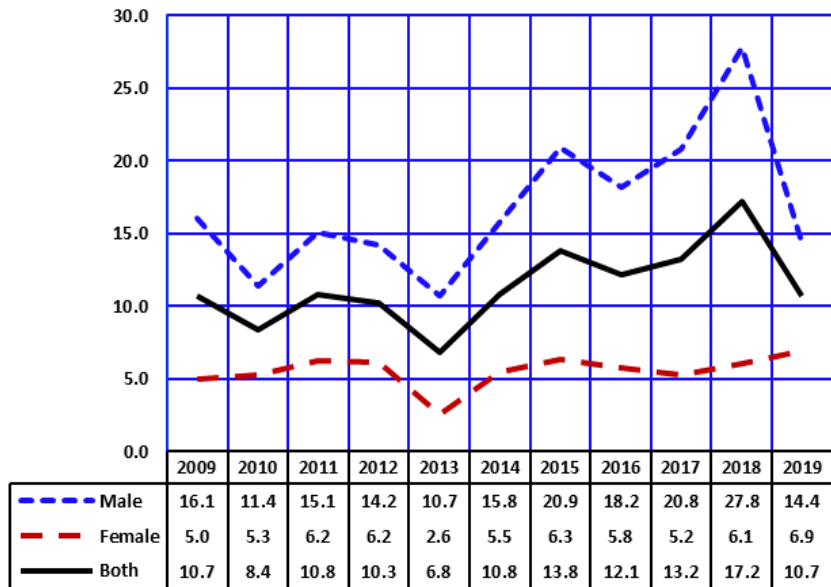
Note: <sup>a</sup> Number of deaths per 100,000 persons, 15 - 19 years old in specified group.

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

**Figure 2C-11**  
**Suicide Rates<sup>a</sup> by Gender and Year among Adolescents 15-19 Years, Arizona, 2009-2019**

In 2019, fifty-one suicide deaths were recorded among Arizonans age 15-19 years, a decrease from 81 recorded in 2018 (**Table 2C-14**). In 2019, as in prior years, male adolescents accounted for the absolute majority (68.6 percent) of completed suicides.

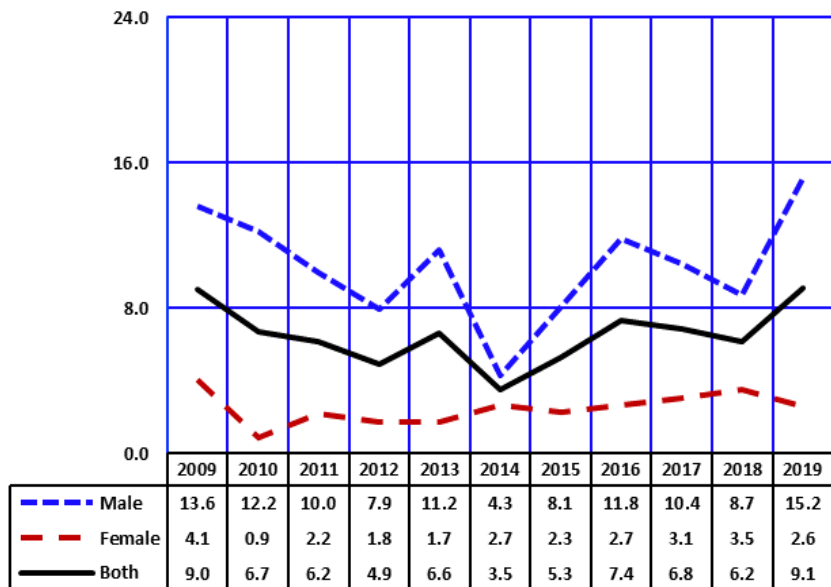
The suicide rate in 2013 was the lowest recorded since at least 1990 (**Figure 2C-11, Table 2C-11**). Between 2009 and 2019, the adolescent male suicide rate (14.4/100,000) decreased 10.6 percent, while the adolescent female suicide rate (6.9) increased by 38.0 percent. The male to female ratio in suicide mortality rates increased from 3.2:1 in 2009 to 2.1:1 in 2019. In other words, male adolescents were almost 2.1 times more likely to kill themselves than female adolescents, compared to 3.2 times in 2009.



Note: <sup>a</sup> Number of suicide deaths per 100,000 persons, 15 - 19 years old in specified group.

**Figure 2C-12**  
**Homicide Rates<sup>a</sup> by Gender and Year among Adolescents 15-19 Years, Arizona, 2009-2019**

During the 11-year period, from 2009 to 2019, the overall adolescent mortality rate due to homicide increased by 1.1 percent. However, there were some gender differences in homicide rates, marked by an increase of 11.8 percent among adolescent males, and a decrease of 36.6 percent among their female counterparts (**Figure 2C-12, Table 2C-11**). From 2018 to 2019, the overall mortality rate of adolescent homicide deaths increased by 46.8 percent. Looking at gender specific homicide mortality, there was a substantial increase of 74.7 percent for males but a decrease of 25.7 percent for females in the 2018-2019 years.



Note: <sup>a</sup> Number of homicide deaths per 100,000 persons, 15 - 19 years old in specified group.

**TABLE 2C-11  
MORTALITY RATES<sup>a</sup> FOR THE SELECTED FIVE LEADING CAUSES<sup>b</sup> OF DEATH AMONG ADOLESCENTS (15-19 YEARS) BY GENDER,  
ARIZONA, 2009-2019**

Gender/Cause	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	% change from 2009
<b>MALE</b>												
Accidents (unintentional injuries)	34.4	27.0	29.3	28.8	28.1	22.3	20.9	27.9	33.3	32.4	42.0	22.1
Other	19.1	11.8	0.8	10.4	12.8	7.3	8.1	14.8	17.9	19.1	26.0	36.1
Motor vehicle accidents	15.3	15.2	18.8	18.3	15.3	15.0	12.8	13.1	15.4	13.3	16.1	5.2
Assault (homicide)	13.6	12.2	10.0	7.9	11.2	4.3	8.1	11.8	10.4	8.7	15.2	11.8
Intentional self-harm (suicide)	16.1	11.4	15.1	14.2	10.7	15.8	20.9	18.2	20.8	27.8	14.4	-10.6
Malignant neoplasms	3.4	2.5	2.1	2.9	2.5	2.6	3.8	2.5	2.1	2.5	4.1	20.6
Diseases of heart	1.3	2.1	1.3	0.0	0.4	1.3	0.4	0.0	0.8	1.7	0.4	-69.2
ALL CAUSES	81.1	69.5	67.4	62.5	66.5	63.8	67.8	72.7	79.5	85.5	88.2	8.7
(Number of all deaths)	(191)	(165)	(161)	(150)	(161)	(149)	(159)	(172)	(191)	(206)	(214)	(12.0)
<b>FEMALE</b>												
Accidents (unintentional injuries)	9.1	9.4	9.7	15.8	7.9	7.7	9.0	15.5	11.8	20.8	18.1	98.9
Motor vehicle accidents	6.3	4.5	5.8	13.2	6.1	5.0	6.3	11.5	8.3	13.0	10.8	71.2
Other	2.7	4.9	0.9	2.6	1.7	2.7	2.7	4.0	3.5	7.8	7.3	170.4
Intentional self-harm (suicide)	5.0	5.3	6.2	6.2	2.6	5.5	6.3	5.8	5.2	6.1	6.9	38.0
Malignant neoplasms	3.2	2.7	4.4	1.8	3.5	4.1	2.7	2.2	1.3	0.9	3.9	21.9
Assault (homicide)	4.1	0.9	2.2	1.8	1.7	2.7	2.3	2.7	3.1	3.5	2.6	-36.6
Diseases of heart	1.4	0.9	0.9	0.0	0.9	0.9	0.9	1.8	0.9	0.9	0.4	-71.4
ALL CAUSES	29.0	24.5	31.0	30.3	23.2	28.2	26.1	33.3	26.7	38.6	37.0	27.6
(Number of all deaths)	(64)	(55)	(70)	(69)	(53)	(62)	(58)	(75)	(61)	(89)	(86)	34.4
<b>TOTAL</b>												
Accidents (unintentional injuries)	22.1	18.4	19.8	22.5	18.3	15.2	15.1	21.9	22.8	26.7	30.3	37.1
Other	11.2	8.4	0.9	6.6	7.4	5.1	5.5	9.5	10.9	13.6	16.8	50.0
Motor vehicle accidents	11.0	10.0	12.5	15.8	10.8	10.1	9.6	12.3	11.9	13.2	13.5	22.7
Intentional self-harm (suicide)	10.7	8.4	10.8	10.3	6.8	10.8	13.8	12.1	13.2	17.2	10.7	0.0
Assault (homicide)	9.0	6.7	6.2	4.9	6.6	3.5	5.3	7.4	6.8	6.2	9.1	1.1
Malignant neoplasms	3.3	2.6	3.2	2.4	3.0	3.3	3.3	2.4	1.7	1.7	4.0	21.2
Diseases of heart	1.3	1.5	1.1	0.0	0.6	1.1	0.7	0.9	0.9	1.3	0.4	-69.2
ALL CAUSES	55.9	47.7	49.7	47.1	45.5	46.5	47.5	53.5	53.7	62.6	63.2	13.1
(Number of all deaths)	(255)	(220)	(231)	(220)	(214)	(211)	(217)	(247)	(252)	(295)	(300)	17.6

Notes: <sup>a</sup> Number of deaths per 100,000 adolescents 15-19 years old; <sup>b</sup> The five causes with the greatest number of deaths over the 2009-2019 period; the cause-of-death titles are according to the Tenth Revision of the International Classification of Diseases (ICD-10); the causes of death for 2009-2019 are classified by ICD-10, replacing the Ninth Revision (ICD-9); 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-12  
MORTALITY RATES<sup>a</sup> FOR THE SELECTED FIVE LEADING CAUSES<sup>b</sup> OF DEATH AMONG ADOLESCENTS (15-19 YEARS)  
IN URBAN AND RURAL AREAS<sup>c</sup>, ARIZONA, 2009-2019**

Area/Cause	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	% change from 2009
<b>URBAN</b>												
Accidents (unintentional injuries)	18.7	17.0	18.4	17.0	15.8	12.5	13.4	20.4	19.6	25.9	31.1	66.3
Other	9.1	7.7	1.0	5.1	6.5	3.7	4.9	8.2	10.3	13.7	18.2	100.0
Motor vehicle accidents	9.6	9.3	10.8	11.9	9.3	8.9	8.5	12.2	9.3	12.2	12.8	33.3
Assault (homicide)	9.6	6.7	6.4	4.8	6.8	3.7	5.9	7.9	7.8	6.5	10.1	5.2
Intentional self-harm (suicide)	9.6	7.2	8.5	8.1	5.0	9.6	12.7	11.2	11.5	12.4	9.9	3.1
Malignant neoplasms	3.2	2.3	2.8	2.8	3.5	3.7	2.8	2.8	1.8	1.7	4.4	37.5
Diseases of heart	1.3	1.5	1.3	0.0	0.5	1.3	0.5	0.8	1.0	1.0	0.5	-61.5
ALL CAUSES	51.5	43.6	45.3	38.8	42.4	42.5	44.2	50.7	49.9	57.2	65.6	27.3
(Number of all deaths)	(194)	(169)	(177)	(153)	(169)	(163)	(171)	(199)	(199)	(230)	(266)	37.1
<b>RURAL</b>												
Accidents (unintentional injuries)	36.9	25.5	26.9	52.1	31.8	29.9	24.5	30.3	39.9	30.2	24.5	-33.6
Motor vehicle accidents	17.2	13.4	21.5	37.0	19.3	17.1	15.8	13.0	25.6	18.7	17.3	0.6
Other	19.7	12.1	0.0	15.1	12.4	12.8	8.6	17.3	14.2	11.5	7.2	-63.5
Intentional self-harm (suicide)	16.0	14.8	22.9	21.9	16.6	17.1	20.2	17.3	22.8	44.5	15.9	-0.6
Assault (homicide)	6.1	6.7	5.4	5.5	5.5	2.9	1.4	2.9	1.4	4.3	2.9	-52.5
Malignant neoplasms	3.7	4.0	5.4	0.0	0.0	1.4	5.8	0.0	1.4	1.4	1.4	-62.2
Diseases of heart	1.2	1.3	0.0	0.0	0.0	0.0	1.4	1.4	0.0	2.9	0.0	-100.0
ALL CAUSES	75.0	68.6	72.7	90.5	62.1	68.4	66.2	66.4	74.1	91.9	47.6	-36.5
(Number of all deaths)	(61)	(51)	(54)	(66)	(45)	(48)	(46)	(46)	(52)	(64)	(33)	(-45.9)
<b>TOTAL</b>												
Accidents (unintentional injuries)	22.1	18.4	19.8	22.5	18.3	15.2	15.1	21.9	22.8	26.7	30.3	37.1
Other	11.2	8.4	0.9	6.6	7.4	5.1	5.5	9.5	10.9	13.6	16.8	50.0
Motor vehicle accidents	11.0	10.0	12.5	15.8	10.8	10.1	9.6	12.3	11.9	13.2	13.5	22.7
Intentional self-harm (suicide)	10.7	8.4	10.8	10.3	6.8	10.8	13.8	12.1	13.2	17.2	10.7	0.0
Assault (homicide)	9.0	6.7	6.2	4.9	6.6	3.5	5.3	7.4	6.8	6.2	9.1	1.1
Malignant neoplasms	3.3	2.6	3.2	2.4	3.0	3.3	3.3	2.4	1.7	1.7	4.0	21.2
Diseases of heart	1.3	1.5	1.1	0.0	0.6	1.1	0.7	0.9	0.9	1.3	0.4	-69.2
ALL CAUSES	55.9	47.7	49.7	47.1	45.5	46.5	47.5	53.5	53.7	62.6	63.2	13.1
(Number of all deaths)	(255)	(220)	(231)	(220)	(214)	(211)	(217)	(247)	(252)	(295)	(300)	17.6

Notes: <sup>a</sup> Number of deaths per 100,000 adolescents 15-19 years old; <sup>b</sup> The five causes with the greatest number of deaths over the 2009-2019 period; <sup>c</sup> Urban = Maricopa, Pinal, and Yuma counties; the remaining counties comprise Arizona's rural areas; see **Technical Notes** for more information; 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 2009-2019 are classified by 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>a</sup> FOR THE SELECTED FIVE LEADING CAUSES OF DEATH AMONG ADOLESCENTS (15-19 YEARS)  
BY GENDER IN URBAN AND RURAL AREAS<sup>b</sup>, ARIZONA, 2009-2019**

Area/Gender	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	% change from 2009
<b>URBAN</b>												
Male	73.8	62.8	62.2	50.8	62.0	59.8	60.8	69.6	73.9	78.3	93.0	26.0
Female	27.6	23.4	27.4	26.1	21.7	24.2	26.6	30.9	24.7	35.2	36.9	33.6
TOTAL	51.5	43.6	45.3	38.8	42.4	42.5	44.2	50.7	49.9	57.2	65.6	27.3
<b>RURAL</b>												
Male	112.6	104.9	94.6	123.3	91.4	85.8	106.8	84.9	111.6	124.4	56.9	-49.5
Female	35.4	30.3	49.6	53.3	31.2	50.0	23.6	47.1	34.9	58.4	38.0	7.4
TOTAL	75.0	68.6	72.7	90.5	62.1	68.4	66.2	66.4	74.1	91.9	47.6	-36.5
<b>TOTAL</b>												
Male	81.1	69.5	67.4	62.5	66.5	63.8	67.8	72.7	79.5	85.5	88.2	8.7
Female	29.0	24.5	31.0	30.3	23.2	28.2	26.1	33.3	26.7	38.6	37.0	27.6
TOTAL	55.9	47.7	49.7	47.1	45.5	46.5	47.5	53.5	53.7	62.6	63.2	13.1

Notes: <sup>a</sup> Rates are presented per 100,000 children 15-19 years old; <sup>b</sup> Urban = Maricopa, Pima, Pinal, and Yuma counties; the remaining counties comprise Arizona's rural areas; see **Technical Notes** for more information; records with unknown county of residence are included in the statewide totals, but are not distributed by urban/rural area.

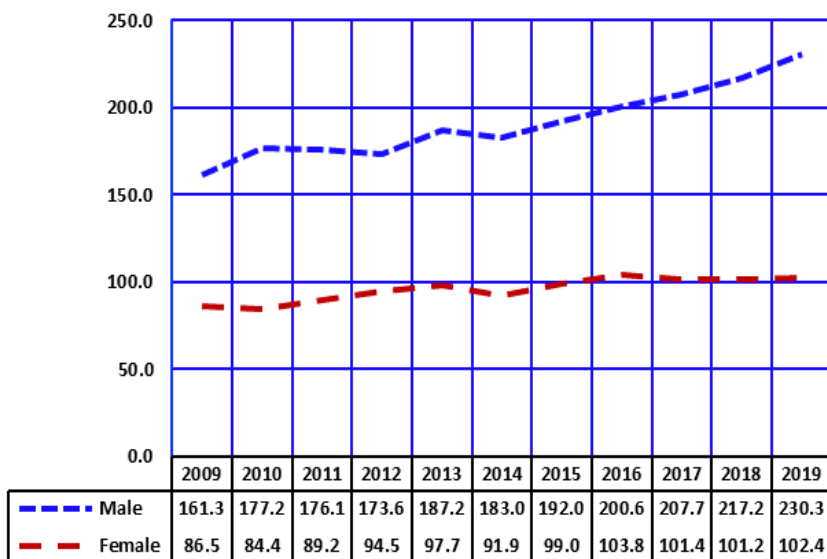
**TABLE 2C-14  
LEADING CAUSES OF DEATH AMONG ADOLESCENTS (15-19 YEARS) BY GENDER, AREA, AND RACE/ETHNICITY,  
ARIZONA, 2019**

Cause of death	Total	Gender		Area <sup>a</sup>			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
Accidents (unintentional injury)	140 <sup>†</sup>	102	42	126	17	*	52	69	13	9	*
Accidental poisoning	70 <sup>†</sup>	54	13	65	*	0	19	37	7	*	0
Motor vehicle accidents	60 <sup>†</sup>	39	25	52	12	0	26	27	*	*	*
Accidental drowning and submersion	10 <sup>†</sup>	*	*	*	*	*	*	*	*	0	0
Intentional self-harm (suicide)	50 <sup>†</sup>	35	16	40	11	0	25	15	*	9	0
By other means	30 <sup>†</sup>	18	13	21	10	0	12	10	*	8	0
By discharge of firearms	20 <sup>†</sup>	17	*	19	*	0	13	*	*	*	0
Assault (homicide)	40 <sup>†</sup>	37	6	41	*	0	8	19	7	7	*
By discharge of firearms	40 <sup>†</sup>	33	6	37	*	0	8	18	6	*	*
By other means	0 <sup>†</sup>	*	0	*	0	0	0	*	*	*	0
Malignant neoplasms	20 <sup>†</sup>	10	9	18	*	0	7	9	*	*	0
Events of undetermined intent	10 <sup>†</sup>	6	*	7	*	0	*	*	*	*	0
Diseases of the heart	0 <sup>†</sup>	*	*	*	0	0	*	0	0	0	0
<b>Total, all causes<sup>b</sup></b>	<b>300</b>	<b>214</b>	<b>86</b>	<b>266</b>	<b>33</b>	<b>1</b>	<b>110</b>	<b>127</b>	<b>29</b>	<b>31</b>	<b>3</b>

Notes: \* Cell suppressed due to count less than 6; <sup>†</sup> Sum rounded to nearest tens unit due to addend less than 6; <sup>a</sup> May include death records where the county of residence could not be classified as urban or rural; Urban = Maricopa, Pima, Pinal, and Yuma counties; the remaining counties comprise Arizona's rural areas; <sup>b</sup> May include other causes of death not shown above.

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

**Figure 2C-13**  
**Mortality Rates<sup>a</sup> by Gender and Year among Young Adults 20-44 Years, Arizona, 2009-2019**

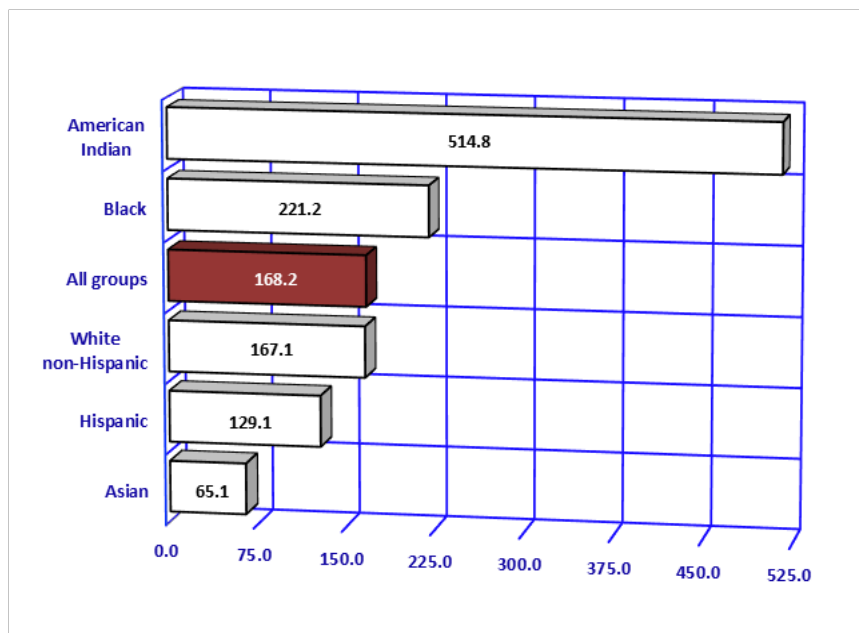


In 2019, 32.9 percent of Arizona residents were between 20 and 44 years of age. Among the six developmental periods examined in the life span, young adulthood, with an estimated 2.4 million individuals, easily represented the largest segment of the population. However, only 6.6 percent of all deaths occurred during young adulthood.

In each year from 2009 to 2019 period, males aged 20-44 years died at a higher rate than females. During the same period, the mortality rate for this age group increased by 36.7 percent, and the number of deaths rose 36.2 percent. Compared to 2018, the young adult mortality rate increased both for males (6.0 percent) and females (1.2 percent); **Figure 2C-13, Table 2C-15).**

Note: <sup>a</sup> Number of deaths per 100,000 persons, 20-44 years old in specified group.

**Figure 2C-14**  
**Mortality Rates<sup>a</sup> by Race/Ethnicity among Young Adults 20-44 Years, Arizona, 2019**



The 2019 mortality among young adults shows racial/ethnic disparities. American Indians aged 20-44 years had the highest mortality rates while Asians of the same age group recorded the lowest mortality rate across all groups.

American Indian young adults had a mortality rate 2.3 times greater than Black or African American adults, the racial/ethnic group with the second highest young adult mortality rate. The American Indian young adult mortality rate was 3.1 times higher than the state average for young adults and 7.9 times greater than Asian young adults.

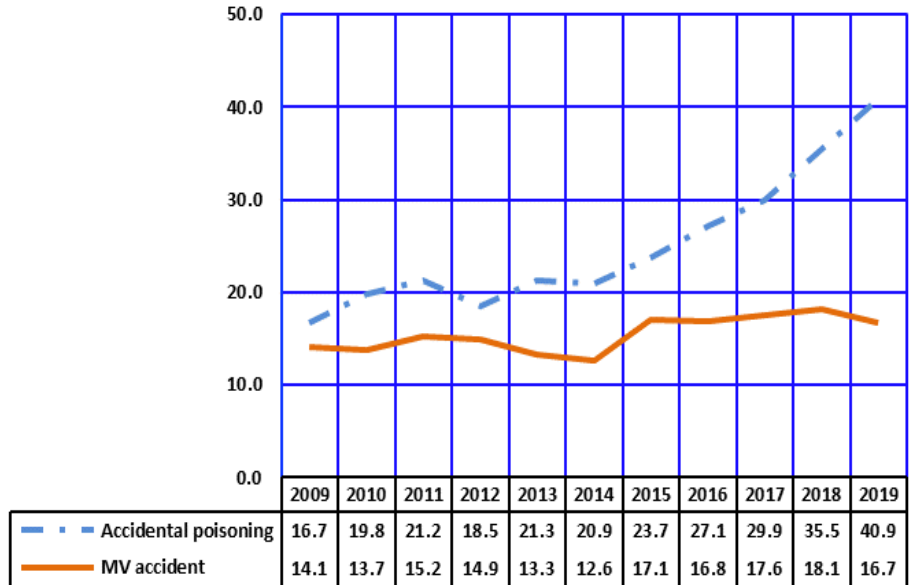
Note: <sup>a</sup> Number of deaths per 100,000 persons, 20-44 years old in specified group.



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

In 2019, 966 deaths of young adults were attributed to accidental poisoning (**Table 2C-18**), an increase of 17.4 percent from 2018. The mortality rate for accidental poisoning among young adults (40.9/100,000) exceeded the mortality rate for motor vehicle-related injuries. In the past decade, excess of mortality due to accidental poisoning has been consistently recorded in each year since 2009 (**Figure 2C-15**). Among the young adults 20-44 years, 920 accidental poisoning deaths were due to drug overdose (ICD-10 X40-44) and 36 deaths were due to alcohol poisoning (ICD-10 X45).

**Figure 2C-15**  
**Mortality Rates<sup>a</sup> for Motor Vehicle-Related Injuries and Accidental Poisoning by Year among Young Adults 20-44 Years, Arizona, 2009-2019**

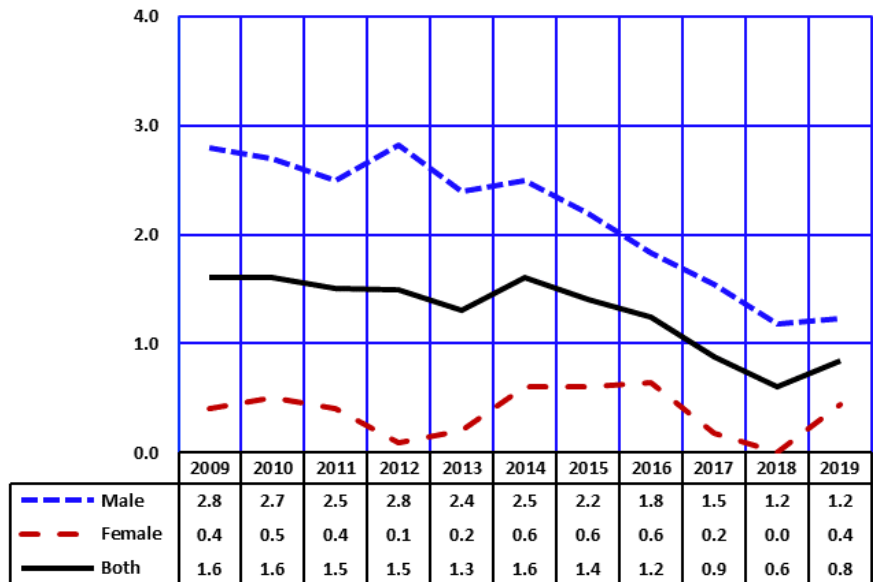


Note: <sup>a</sup> Number of motor vehicle and accidental poisoning deaths per 100,000 persons, 20-44 years old in specified group.

**Figure 2C-16**  
**Mortality Rates<sup>a</sup> for HIV Disease by Gender and Year among Young Adults 20-44 Years, Arizona, 2009-2019**

In 2019, of the 68 deaths from *HIV disease* about 29.4 percent occurred among Arizonans 20-44 years old (**Table 2C-27**), an increase from 17.7 percent in 2018. Males accounted for all of the young adult deaths from *HIV disease* in 2018 (**Table 2C-18**).

An analysis of HIV mortality rates by gender for the 2009-2019 period revealed a decrease of 57.1 percent in mortality among young males but no changes in mortality rate among their female counterparts.



Note: <sup>a</sup> Number of HIV deaths per 100,000 persons, 20-44 years old in specified group.

**TABLE 2C-15  
MORTALITY RATES<sup>a</sup> FOR THE SELECTED FIVE LEADING CAUSES<sup>b</sup> OF DEATH AMONG YOUNG ADULTS (20-44 YEARS) BY GENDER  
ARIZONA, 2009-2019**

Gender/Cause	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	% change from 2009
<b>MALE</b>												
Accidents (unintentional injuries)	53.7	52.6	57.9	52.8	56.7	54.3	63.3	71.2	76.7	86.0	94.3	75.6
Other	33.4	27.5	8.7	31.2	38.0	35.9	38.6	46.9	52.6	59.9	70.2	110.2
Motor vehicle accidents	20.2	19.8	20.6	21.6	18.7	18.4	24.7	24.3	24.1	26.1	24.1	19.3
Intentional self-harm (suicide)	25.1	31.5	32.4	29.0	30.8	28.7	30.8	30.9	33.5	36.9	37.2	48.5
Assault (homicide)	13.4	20.1	18.2	16.1	16.1	13.3	16.6	17.8	19.4	17.9	15.0	12.3
Diseases of heart	14.0	11.7	14.7	13.5	14.2	14.0	13.6	12.0	14.7	13.3	14.8	5.7
Malignant neoplasms	12.0	12.8	11.0	12.3	13.4	11.2	13.0	11.3	12.0	10.9	12.0	0.0
ALL CAUSES	161.3	177.2	176.1	173.6	187.2	183.0	192.0	200.6	207.7	217.2	230.3	42.8
(Number of all deaths)	(1,944)	(1,920)	(1,923)	(1,910)	(2,082)	(2,071)	(2,191)	(2,304)	(2,421)	(2,588)	(2,799)	44.0
<b>FEMALE</b>												
Accidents (unintentional injuries)	20.8	22.4	25.2	22.8	24.5	21.3	28.2	26.6	29.3	30.5	32.0	53.8
Other	13.3	15.0	2.1	15.1	16.9	14.7	19.1	17.5	18.6	20.8	23.1	73.7
Motor vehicle accidents	7.5	7.4	9.7	7.7	7.6	6.6	9.1	9.0	10.7	9.7	8.9	18.7
Malignant neoplasms	15.9	14.0	15.7	17.6	17.4	14.0	13.5	16.7	14.5	16.2	14.1	-11.3
Intentional self-harm (suicide)	9.4	6.8	8.9	8.7	9.6	9.0	10.5	9.9	11.2	9.6	8.1	-13.8
Diseases of heart	6.7	4.6	6.4	7.0	5.6	6.6	7.2	5.1	7.0	6.3	6.1	-9.0
Assault (homicide)	4.0	3.5	2.4	4.3	3.4	2.9	3.2	3.7	3.8	3.7	4.0	0.0
ALL CAUSES	86.5	84.4	89.2	94.5	97.7	91.9	99.0	103.8	101.4	101.2	102.4	18.4
(Number of all deaths)	(973)	(876)	(933)	(990)	(1,033)	(991)	(1,080)	(1,137)	(1,123)	(1,139)	(1,174)	20.7
<b>TOTAL</b>												
Accidents (unintentional injuries)	37.8	37.8	41.9	38.2	41.0	38.2	46.1	49.4	53.6	59.0	64.0	69.3
Other	23.7	24.1	5.5	23.3	27.7	25.6	29.0	32.6	36.0	40.9	47.3	99.6
Motor vehicle accidents	14.1	13.7	15.2	14.9	13.3	12.6	17.1	16.8	17.6	18.1	16.7	18.4
Intentional self-harm (suicide)	17.5	19.4	20.9	19.1	20.5	19.1	20.9	20.6	22.6	23.6	23.1	32.0
Malignant neoplasms	13.9	13.4	13.3	14.9	15.3	12.6	13.2	13.9	13.2	13.5	13.0	-6.5
Diseases of heart	8.8	8.2	10.6	10.3	10.0	10.4	10.5	8.6	10.9	9.9	10.6	20.5
Assault (homicide)	10.5	12.0	10.5	10.3	9.9	8.2	10.0	11.0	11.8	11.0	9.7	-7.6
ALL CAUSES	125.2	131.8	133.6	135.0	143.5	138.6	146.6	153.3	155.9	160.9	168.2	34.3
(Number of all deaths)	(2,917)	(2,796)	(2,856)	(2,900)	(3,115)	(3,062)	(3,271)	(3,441)	(3,544)	(3,727)	(3,973)	36.2

Notes: <sup>a</sup> Rates are presented per 100,000 persons 20-44 years old; <sup>b</sup> The five causes with the greatest number of deaths over the 2009-2019 period; the cause-of-death titles are according to the Tenth Revision of the International Classification of Diseases (ICD-10); the causes of death for 2009-2019 are classified by ICD-10, replacing the Ninth Revision (ICD-9); 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-16  
MORTALITY RATES<sup>a</sup> FOR THE SELECTED FIVE LEADING CAUSES<sup>b</sup> OF DEATH AMONG YOUNG ADULTS (20-44 YEARS)  
IN URBAN AND RURAL AREAS<sup>c</sup>, ARIZONA, 2009-2019**

Area/Cause	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	% change from 2009
<b>URBAN</b>												
Accidents (unintentional injuries)	32.7	33.5	36.6	32.3	35.4	33.8	40.1	43.9	49.0	55.2	60.6	85.3
Other	21.5	22.0	4.3	20.2	23.9	22.7	25.4	28.9	34.3	39.5	46.1	114.4
Motor vehicle accidents	11.2	11.5	12.4	12.1	11.5	11.1	14.7	15.1	14.8	15.7	14.5	29.6
Intentional self-harm (suicide)	13.6	17.7	18.1	17.0	18.3	16.8	19.0	18.4	19.7	20.6	21.3	56.7
Malignant neoplasms	15.6	13.3	13.5	14.1	15.3	12.7	13.1	13.5	13.0	13.5	12.6	-19.4
Diseases of heart	8.7	8.0	9.6	9.5	9.3	9.7	10.1	8.3	10.3	9.2	10.2	17.2
Assault (homicide)	9.7	11.0	10.0	9.5	9.4	8.1	9.6	10.7	11.3	11.1	9.8	0.6
ALL CAUSES	113.0	119.7	120.3	118.8	130.1	126.2	131.9	137.1	140.7	148.0	156.5	38.5
(Number of all deaths)	(2,203)	(2,203)	(2,232)	(2,215)	(2,451)	(2,422)	(2,557)	(2,676)	(2,783)	(2,986)	(3,224)	46.3
<b>RURAL</b>												
Accidents (unintentional injuries)	64.7	63.9	71.9	74.4	74.9	61.2	78.6	77.9	75.3	81.3	80.9	25.0
Other	35.4	36.9	10.3	42.7	50.8	39.6	47.9	51.3	39.4	48.5	52.8	49.2
Motor vehicle accidents	29.4	27.0	33.0	31.7	24.2	21.7	30.8	26.7	36.0	32.8	28.1	-4.5
Intentional self-harm (suicide)	29.1	30.2	37.6	32.4	33.6	32.3	32.1	33.5	40.1	43.5	35.0	20.3
Malignant neoplasms	15.9	13.8	12.0	19.0	15.4	11.4	13.3	16.7	13.6	12.4	16.2	1.7
Diseases of heart	15.0	9.6	16.7	14.5	14.0	14.4	13.0	10.3	14.3	14.0	12.5	-16.4
Assault (homicide)	7.8	16.0	12.8	14.8	13.0	7.2	10.6	10.6	10.9	10.4	7.9	1.6
ALL CAUSES	191.6	203.7	210.2	233.4	226.5	207.1	224.7	240.9	236.6	238.1	237.7	24.1
(Number of all deaths)	(662)	(574)	(593)	(662)	(647)	(602)	(657)	(705)	(697)	(712)	(720)	8.8
<b>TOTAL</b>												
Accidents (unintentional injuries)	37.8	37.8	41.9	38.2	41.0	38.2	46.1	49.4	53.6	59.0	64.0	69.3
Other	23.7	24.1	5.5	23.3	27.7	25.6	29.0	32.6	36.0	40.9	47.3	99.6
Motor vehicle accidents	14.1	13.7	15.2	14.9	13.3	12.6	17.1	16.8	17.6	18.1	16.7	18.4
Intentional self-harm (suicide)	17.5	19.4	20.9	19.1	20.5	19.1	20.9	20.6	22.6	23.6	23.1	32.0
Malignant neoplasms	13.9	13.4	13.3	14.9	15.3	12.6	13.2	13.9	13.2	13.5	13.0	-6.5
Diseases of heart	8.8	8.2	10.6	10.3	10.0	10.4	10.5	8.6	10.9	9.9	10.6	20.5
Assault (homicide)	10.5	12.0	10.5	10.3	9.9	8.2	10.0	11.0	11.8	11.0	9.7	-7.6
ALL CAUSES	125.2	131.8	133.6	135.0	143.5	138.6	146.6	153.3	155.9	160.9	168.2	34.3
(Number of all deaths)	(2,917)	(2,796)	(2,856)	(2,900)	(3,115)	(3,062)	(3,271)	(3,441)	(3,544)	(3,727)	(3,973)	36.2

Notes: <sup>a</sup> Rates are presented per 100,000 young adults 20-44 years old; <sup>b</sup> The five causes with the greatest number of deaths statewide over the 2009-2019 period; <sup>c</sup> Urban = Maricopa, Pima, Pinal, and Yuma counties; the remaining counties comprise Arizona's rural areas; see **Technical Notes** for more information; 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 2009-2019 are classified by ICD-10, replacing the Ninth Revision (ICD-9); 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>a</sup> FOR THE SELECTED FIVE LEADING CAUSES OF DEATH AMONG YOUNG ADULTS (20-44 YEARS)  
BY GENDER IN URBAN AND RURAL AREAS<sup>b</sup>, ARIZONA, 2009-2019**

Area/Gender	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	% change from 2009
<b>URBAN</b>												
Male	143.9	159.4	158.7	154.0	169.0	165.6	171.9	178.4	187.7	198.0	216	50.1
Female	79.5	78.4	80.3	81.9	89.2	85.1	90.1	94.0	91.4	95.2	93.8	18.0
TOTAL	113.0	119.7	120.3	118.8	130.1	126.2	131.9	137.1	140.7	148.0	156.5	38.5
<b>RURAL</b>												
Male	258.9	281.0	271.6	288.4	296.4	278.8	294.2	315.6	307.7	332.7	309.8	19.7
Female	123.5	121.6	144.8	174.6	151.6	130.0	149.8	160.1	159.3	135.0	158.9	28.7
TOTAL	191.6	203.7	210.2	233.4	226.5	207.1	224.7	240.9	236.6	238.1	237.7	24.1
<b>TOTAL</b>												
Male	161.3	177.2	176.1	173.6	187.2	183.0	192.0	200.6	207.7	217.2	230.3	42.8
Female	86.5	84.4	89.2	94.5	97.7	91.9	99.0	103.8	101.4	101.2	102.4	18.4
TOTAL	125.2	131.8	133.6	135.0	143.5	138.6	146.6	153.3	155.9	160.9	168.2	34.3

Notes: <sup>a</sup> Rates are presented per 100,000 persons 20-44 years old; <sup>b</sup> Urban = Maricopa, Pima, Pinal, and Yuma counties; the remaining counties comprise Arizona's rural areas; see **Technical Notes** for more information; records with unknown county of residence are included in the statewide totals, but are not distributed by urban/rural area.

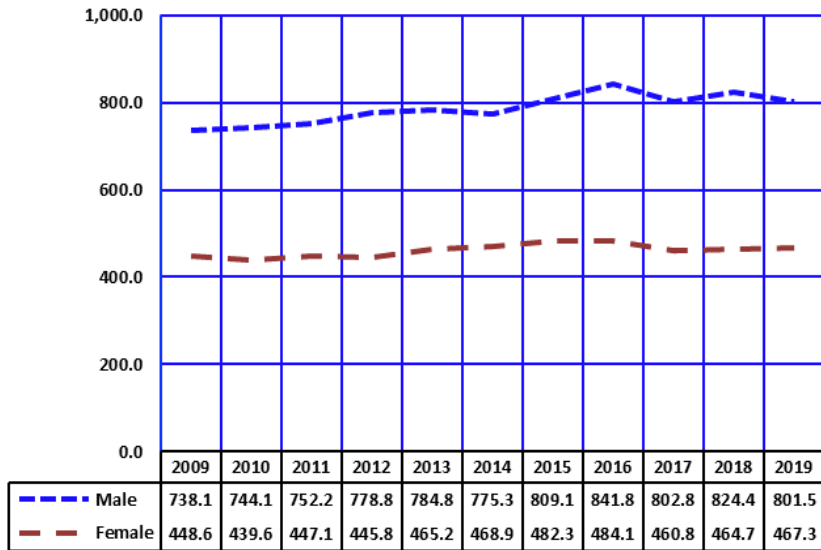
**TABLE 2C-18  
LEADING CAUSES OF DEATH AMONG YOUNG ADULTS (20-44 YEARS) BY GENDER, AREA, AND RACE/ETHNICITY,  
ARIZONA, 2019**

Cause of death	Total	Gender		Area <sup>a</sup>			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	Refused/Unknown
Accidents (unintentional injury)	1,510 <sup>†</sup>	1,146	367	1,249	245	19	764	452	92	180	20	*
Accidental poisoning	970 <sup>†</sup>	731	235	847	115	*	534	286	62	70	12	*
Motor vehicle accidents	400 <sup>†</sup>	293	102	299	85	11	173	122	25	70	*	*
Intentional self-harm (suicide)	550 <sup>†</sup>	452	93	439	106	0	319	126	30	56	10	*
By discharge of firearms	290 <sup>†</sup>	251	39	242	48	0	193	68	16	7	*	*
By other means	260 <sup>†</sup>	201	54	197	58	0	126	58	14	49	6	*
Malignant neoplasms	310 <sup>†</sup>	146	162	259	49	0	144	98	25	26	12	*
Malignant neoplasm of breast	40 <sup>†</sup>	0	41	35	6	0	22	6	7	*	*	0
Malignant neoplasm of lymphoid, hematopoietic and related tissue	40 <sup>†</sup>	32	8	36	*	0	18	15	*	*	*	*
Malignant neoplasm of meninges, brain and other parts of central nervous system	30 <sup>†</sup>	17	10	21	6	0	14	9	*	*	0	0
Diseases of heart	250 <sup>†</sup>	180	70	210	38	*	119	62	32	25	10	*
Assault (homicide)	230 <sup>†</sup>	182	46	201	24	*	60	93	35	36	*	*
By discharge of firearms	180 <sup>†</sup>	147	32	165	12	*	43	80	33	21	*	0
By other means	50 <sup>†</sup>	35	14	36	12	*	17	13	*	15	*	*
Chronic liver disease and cirrhosis	180 <sup>†</sup>	116	67	116	66	*	67	34	*	78	0	0
Diabetes	90 <sup>†</sup>	57	37	77	17	0	34	29	*	26	*	0
Cerebrovascular diseases	50 <sup>†</sup>	22	26	38	10	0	19	19	*	*	*	0
Influenza and pneumonia	30 <sup>†</sup>	14	16	23	7	0	8	11	*	8	*	0
Obesity	30 <sup>†</sup>	18	11	23	6	0	17	*	*	6	0	0
Human immunodeficiency virus (HIV) disease	20 <sup>†</sup>	15	*	18	*	0	8	6	*	*	0	0
<b>Total, all causes</b>	<b>3,973</b>	<b>2,799</b>	<b>1,174</b>	<b>3,224</b>	<b>720</b>	<b>29</b>	<b>1,882</b>	<b>1,127</b>	<b>301</b>	<b>570</b>	<b>76</b>	<b>17</b>

Notes: \* Cell suppressed due to count less than 6; <sup>†</sup> Sum rounded to nearest tens unit due to addend less than 6; <sup>a</sup> Urban = Maricopa, Pima, Pinal, and Yuma counties; the remaining counties comprise Arizona's rural areas.

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

**Figure 2C-17**  
**Mortality Rates<sup>a</sup> by Gender and Year among Middle-Aged Adults 45-64 Years, Arizona, 2009-2019**



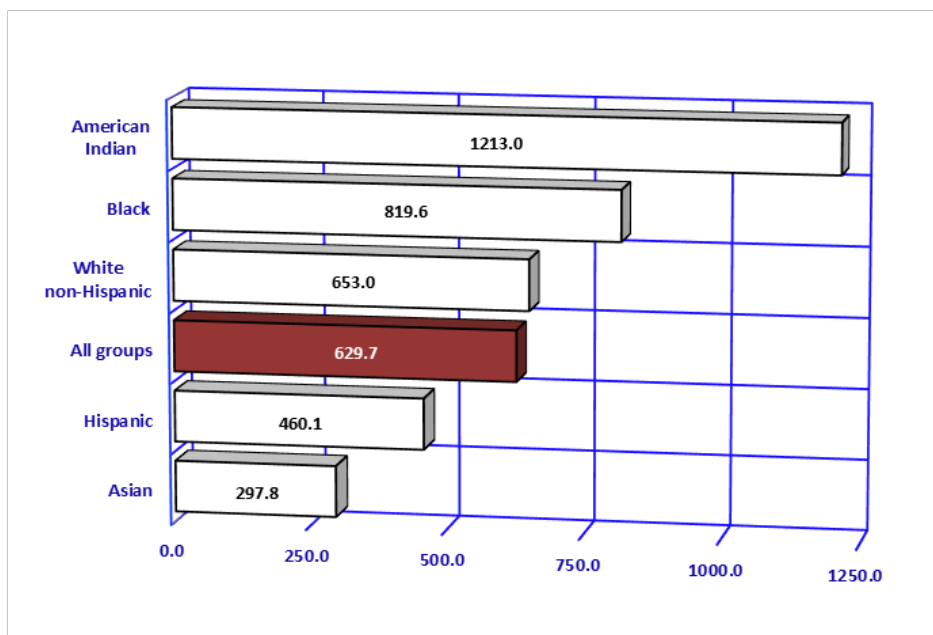
Note: <sup>a</sup> Number of deaths per 100,000 persons, 45-64 years old in specified group.

In 2019, the 1,720,449 middle-aged adult residents aged 45 to 64 experienced 10,834 deaths, or an average of 30 deaths, per day. The total number of deaths among 45-64 years old Arizona residents in 2019 (10,834) is lower than the 2018 count- the highest number recorded since 1980, and likely in Arizona's history (**Table 2C-19**).

The 2019 total mortality rate among middle-age females was 4.2 percent higher, and among middle-aged males, 8.6 percent higher than their respective rates in 2009 (**Figure 2C-17, Table 2C-19**). In 2019, the mortality rate for males age 45 - 64 was almost twofold the female mortality of the same age group.

The five causes with the greatest number of deaths in 2009-2019 were *malignant neoplasms, diseases of heart, accidents, chronic liver disease and cirrhosis, and chronic lower respiratory diseases* (**Table 2C-19**).

**Figure 2C-18**  
**Mortality Rates<sup>a</sup> by Race/Ethnicity among Middle-Aged Adults 45-64 Years, Arizona, 2019**



Note: <sup>a</sup> Number of deaths per 100,000 persons, 45-64 years old in specified group.

American Indian, Black or African American, and White non-Hispanic middle-aged adults had the three highest mortality rates (1213.0/100,000, 819.6/100,000, and 653.0/100,000, respectively) among the racial/ethnic groups.

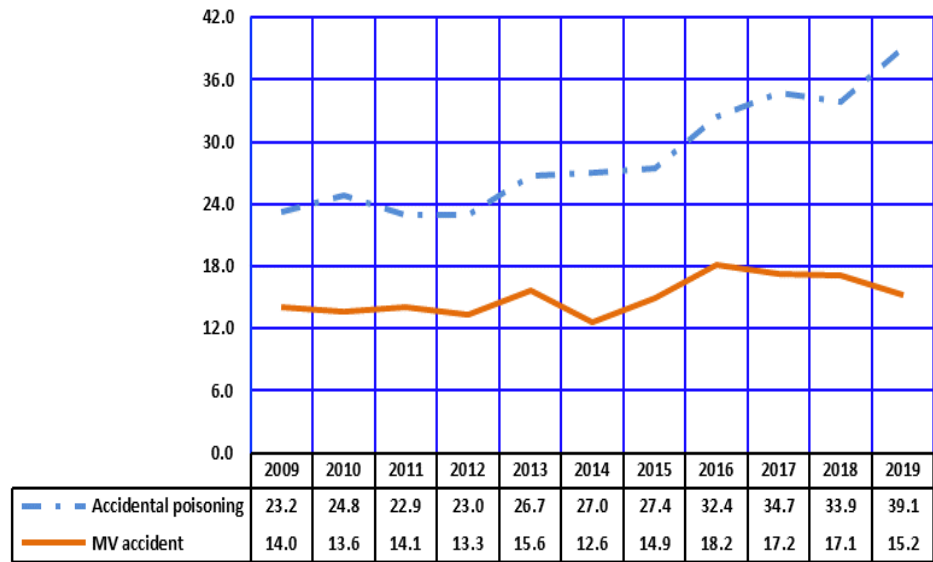
If the 2019 total mortality rate for Asian middle-aged adults applied to all Arizona residents 45-64 years old, 5,124 middle-aged adults would have died rather than the 10,834 who actually did.

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

The 2019 mortality rate due to accidental poisoning was 39.1 per 100,000 adults aged 45-64 years, an increase of 15.3 percent from 2018. In 2019, about 672 deaths were attributed to accidental poisoning (Table 2C-22). Of the accidental poisoning deaths in this age group, 612 were drug overdoses (ICD-10 X40-X44) and 47 were alcohol poisoning (ICD-10 X45).

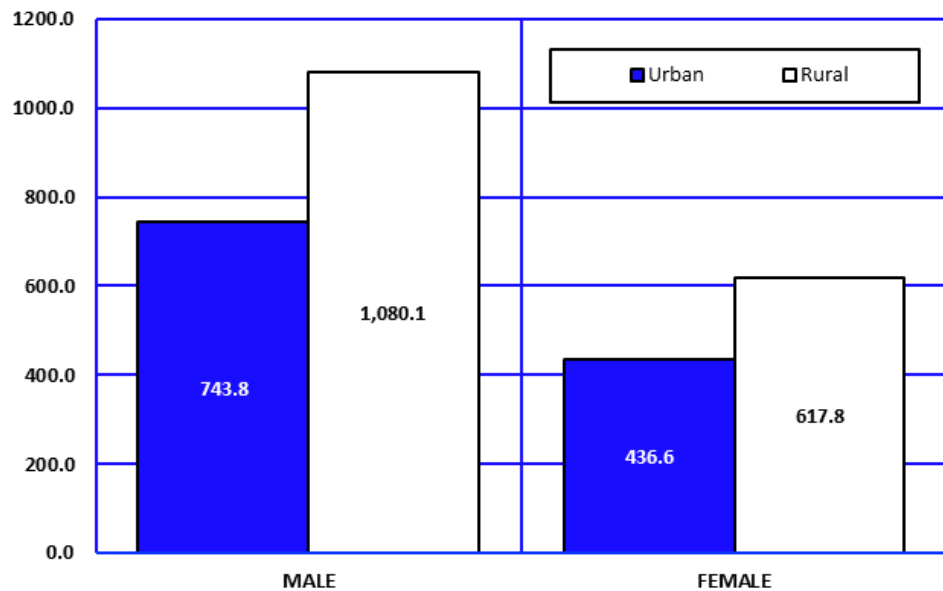
Beginning in 2007, the mortality rate for accidental poisoning exceeded the mortality rate for motor vehicle-related injuries among the middle-aged (Figure 2C-19). In 2019, accidental poisoning mortality rate of 39.1 per 100,000 middle-aged adults was 2.6 times higher than the mortality rate of 15.2 per 100,000 for motor vehicle accidents. White non-Hispanics accounted for about 65.6 percent of all accidental poisoning deaths (Table 2C-22).

**Figure 2C-19**  
**Mortality Rates<sup>a</sup> for Accidental Poisoning and Motor Vehicle-related Injuries by Year among Middle-Aged Adults 45-64 Years, Arizona, 2009-2019**



Note: <sup>a</sup> Number of motor vehicle and accidental poisoning deaths per 100,000 persons, 45-64 years old in specified group.

**Figure 2C-20**  
**Mortality Rates by Gender in Urban<sup>a</sup> and Rural Areas among Middle-Aged Adults 45-64 Years, Arizona, 2019**



Note: <sup>a</sup> Urban counties include Maricopa, Pima, Pinal, and Yuma counties.

In 2019, as in the past, rural middle-aged males had the worse survival chances than the remaining of the subgroups (Figure 2C-20, Table 2C-21). The mortality rate for rural middle-aged males in 2019 was 1.5 times greater than for urban males, 1.7-fold greater than rural females, and 2.5-fold greater than urban females.

**TABLE 2C-19  
MORTALITY RATES<sup>a</sup> FOR THE SELECTED FIVE LEADING CAUSES<sup>b</sup> OF DEATH AMONG MIDDLE-AGED ADULTS (45-64 YEARS)  
BY GENDER, ARIZONA, 2009-2019**

Gender/Cause	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	% change from 2009
<b>MALE</b>												
Malignant neoplasms	182.2	188.3	186.3	196.6	191.4	171.5	186.4	184.1	180.7	177.8	175.1	-3.9
Diseases of heart	169.0	160.7	165.3	155.1	159.3	143.2	166.6	170.1	164.7	162.5	160.8	-4.9
Accidents (unintentional injuries)	71.9	69.2	68.9	68.0	77.9	73.5	76.8	100.4	98.8	95.5	105.7	47.0
Other	51.1	54.6	19.8	47.9	54.5	54.0	54.5	71.5	72.1	70.5	82.6	61.6
Motor vehicle accidents	20.8	19.9	21.4	20.1	23.3	19.4	22.3	28.9	26.8	25.0	23.1	11.1
Chronic liver disease and cirrhosis	38.0	42.1	49.6	50.2	46.7	43.1	48.1	47.8	45.5	45.7	43.8	15.3
Intentional self-harm (suicide)	37.0	40.9	41.3	41.8	38.3	37.7	40.3	41.2	37.4	43.3	39.7	7.3
ALL CAUSES	738.1	744.1	752.2	778.8	784.8	775.3	809.1	841.8	802.8	824.4	801.5	8.6
(Number of all deaths)	(5,472)	(5,659)	(5,760)	(5,999)	(6,088)	(6,111)	(6,444)	(6,781)	(6,570)	(6,839)	(6,702)	22.5
<b>FEMALE</b>												
Malignant neoplasms	154.2	153.9	156.9	155.1	160.7	145.0	155.6	150.9	143.9	146.3	147.5	-4.3
Diseases of heart	59.4	55.9	61.8	60.5	54.6	54.0	60.8	66.7	58.2	62.7	61.9	4.2
Accidents (unintentional injuries)	36.1	36.6	32.8	33.0	38.0	33.7	35.8	38.4	42.2	37.3	38.7	7.2
Other	28.5	29.0	7.4	26.1	29.8	27.4	27.9	30.4	18.6	27.7	31.0	8.8
Motor vehicle accidents	7.6	7.7	7.1	6.9	8.2	6.2	7.9	8.1	8.2	9.7	7.7	1.3
Diabetes	14.2	17.0	21.3	22.3	23.6	22.8	27.4	24.6	22.6	22.1	23.4	64.8
Chronic lower respiratory diseases	19.2	19.3	21.6	24.2	24.8	24.8	23.0	25.8	26.4	27.6	21.3	10.9
ALL CAUSES	448.6	439.6	447.1	445.8	465.2	468.9	482.3	484.1	460.8	464.7	467.3	4.2
(Number of all deaths)	(3,483)	(3,553)	(3,638)	(3,631)	(3,810)	(3,914)	(4,066)	(4,130)	(3,997)	(4,081)	(4,132)	18.6
<b>TOTAL</b>												
Malignant neoplasms	167.9	170.6	171.2	175.2	175.6	157.9	170.6	167.0	161.8	161.6	160.9	-4.2
Diseases of heart	112.9	106.7	112.0	106.5	105.5	97.4	112.2	116.9	109.9	111.2	110.0	-2.6
Accidents (unintentional injuries)	53.6	52.4	50.3	50.0	57.4	53.0	55.7	68.5	69.7	65.6	71.3	33.0
Other	39.5	38.8	13.4	36.7	41.8	40.4	40.8	50.3	52.5	48.5	56.1	42.0
Motor vehicle accidents	14.0	13.6	14.1	13.3	15.6	12.6	14.9	18.2	17.2	17.1	15.2	8.6
Chronic liver disease and cirrhosis	29.1	30.2	34.3	35.0	34.7	33.6	37.7	36.3	35.1	34.0	33.6	15.5
Chronic lower respiratory diseases	21.5	20.0	23.6	25.1	24.7	25.4	26.6	28.2	27.3	28.4	23.5	9.3
ALL CAUSES	590.0	587.2	595.0	607.6	620.7	617.7	641.0	657.8	626.8	639.4	629.7	6.7
(Number of all deaths)	(8,855)	(9,212)	(9,398)	(9,630)	(9,898)	(10,025)	(10,510)	(10,911)	(10,567)	(10,920)	(10,834)	22.3

Notes: <sup>a</sup> Rates are presented per 100,000 middle-aged adults 45-64 years old; <sup>b</sup> The five causes with the greatest number of deaths over the 2009-2019 period; the cause-of-death titles are according to the Tenth Revision of the International Classification of Diseases (ICD-10); the causes of death for 2009-2019 are classified by ICD-10; 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-20**  
**MORTALITY RATES<sup>a</sup> FOR THE SELECTED FIVE LEADING CAUSES<sup>b</sup> OF DEATH AMONG MIDDLE-AGED ADULTS (45-64 YEARS)**  
**IN URBAN AND RURAL AREAS<sup>c</sup>, ARIZONA, 2009-2019**

Area/Cause	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	% change from 2009
<b>URBAN</b>												
Malignant neoplasms	165.4	164.6	166.5	171.8	169.1	153.8	164.8	162.1	156.3	156.4	153.7	-7.1
Diseases of heart	101.3	98.6	103.9	95.9	96.5	89.5	100.3	106.3	101.7	100.2	103.9	2.6
Accidents (unintentional injuries)	48.8	47.5	45.4	47.6	51.5	47.3	50.2	61.3	61.3	60.0	66.1	35.5
Other	37.3	36.5	12.4	35.7	38.5	36.7	37.8	45.3	46.6	46.0	52.4	40.5
Motor vehicle accidents	11.5	11.1	11.9	11.9	13.0	10.6	12.4	16.0	14.7	14.0	13.6	18.3
Chronic liver disease and cirrhosis	25.7	27.2	30.8	31.5	29.9	31.5	32.6	30.3	30.1	29.9	28.5	10.9
Chronic lower respiratory diseases	20.2	19.2	20.6	22.9	22.6	23.4	25.0	25.9	24.0	24.4	21.0	4.0
ALL CAUSES	559.4	552.4	561.5	575.8	579.8	584.2	596.5	613.0	583.1	595.1	586.3	4.8
(Number of all deaths)	(6,979)	(7,098)	(7,274)	(7,513)	(7,631)	(7,855)	(8,128)	(8,485)	(8,223)	(8,527)	(8,485)	21.6
<b>RURAL</b>												
Malignant neoplasms	176.9	193.1	186.3	187.8	204.7	175.4	196.4	184.3	182.9	186.2	196.3	11.0
Diseases of heart	164.3	137.4	143.7	152.5	142.2	133.3	163.5	159.6	140.1	162.6	139.1	-15.3
Accidents (unintentional injuries)	71.4	66.2	67.6	55.3	75.8	73.3	72.6	83.8	91.5	86.9	94.1	31.8
Other	46.6	42.6	16.5	36.4	51.7	52.8	46.6	58.3	64.2	55.6	71.4	53.2
Motor vehicle accidents	24.8	23.6	22.5	18.9	24.1	20.5	26.0	25.5	27.2	31.3	22.7	-8.5
Chronic liver disease and cirrhosis	43.3	41.9	49.3	47.5	57.1	41.7	59.2	61.9	56.6	53.5	59.7	37.9
Chronic lower respiratory diseases	27.4	22.2	36.3	33.2	32.3	34.1	33.9	37.9	41.7	49.1	35.5	29.6
ALL CAUSES	713.2	708.3	716.6	720.2	786.8	751.4	821.2	808.3	781.1	842.7	839.6	17.7
(Number of all deaths)	(1,927)	(2,010)	(2,035)	(2,017)	(2,191)	(2,091)	(2,275)	(2,219)	(2,152)	(2,317)	(2,293)	19.0
<b>TOTAL</b>												
Malignant neoplasms	167.9	170.6	171.2	175.2	175.6	157.9	170.6	167.0	161.8	161.6	160.9	-4.2
Diseases of heart	112.9	106.7	112.0	106.5	105.5	97.4	112.2	116.9	109.9	111.2	110.0	-2.6
Accidents (unintentional injuries)	53.6	52.4	50.3	50.0	57.4	53.0	55.7	68.5	69.7	65.6	71.3	33.0
Other	39.5	38.8	13.4	36.7	41.8	40.4	40.8	50.3	52.5	48.5	56.1	42.0
Motor vehicle accidents	14.0	13.6	14.1	13.3	15.6	12.6	14.9	18.2	17.2	17.1	15.2	8.6
Chronic liver disease and cirrhosis	29.1	30.2	34.3	35.0	34.7	33.6	37.7	36.3	35.1	34.0	33.6	15.5
Chronic lower respiratory diseases	21.5	20.0	23.6	25.1	24.7	25.4	26.6	28.2	27.3	28.4	23.5	9.3
ALL CAUSES	590.0	587.2	595.0	607.6	620.7	617.7	641.0	657.8	626.8	639.4	629.7	6.7
(Number of all deaths)	(8,855)	(9,212)	(9,398)	(9,630)	(9,898)	(10,025)	(10,510)	(10,911)	(10,567)	(10,920)	(10,834)	22.3

Notes: <sup>a</sup> Rates are presented per 100,000 middle-aged adults 45-64 years old; <sup>b</sup> The five causes with the greatest number of deaths over the 2009-2019 period; <sup>c</sup> Urban = Maricopa, Pima, Pinal, and Yuma counties; the remaining counties comprise Arizona's rural areas; see **Technical Notes** for more information; 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 2009-2019 are classified by ICD-10; 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>a</sup> FOR THE SELECED FIVE LEADING CAUSES OF DEATH AMONG MIDDLE-AGED ADULTS (45-64 YEARS)**  
**BY GENDER IN URBAN AND RURAL AREAS<sup>b</sup>, ARIZONA, 2009-2019**

Area/Gender	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	% change from 2009
<b>URBAN</b>												
Male	697.6	690.0	703.5	724.9	726.0	728.1	746.1	769.7	736.7	762.1	743.8	6.6
Female	426.5	423.0	427.8	434.7	441.0	448.0	454.8	464.5	437.4	436.6	436.6	2.4
TOTAL	559.4	552.4	561.5	575.8	579.8	584.2	596.5	613.0	583.1	595.1	586.3	4.8
<b>RURAL</b>												
Male	896.8	924.9	918.6	968.7	1018.5	953.9	1054.9	1079.2	1025.4	1110.2	1080.1	20.4
Female	543.0	504.0	526.1	486.1	568.8	561.6	603.7	557.3	556.0	596.9	617.8	13.8
TOTAL	713.2	708.3	716.6	720.2	786.8	751.4	821.2	808.3	781.1	842.7	839.6	17.7
<b>TOTAL</b>												
Male	738.1	744.1	752.2	778.8	784.8	775.3	809.1	841.8	802.8	824.4	801.5	8.6
Female	448.6	439.6	447.1	445.8	465.2	468.9	482.3	484.1	460.8	464.7	467.3	4.2
TOTAL	590.0	587.2	595.0	607.6	620.7	617.7	641.0	657.8	626.8	639.4	629.7	6.7

Notes: <sup>a</sup> Rates are presented per 100,000 persons 45-64 years old; <sup>b</sup> Urban = Maricopa, Pima, Pinal, and Yuma counties; the remaining counties comprise Arizona's rural areas; see **Technical Notes** for more information.

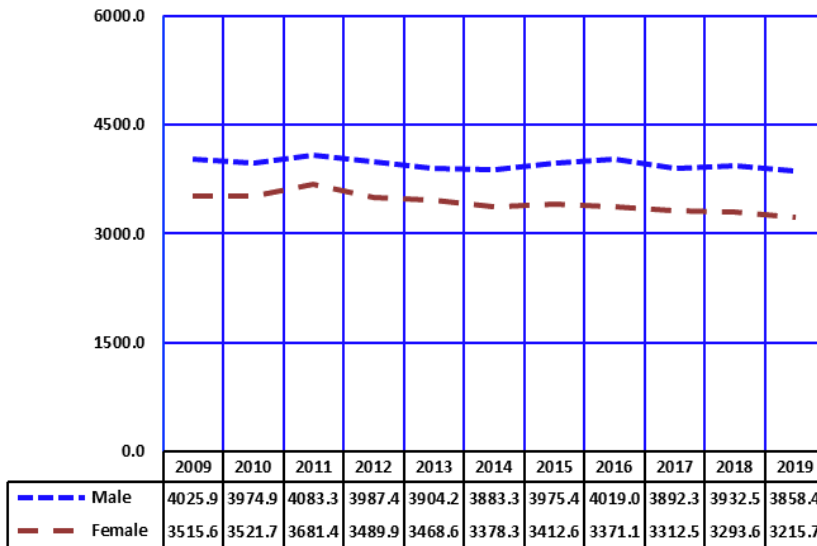
**TABLE 2C-22  
LEADING CAUSES OF DEATH AMONG MIDDLE-AGED ADULTS (45-64 YEARS) BY GENDER, AREA, AND RACE/ETHNICITY,  
ARIZONA, 2019**

Cause of death	Total		Gender		Area <sup>a</sup>			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	Unknown
Malignant neoplasms	2,768	1,464	1,304	2,224	536	8	1,899	509	154	112	73	21
Malignant neoplasm of trachea, bronchus and lung	447	238	209	346	98	*	356	38	31	6	9	7
Malignant neoplasm of colon, rectum, and anus	300 <sup>+</sup>	196	107	250	51	*	199	60	17	12	12	*
Malignant neoplasm of breast	290 <sup>†</sup>	*	284	240	48	*	192	46	22	11	15	*
Malignant neoplasm of pancreas	240 <sup>†</sup>	131	105	195	41	0	157	47	18	12	*	0
Diseases of heart	1,892	1,345	547	1,504	380	8	1,285	304	149	85	30	39
Accidents (unintentional injury)	1,226	884	342	956	257	13	778	232	58	109	16	33
Accidental poisoning	672	470	202	560	105	7	441	109	39	52	6	25
Motor vehicle accidents	260 <sup>†</sup>	193	68	197	62	*	157	69	8	18	*	*
Falls	90 <sup>†</sup>	58	34	70	21	*	67	11	*	9	0	0
Diabetes	583	376	207	475	106	*	298	148	32	83	9	13
Chronic liver disease and cirrhosis	580 <sup>†</sup>	366	212	412	163	*	330	113	16	109	*	6
Intentional self-harm (suicide)	461	332	129	357	103	*	372	48	12	13	8	8
By discharge of firearms	240 <sup>†</sup>	193	47	188	52	0	212	17	*	*	*	*
By other means	220 <sup>†</sup>	139	82	169	51	*	160	31	9	10	7	*
Chronic lower respiratory diseases	410 <sup>†</sup>	217	188	304	97	*	340	26	12	6	*	18
Cerebrovascular diseases	317	168	149	250	66	*	192	67	26	16	9	7
Influenza and pneumonia	170 <sup>†</sup>	94	77	140	29	*	111	25	17	13	*	*
Essential (primary) hypertension and hypertensive renal disease	130 <sup>†</sup>	78	54	116	16	0	70	32	17	7	*	*
Nephritis, nephrotic syndrome and nephrosis	130 <sup>†</sup>	77	49	96	30	0	65	40	*	12	*	0
Septicemia	100 <sup>†</sup>	53	45	72	24	*	44	31	*	17	*	0
Assault (homicide)	80 <sup>†</sup>	65	14	59	19	*	37	18	10	10	*	*
By discharge of firearms	50 <sup>†</sup>	40	9	38	10	*	26	12	6	*	*	*
By other means	30 <sup>†</sup>	25	*	21	9	0	11	6	*	8	*	0
Viral hepatitis	60 <sup>†</sup>	41	22	50	13	0	30	23	*	6	0	*
Human immunodeficiency virus (HIV) disease	30 <sup>†</sup>	27	7	25	8	*	20	7	*	*	0	0
<b>Total, all causes<sup>b</sup></b>	<b>10,834</b>	<b>6,702</b>	<b>4,132</b>	<b>8,485</b>	<b>2,293</b>	<b>56</b>	<b>7,115</b>	<b>1,969</b>	<b>610</b>	<b>771</b>	<b>193</b>	<b>176</b>

Note: \* Cell suppressed due to count less than 6; <sup>†</sup> Sum rounded to nearest tens unit due to addend less than 6; <sup>a</sup> Urban = Maricopa, Pima, Pinal, and Yuma counties; the remaining counties comprise Arizona's rural areas; <sup>b</sup> May include other causes of death not shown above.

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

**Figure 2C-21**  
**Mortality Rates<sup>a</sup> by Gender and Year among Elderly 65 Years and Older, Arizona, 2009-2019**



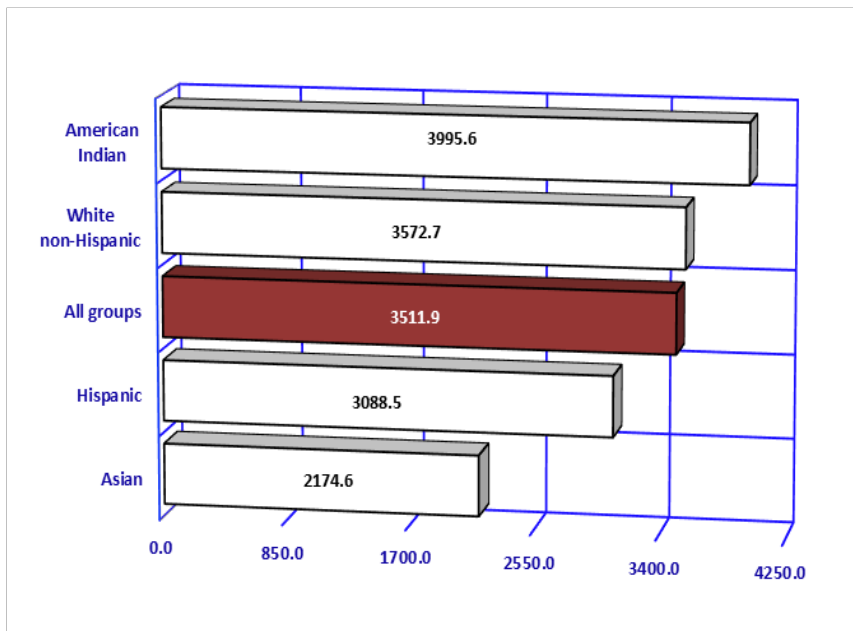
In 2019, an estimated 1,264,218 residents age 65 years and older resided in the state (Table 10A-1). No other age group has as great of a disproportionate gender distribution as the elderly. As a result of the higher total mortality rates for males at earlier ages, more elderly women than men were alive in 2019.

The 2019 elderly mortality rate of 3511.9 per 100,000 was 6.2 percent lower than the 2009 rate of 3,744.2 (Table 2C-23).

The 2019 total mortality rate among elderly females was 8.5 percent lower than their rate in 2009. The mortality rate among elderly males decreased 4.2 percent during the same period (Figure 2C-21, Table 2C-23).

Note: <sup>a</sup> Number of deaths per 100,000 persons, 65+ years old in specified group.

**Figure 2C-22**  
**Mortality Rates<sup>a</sup> by Race/Ethnicity among Elderly 65 Years and Older, Arizona, 2019**



In 2019 the mortality rate for Arizona's American Indian elderly residents was 1.8 times that of the Asian elderly population. The mortality rate of 2,174.6 /100,000 among elderly Asians was the lowest rate among the racial/ethnic groups (Figure 2C-22). Hispanic or Latino elderly had the second lowest mortality rate in 2019 at 3,088.5/100,000.

Note: <sup>a</sup> Number of deaths per 100,000 persons, 65+ years old in specified group.

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

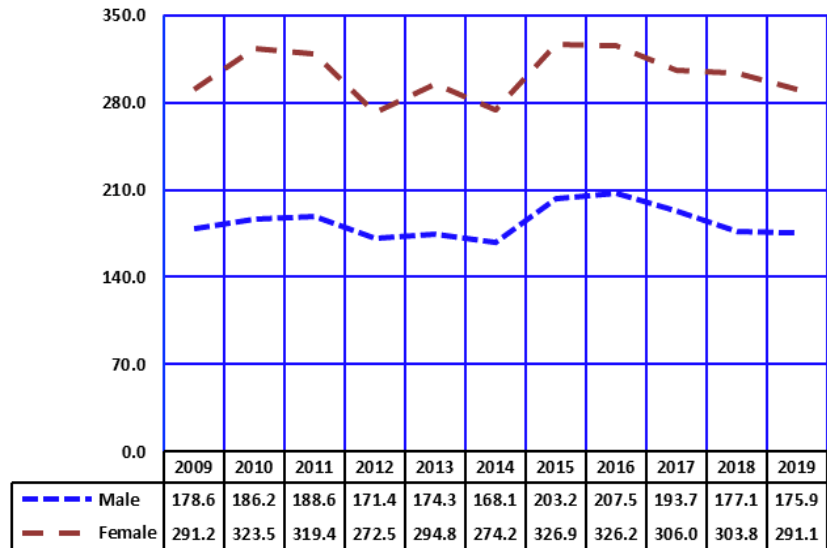
**Tables 2C-23 and 2c-24** provide mortality rates for the five causes with the greatest number of deaths over the 2009-2019 period.

In 2019, Alzheimer’s disease (3,009 deaths; **Table 2C-26**) accounted for 6.8 percent of elderly mortality. From 2018 to 2019, mortality due to Alzheimer’s disease decreased for both genders (**Figure 2C-23**).

There were 1,984 deaths from Alzheimer’s disease among elderly females in 2019, approximately twice the number of deaths from this cause among males (1,025; **Table 2C-26**).

White non-Hispanic elderly accounted for 83.3 percent of the 2019 deaths from Alzheimer’s disease (based on data in **Table 2C-26**).

**Figure 2C-23**  
**Trends in Mortality Rates for Alzheimer’s Disease<sup>a</sup> by Gender and Year among Elderly 65 Years and Older, Arizona, 2009-2019**

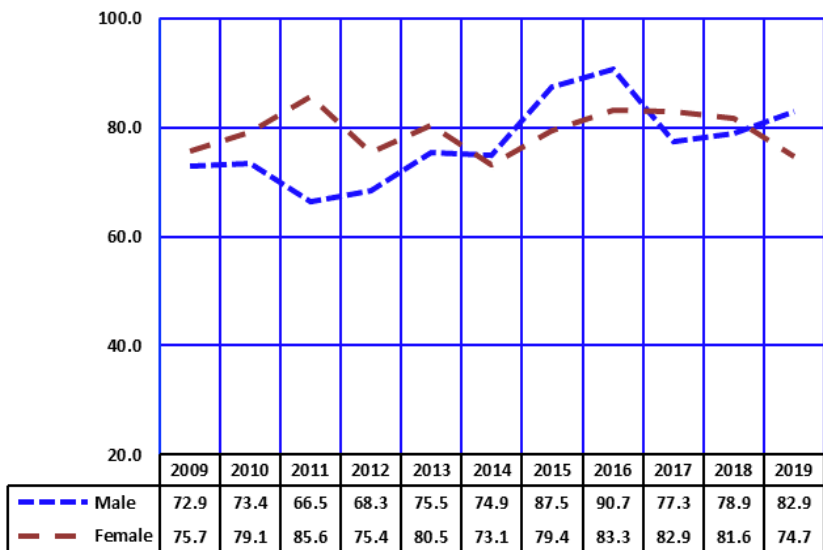


Note: <sup>a</sup> Number of deaths due to Alzheimer’s disease per 100,000 persons, 65+ years old in specified group.

**Figure 2C-24**  
**Trends in Mortality Rates for Falls and Fall-related Injuries<sup>a</sup> by Gender and Year among Elderly 65 Years and Older, Arizona, 2009-2019**

Among unintentional injury deaths unrelated to motor vehicles, Arizona’s elderly experienced high mortality from *fall-related injuries* (**Figure 2C-24**). In 2019, 992 elderly Arizonans 65 years or older died from *fall-related injuries*, compared to 976 in 2018, representing a 1.6 percent increase between these two years (**Table 2C-26**).

In 2019, Arizonans aged 85 years old or older experienced the largest number of *fall-related deaths* (514), followed by Arizonans 75-84 years old (340), and those aged 65-74 years old (138).



Note: <sup>a</sup> Number of deaths due to falls and fall-related injuries per 100,000 persons, 65+ years old in specified group.

**TABLE 2C-23  
MORTALITY RATES<sup>a</sup> FOR THE SELECTED FIVE LEADING CAUSES<sup>b</sup> OF DEATH AMONG ELDERLY (65 YEARS AND OLDER) BY GENDER,  
ARIZONA, 2009-2019**

Gender/Cause	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	% change from 2009
<b>MALE</b>												
Diseases of heart	1073.3	992.8	1065.5	1022.2	1007.0	908.6	970.0	1003.2	1002.5	984.3	961.0	-10.5
Malignant neoplasms	1017.3	1007.7	1007.4	992.6	958.6	899.1	931.7	927.9	893.5	901.1	875.4	-13.9
Chronic lower respiratory diseases	303.6	310.9	318.4	319.9	302.7	290.2	308.7	298.2	288.3	280.8	265.2	-12.6
Cerebrovascular diseases	182.8	169.3	164.4	165.5	151.8	144.4	183.0	176.8	178.6	187.1	181.4	-0.8
Alzheimer's disease	178.6	186.2	188.6	171.4	174.3	168.1	203.2	207.5	193.7	177.1	175.9	-1.5
ALL CAUSES	4025.9	3974.9	4083.3	3987.4	3904.2	3883.3	3975.4	4019.0	3892.3	3932.5	3858.4	-4.2
(Number of all deaths)	(15,462)	(15,967)	(16,517)	(17,101)	(17,489)	(18,292)	(19,665)	(20,781)	(21,144)	(22,030)	(22,480)	45.4
<b>FEMALE</b>												
Diseases of heart	855.9	804.8	847.2	794.5	763.7	694.9	756.2	741.0	743.4	726.4	705.3	-17.6
Malignant neoplasms	701.6	702.5	710.9	678.6	697.9	628.1	670.5	642.2	628.7	601.8	624.4	-11.0
Alzheimer's disease	291.2	323.5	319.4	272.5	294.8	274.2	326.9	326.2	306.0	303.8	291.1	0.0
Chronic lower respiratory diseases	273.5	272.6	301.4	268.6	283.6	248.3	286.8	288.1	271.7	265.6	248.2	-9.3
Cerebrovascular diseases	218.5	229.9	231.0	208.0	198.1	191.1	210.5	218.4	208.0	215.3	207.8	-4.9
ALL CAUSES	3515.6	3521.7	3681.4	3489.9	3468.6	3378.3	3412.6	3371.1	3312.5	3293.6	3215.7	-8.5
(Number of all deaths)	(16,636)	(16,909)	(17,798)	(17,855)	(18,494)	(18,718)	(19,815)	(20,408)	(21,055)	(21,542)	(21,918)	31.8
<b>TOTAL</b>												
Diseases of heart	953.3	890.4	946.8	898.3	874.8	793.1	854.5	861.8	862.8	845.4	823.1	-13.7
Malignant neoplasms	843.0	841.5	846.1	821.8	816.9	752.6	790.7	773.8	750.7	739.9	740.1	-12.2
Chronic lower respiratory diseases	287.0	290.1	309.1	292.0	292.3	267.6	296.8	292.8	279.3	272.6	256.0	-10.8
Alzheimer's disease	240.8	260.9	259.8	226.4	239.8	225.4	270.0	271.5	254.2	245.3	238.0	-1.2
Cerebrovascular diseases	202.5	202.3	200.7	188.6	176.9	169.6	197.8	199.2	194.4	202.3	195.6	-3.4
ALL CAUSES	3744.2	3728.2	3864.8	3716.9	3667.5	3610.4	3671.5	3669.5	3579.6	3588.4	3511.9	-6.2
(Number of all deaths)	(32,098)	(32,876)	(34,318)	(34,958)	(35,983)	(37,010)	(39,480)	(41,189)	(42,199)	(43,572)	(44,398)	38.3

Notes: <sup>a</sup> Rates are presented per 100,000 elderly persons 65 years and older; <sup>b</sup> The five causes with the greatest number of deaths over the 2009-2019 period; \* Total (number of all deaths) includes 2 unknown gender; the cause-of-death titles are according to the Tenth Revision of the International Classification of Diseases (ICD-10); the causes of death for 2009-2019 are classified by ICD-10, replacing the Ninth Revision (ICD-9).

**TABLE 2C-24  
MORTALITY RATES<sup>a</sup> FOR THE SELECTED FIVE LEADING CAUSES<sup>b</sup> OF DEATH AMONG ELDERLY (65 YEARS AND OLDER)  
IN URBAN AND RURAL AREAS<sup>c</sup>, ARIZONA, 2009-2019**

Area/Cause	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	% change from 2009
<b>URBAN</b>												
Diseases of heart	952.2	888.5	932.0	891.8	862.3	781.0	830.2	835.5	839.1	829.2	822.4	-13.6
Malignant neoplasms	835.0	834.0	846.2	825.5	807.6	748.7	783.6	756.6	737.1	724.0	726.2	-13.0
Alzheimer's disease	263.2	284.9	288.9	251.5	272.0	252.6	291.9	286.0	262.6	253.4	249.6	-5.2
Chronic lower respiratory diseases	282.2	288.7	311.3	288.9	286.3	267.8	292.0	285.8	265.3	257.5	238.0	-15.7
Cerebrovascular diseases	206.1	201.5	202.0	192.8	180.1	172.6	198.1	197.5	193.8	203.2	197.2	-4.3
ALL CAUSES	3765.4	3738.3	3886.0	3740.3	3663.4	3615.6	3650.2	3624.7	3531.0	3568.4	3488.5	-7.4
(Number of all deaths)	(25,596)	(26,043)	(27,302)	(27,824)	(28,442)	(29,416)	(31,179)	(32,370)	(33,146)	(34,397)	(35,062)	37.0
<b>RURAL</b>												
Diseases of heart	950.4	889.9	990.4	912.5	919.1	834.0	935.2	947.2	940.3	900.8	819.6	-13.8
Malignant neoplasms	865.3	864.6	840.5	802.6	847.8	764.5	810.8	828.2	792.5	794.6	788.7	-8.9
Chronic lower respiratory diseases	302.5	291.6	298.9	299.6	314.0	264.3	311.1	311.2	328.6	327.6	323.4	6.9
Alzheimer's disease	152.1	169.6	145.1	130.2	117.2	118.7	184.1	211.9	218.2	211.3	190.6	25.3
Cerebrovascular diseases	187.0	204.1	193.1	171.9	164.1	157.9	195.8	204.0	193.6	196.1	187.2	0.1
ALL CAUSES	3628.5	3657.5	3741.1	3590.0	3665.4	3558.1	3706.3	3771.9	3708.2	3634.9	3566.0	-1.7
(Number of all deaths)	(6,441)	(6,773)	(6,935)	(7,058)	(7,505)	(7,526)	(8,196)	(8,653)	(8,905)	(9,099)	(9,241)	43.5
<b>TOTAL</b>												
Diseases of heart	953.3	890.4	946.8	898.3	874.8	793.1	854.5	861.8	862.8	845.4	823.1	-13.7
Malignant neoplasms	843.0	841.5	846.1	821.8	816.9	752.6	790.7	773.8	750.7	739.9	740.1	-12.2
Chronic lower respiratory diseases	287.0	290.1	309.1	292.0	292.3	267.6	296.8	292.8	279.3	272.6	256.0	-10.8
Alzheimer's disease	240.8	260.9	259.8	226.4	239.8	225.4	270.0	271.5	254.2	245.3	238.0	-1.2
Cerebrovascular diseases	202.5	202.3	200.7	188.6	176.9	169.6	197.8	199.2	194.4	202.3	195.6	-3.4
ALL CAUSES	3744.2	3728.2	3864.8	3716.9	3667.5	3610.4	3671.5	3669.5	3579.6	3588.4	3511.9	-6.2
(Number of all deaths)	(32,098)	(32,876)	(34,318)	(34,958)	(35,983)	(37,010)	(39,480)	(41,189)	(42,199)	(43,572)	(44,398)	38.3

Notes: <sup>a</sup> Rates are presented per 100,000 elderly persons 65 years and older; <sup>b</sup> The five causes with the greatest number of deaths over the 2009-2019 period; <sup>c</sup> Urban = Maricopa, Pima, Pinal, and Yuma counties; the remaining counties comprise Arizona's rural areas; see **Technical Notes** for more information; 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 2009-2019 are classified by ICD-10, replacing the Ninth Revision (ICD-9); 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-25**  
**MORTALITY RATES<sup>a</sup> FOR THE FIVE LEADING CAUSES OF DEATH AMONG ELDERLY (65 YEARS AND OLDER)**  
**BY GENDER IN URBAN AND RURAL AREAS<sup>b</sup>, ARIZONA, 2009-2019**

Area/Gender	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	% change from 2009
<b>URBAN</b>												
Male	4013.8	3976.9	4107.6	3980.1	3898.2	3888.6	3944.3	3960.2	3799.2	3891.3	3816.2	-4.9
Female	3567.5	3543.8	3705.0	3543.8	3470.8	3388.5	3405.1	3344.3	3306.7	3297.9	3214.4	-9.9
TOTAL	3765.4	3738.3	3886.0	3740.3	3663.4	3615.6	3650.2	3624.7	3531.0	3568.4	3488.5	-7.4
<b>RURAL</b>												
Male	4021.7	3917.1	3948.9	3952.6	3895.3	3826.7	4027.0	4133.9	4142.9	4043.4	3971.6	-1.2
Female	3286.5	3418.2	3547.4	3256.0	3454.5	3309.8	3409.1	3435.2	3304.1	3253.6	3188.9	-3.0
TOTAL	3628.5	3657.5	3741.1	3590.0	3665.4	3558.1	3706.3	3771.9	3708.2	3634.9	3566.0	-1.7
<b>TOTAL</b>												
Male	4025.9	3974.9	4083.3	3987.4	3904.2	3883.3	3975.4	4019.0	3892.3	3932.5	3858.4	-4.2
Female	3515.6	3521.7	3681.4	3489.9	3468.6	3378.3	3412.6	3371.1	3312.5	3293.6	3215.7	-8.5
TOTAL	3744.2	3728.2	3864.8	3716.9	3667.5	3610.4	3671.5	3669.5	3579.6	3588.4	3511.9	-6.2

Notes: <sup>a</sup> Rates are presented per 100,000 persons 65 years and older; <sup>b</sup> Urban = Maricopa, Pima, Pinal, and Yuma counties; the remaining counties comprise Arizona's rural areas; see **Technical Notes** for more information.



**TABLE 2C-26  
LEADING CAUSES OF DEATH AMONG ELDERLY (65 YEARS AND OLDER) BY GENDER, AREA, AND RACE/ETHNICITY,  
ARIZONA, 2019**

Cause of death	Gender		Area <sup>a</sup>		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	Refused/Unknown
Diseases of heart	10,406	5,599	4,807	8,266	2,124	16	8,687	1,000	286	196	152	85
Malignant neoplasms	9,356	5,100	4,256	7,299	2,044	13	7,666	1,037	277	185	151	40
Malignant neoplasm of trachea, bronchus and lung	2,053	1,071	982	1,586	464	*	1,769	169	56	13	38	8
Malignant neoplasm of lymphoid, hematopoietic and related tissue	980†	561	420	787	194	0	825	106	23	18	*	*
Malignant neoplasm of colon, rectum, and anus	770†	402	367	572	196	*	626	90	22	14	15	*
Malignant neoplasm of pancreas	770†	397	369	635	130	*	618	87	30	11	18	*
Malignant neoplasm of prostate	660†	656	0	497	159	0	526	73	34	13	7	*
Malignant neoplasm of breast	581	7	574	463	117	*	471	71	25	8	6	0
Chronic lower respiratory diseases	3,237	1,545	1,692	2,392	838	7	2,896	203	65	30	21	22
Alzheimer's disease	3,009	1,025	1,984	2,509	494	6	2,506	345	79	38	35	6
Cerebrovascular diseases	2,473	1,057	1,416	1,982	485	6	1,977	327	56	61	40	12
Accidents (unintentional injury)	1,560	863	697	1,226	328	6	1,278	165	30	51	20	16
Falls	990†	483	509	820	172	0	852	92	11	22	11	*
Motor vehicle accidents	220†	147	70	154	60	*	165	32	*	10	*	0
Diabetes	1,491	859	632	1,179	308	*	947	308	74	114	35	13
Essential (primary) hypertension and hypertensive disease	850†	382	471	717	136	0	633	129	37	32	20	*
Parkinson's disease	790†	517	268	645	139	*	650	92	6	22	13	*
Influenza and pneumonia	740†	398	343	582	155	*	572	90	17	40	18	*
Nephritis, nephrotic syndrome and nephrosis	612	342	270	466	145	*	426	116	21	37	12	0
Septicemia	220†	114	105	156	61	*	167	29	6	12	*	*
<b>Total, all causes<sup>b</sup></b>	<b>44,398</b>	<b>22,480</b>	<b>21,918</b>	<b>35,062</b>	<b>9,241</b>	<b>95</b>	<b>36,122</b>	<b>5,011</b>	<b>1,185</b>	<b>1,171</b>	<b>664</b>	<b>245</b>

Notes: \* Cell suppressed due to count less than 6; † Sum rounded to nearest tens unit due to addend less than 6; <sup>a</sup> Urban = Maricopa, Pima, Pinal, and Yuma counties; the remaining counties comprise Arizona's rural areas; <sup>b</sup> May include other causes of death not shown above.



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

**TABLE 2C-27  
COMPARISON OF CAUSES OF MORTALITY BY AGE GROUP, ARIZONA, 2019**

	All ages	Infants <1	Children 1-14	Adolescents 15-19	Young adults 20-44	Middle-aged adults 45-64	Elderly 65+	Un-known
Total, all causes	60,161	430	224	300	3,973	10,834	44,398	2
Salmonella infections	0†	0	0	0	0	0	*	0
Shigellosis and amebiasis	0	0	0	0	0	0	0	0
Certain other intestinal infections	190†	*	*	0	*	27	150	0
Enterocolitis due to Clostridium difficile	110†	*	0	0	*	18	92	0
Tuberculosis	10†	0	0	0	*	*	6	0
Respiratory tuberculosis	10†	0	0	0	*	*	*	0
Other tuberculosis	10†	0	0	0	0	*	*	0
Whooping cough	0	0	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
Septicemia	340†	*	0	*	18	98	219	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	109	0	0	0	6	63	40	0
Human immunodeficiency virus (HIV) disease	68	0	0	0	20	34	14	0
Malaria	0	0	0	0	0	0	0	0
Other and unspecified infectious and parasitic diseases	240†	*	*	*	18	63	149	0
Malignant neoplasms	12,490†	*	33	19	308	2,768	9,356	0
Malignant neoplasm of lip, oral cavity and pharynx	190†	0	0	0	*	59	126	0
Malignant neoplasm of esophagus	332	0	0	0	9	82	241	0
Malignant neoplasm of stomach	226	0	0	0	14	53	159	0
Malignant neoplasm of colon, rectum, and anus	1,117	0	0	0	45	303	769	0
Malignant neoplasm of liver and intrahepatic bile ducts	670†	0	*	0	12	204	455	0
Malignant neoplasm of pancreas	1,020†	0	*	0	15	236	766	0
Malignant neoplasm of larynx	60†	0	0	0	*	17	39	0
Malignant neoplasm of trachea, bronchus and lung	2,510	0	0	0	10	447	2,053	0
Malignant melanoma of skin	206	0	0	0	9	50	147	0
Malignant neoplasm of breast	911	0	0	0	41	289	581	0
Malignant neoplasm of cervix uteri	84	0	0	0	14	44	26	0
Malignant neoplasm of corpus uteri and uterus, part unspecified	200†	0	0	0	*	58	144	0
Malignant neoplasm of ovary	300†	0	0	*	9	81	211	0
Malignant neoplasm of prostate	734	0	0	0	0	78	656	0
Malignant neoplasm of kidney and renal pelvis	310†	0	*	0	*	76	227	0
Malignant neoplasm of bladder	360†	0	*	0	*	49	310	0

**TABLE 2C-27 (continued)  
COMPARISON OF CAUSES OF MORTALITY BY AGE GROUP, ARIZONA, 2019**

	All ages	Infants <1	Children 1-14	Adoles- cents 15-19	Young adults 20-44	Middle- aged adults 45-64	Elderly 65+	Un- known
Malignant neoplasm of meninges, brain and other parts of central nervous system	380†	*	*	*	27	107	237	0
Malignant neoplasm of lymphoid, hematopoietic and related tissue	1,242	0	13	8	40	200	981	0
Hodgkin's disease	20†	0	0	0	*	*	13	0
Non-Hodgkin's lymphoma	409	0	0	0	7	78	324	0
Leukemia	546	0	12	8	27	82	417	0
Multiple myeloma and immunoproliferative neoplasms	260†	0	0	0	*	34	222	0
Other and unspecified malignant neoplasms of lymphoid tissue	10†	0	*	0	0	*	*	0
All other and unspecified malignant neoplasm	1,634	0	12	6	53	335	1,228	0
In situ neoplasms	380†	*	*	0	6	33	341	0
Anemias	70†	0	*	0	*	19	45	0
Diabetes	2,170†	0	*	*	94	583	1,491	0
Nutritional deficiencies	420†	*	0	0	*	20	392	0
Malnutrition	390†	*	0	0	*	19	365	0
Other nutritional deficiencies	30†	0	0	0	0	*	27	0
Obesity	180†	0	*	*	29	86	66	0
Meningitis	20†	0	*	*	0	7	7	0
Parkinson's disease	806	0	0	0	0	21	785	0
Alzheimer's disease	3,045	0	0	0	0	36	3,009	0
Major cardiovascular diseases	16,930†	6	14	*	341	2,430	14,139	0
Diseases of heart	12,560†	*	*	*	250	1,892	10,406	0
Acute rheumatic fever and chronic rheumatic heart disease	70†	0	0	0	*	12	56	0
Hypertensive heart disease	1,409	0	0	0	36	260	1,113	0
Hypertensive heart and renal disease	170†	0	0	0	*	8	155	0
Ischemic heart disease	7,620†	*	0	0	93	1,177	6,345	0
Acute myocardial infarction	1,600†	*	0	0	20	304	1,274	0
Other acute ischemic heart disease	52	0	0	0	0	9	43	0
Other forms of chronic ischemic heart disease	5,970†	*	0	0	73	864	5,028	0
Atherosclerotic cardiovascular disease	1,542	0	0	0	39	417	1,086	0
All other forms of chronic ischemic heart disease	4,420†	*	0	0	34	447	3,942	0
Other heart diseases	3,300†	*	*	*	116	435	2,737	0
Acute and subacute endocarditis	42	0	0	0	10	12	20	0
Diseases of pericardium and acute myocarditis	20†	0	0	0	6	*	15	0
Heart failure	838	0	0	0	8	70	760	0
All other forms of heart disease	2,390†	*	*	*	92	350	1,942	0
Essential (primary) hypertension and hypertensive renal disease	1,009	0	0	0	24	132	853	0
Cerebrovascular diseases	2,850†	*	7	*	48	317	2,473	0
Atherosclerosis	80†	0	0	0	*	10	70	0

**TABLE 2C-27 (continued)**  
**COMPARISON OF CAUSES OF MORTALITY BY AGE GROUP, ARIZONA, 2019**

	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	440†	0	*	0	18	79	337	0
Aortic aneurysm and dissection	211	0	0	0	12	44	155	0
Other disease of arteries, arterioles and capillaries	230†	0	*	0	6	35	182	0
Other disorders of circulatory system	120†	0	0	*	16	44	58	*
Influenza and pneumonia	950†	*	*	*	30	171	741	0
Influenza	82	0	0	0	7	30	45	0
Pneumonia	870†	*	*	*	23	141	696	0
Other acute lower respiratory infections	10†	*	0	0	0	*	*	0
Acute bronchiolitis	10†	*	0	0	0	*	*	0
Unspecified acute lower respiratory infection	0†	0	0	0	0	0	*	0
Chronic lower respiratory diseases	3,680†	0	*	*	31	405	3,237	0
Bronchitis, chronic and unspecified	10†	0	0	0	0	0	*	0
Emphysema	160†	0	0	0	*	31	128	0
Asthma	90†	0	*	*	26	20	37	0
Other chronic lower respiratory diseases	3,430†	0	*	0	*	354	3,067	0
Pneumoconioses and chemical effects	13	0	0	0	0	0	13	0
Pneumonitis due to solids and liquids	230†	0	0	0	*	44	177	0
Other disease of respiratory system	880†	*	*	0	19	111	742	0
Peptic ulcer	120†	0	0	0	*	25	88	0
Diseases of appendix	10†	0	0	0	*	*	*	0
Hernia	53	0	0	0	0	8	45	0
Chronic liver disease and cirrhosis	1,211	0	0	0	183	578	450	0
Alcoholic liver disease	769	0	0	0	144	424	201	0
Other chronic liver disease and cirrhosis	442	0	0	0	39	154	249	0
Cholelithiasis and other disorders of gallbladder	80†	0	0	0	*	10	65	0
Nephritis, nephrotic syndrome and nephrosis	760†	*	0	0	20	126	612	0
Acute and rapidly progressive nephritic and nephrotic syndrome	0†	0	0	0	0	*	*	0
Chronic glomerulonephritis	10†	0	0	0	*	*	*	0
Renal failure	750†	*	0	0	18	123	605	0
Others disorders of kidney	0†	0	0	0	*	0	0	0
Infections of kidney	20†	0	0	0	*	*	14	0
Hyperplasia of prostate	13	0	0	0	0	0	13	0
Inflammatory diseases of female pelvic organs	10†	0	0	0	*	*	*	0
Pregnancy, childbirth and the puerperium	42	0	0	0	33	9	0	0
Pregnancy with abortive outcome	0	0	0	0	0	0	0	0
Other complications of pregnancy, childbirth and the puerperium	42	0	0	0	33	9	0	0

**TABLE 2C-27 (continued)**  
**COMPARISON OF CAUSES OF MORTALITY BY AGE GROUP, ARIZONA, 2019**

	All ages	Infants <1	Children 1-14	Adolescents 15-19	Young adults 20-44	Middle-aged adults 45-64	Elderly 65+	Unknown
Perinatal conditions	180†	181	*	0	0	0	0	0
Congenital anomalies, deformations and chromosomal abnormalities	200†	103	16	*	22	23	31	0
Symptoms, signs, abnormal findings	1,020†	59	14	*	58	127	754	*
Total accidents	4,522	20	59	144	1,513	1,226	1,560	0
Transport accidents	970†	*	32	64	395	261	217	0
Motor vehicle accidents	1,060†	*	35	66	424	293	236	0
Other land transport accidents	40†	0	*	*	13	13	8	0
Water, air, space	50†	0	0	*	16	19	11	0
Nontransport accidents	3,467	19	24	78	1,089	933	1,324	0
Falls	1,110†	0	*	*	21	92	992	0
Accidental discharge of firearms	10†	0	*	*	6	*	0	0
Accidental drowning and submersion	100†	*	9	*	21	35	29	0
Accidental exposure to smoke, fire and flames	40†	0	*	0	*	17	21	0
Accidental poisoning	1,800†	*	*	67	966	672	88	0
Other and unspecified nontransport accidents	410†	17	9	*	71	112	194	0
Intentional self-harm (suicide)	1,411	0	15	51	545	461	339	0
By discharge of firearms	810†	0	*	20	290	240	253	0
By other means	603	0	10	31	255	221	86	0
Assault (homicide)	409	8	19	43	228	79	32	0
By discharge of firearms	285	0	8	39	179	49	10	0
By other means	120†	8	11	*	49	30	22	0
Legal intervention	10†	0	0	0	13	0	*	0
Events of undetermined intent	140†	13	*	8	54	43	22	0
Discharge of firearms	20†	0	0	*	9	*	*	0
Other and unspecified events of undetermined intent	130†	13	*	*	45	42	21	0
Operations of war	0	0	0	0	0	0	0	0
Complications of medical and surgical care	120†	*	*	0	*	26	82	0
Injury by firearms	1,134	0	14	65	495	295	265	0
Drug-induced deaths	2,000†	*	*	72	1,019	752	157	0
Opioid-induced deaths	1,290†	*	*	57	781	375	69	0
Alcohol-induced deaths	1,275	0	0	0	286	686	303	0

Notes: \* Cell suppressed due to count less than 6; † Sum rounded to nearest tens unit due to addend less than 6; the causes of death in this table are classified by the Tenth Revision of the International Classification of Diseases (ICD-10).

**TABLE 2C-28  
COMPARISON OF CAUSE-SPECIFIC MORTALITY RATES<sup>a</sup> BY AGE GROUP, ARIZONA, 2019**

	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	836.8	543.0	17.5	63.2	168.2	629.7	3511.9
Salmonella infections	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	0.0
Certain other intestinal infections	2.6	**	**	0.0	**	1.6	11.9
Enterocolitis due to Clostridium difficile	1.6	**	0.0	0.0	**	1.0	7.3
Tuberculosis	0.1	0.0	0.0	0.0	**	**	0.5
Respiratory tuberculosis	0.1	0.0	0.0	0.0	**	**	**
Other tuberculosis	0.1	0.0	0.0	0.0	0.0	**	**
Whooping cough	0.0	0.0	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	**
Septicemia	4.7	**	0.0	**	0.8	5.7	17.3
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	1.5	0.0	0.0	0.0	0.3	3.7	3.2
Human immunodeficiency virus (HIV) disease	0.9	0.0	0.0	0.0	0.8	2.0	1.1
Malaria	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other and unspecified infectious and parasitic diseases	3.3	**	**	**	0.8	3.7	11.8
Malignant neoplasms	173.7	**	2.6	4.0	13.0	160.9	740.1
Malignant neoplasm of lip, oral cavity and pharynx	2.6	0.0	0.0	0.0	**	3.4	10.0
Malignant neoplasm of esophagus	4.6	0.0	0.0	0.0	0.4	4.8	19.1
Malignant neoplasm of stomach	3.1	0.0	0.0	0.0	0.6	3.1	12.6
Malignant neoplasm of colon, rectum, and anus	15.5	0.0	0.0	0.0	1.9	17.6	60.8
Malignant neoplasm of liver and intrahepatic bile ducts	9.3	0.0	**	0.0	0.5	11.9	36.0
Malignant neoplasm of pancreas	14.2	0.0	**	0.0	0.6	13.7	60.6
Malignant neoplasm of larynx	0.8	0.0	0.0	0.0	**	1.0	3.1
Malignant neoplasm of trachea, bronchus and lung	34.9	0.0	0.0	0.0	0.4	26.0	162.4
Malignant melanoma of skin	2.9	0.0	0.0	0.0	0.4	2.9	11.6
Malignant neoplasm of breast	12.7	0.0	0.0	0.0	1.7	16.8	46.0
Malignant neoplasm of cervix uteri	2.3	0.0	0.0	0.0	1.2	5.0	3.8
Malignant neoplasm of corpus uteri and uterus, part unspecified	5.6	0.0	0.0	0.0	**	6.6	21.1
Malignant neoplasm of ovary	8.4	0.0	0.0	**	0.8	9.2	31.0
Malignant neoplasm of prostate	20.5	0.0	0.0	0.0	0.0	9.3	112.6
Malignant neoplasm of kidney and renal pelvis	4.3	0.0	**	0.0	**	4.4	18.0
Malignant neoplasm of bladder	5.0	0.0	**	0.0	**	2.8	24.5



**TABLE 2C-28 (continued)  
COMPARISON OF CAUSE-SPECIFIC MORTALITY RATES<sup>a</sup> BY AGE GROUP, ARIZONA, 2019**

	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 central nervous system	5.3	**	**	**	1.1	6.2	18.8
Malignant neoplasm of lymphoid, hematopoietic and related tissue	17.3	0.0	1.0	1.7	1.7	11.6	77.6
Hodgkin's disease	0.3	0.0	0.0	0.0	**	**	1.0
Non-Hodgkin's lymphoma	5.7	0.0	0.0	0.0	0.3	4.5	25.6
Leukemia	7.6	0.0	0.9	1.7	1.1	4.8	33.0
Multiple myeloma and immunoproliferative neoplasms	3.6	0.0	0.0	0.0	**	2.0	17.6
Other and unspecified malignant neoplasms of lymphoid tissue	0.1	0.0	**	0.0	0.0	**	**
All other and unspecified malignant neoplasms	22.7	0.0	0.9	1.3	2.2	19.5	97.1
In situ neoplasms	5.3	**	**	0.0	0.3	1.9	27.0
Anemias	1.0	0.0	**	0.0	**	1.1	3.6
Diabetes	30.2	0.0	**	**	4.0	33.9	117.9
Nutritional deficiencies	5.8	**	0.0	0.0	**	1.2	31.0
Malnutrition	5.4	**	0.0	0.0	**	1.1	28.9
Other nutritional deficiencies	0.4	0.0	0.0	0.0	0.0	**	2.1
Obesity	2.5	0.0	**	**	1.2	5.0	5.2
Meningitis	0.2	0.0	**	**	0.0	0.4	0.6
Parkinson's disease	11.2	0.0	0.0	0.0	0.0	1.2	62.1
Alzheimer's disease	42.4	0.0	0.0	0.0	0.0	2.1	238.0
Major cardiovascular diseases	235.6	7.6	1.1	**	14.4	141.2	1118.4
Diseases of heart	174.7	**	**	**	10.6	110.0	823.1
Acute rheumatic fever and chronic rheumatic heart disease	1.0	0.0	0.0	0.0	**	0.7	4.4
Hypertensive heart disease	19.6	0.0	0.0	0.0	1.5	15.1	88.0
Hypertensive heart and renal disease	2.3	0.0	0.0	0.0	**	0.5	12.3
Ischemic heart disease	106.0	**	0.0	0.0	3.9	68.4	501.9
Acute myocardial infarction	22.2	**	0.0	0.0	0.8	17.7	100.8
Other acute ischemic heart disease	0.7	0.0	0.0	0.0	0.0	0.5	3.4
Other forms of chronic ischemic heart disease	83.0	**	0.0	0.0	3.1	50.2	397.7
Atherosclerotic cardiovascular disease	21.4	0.0	0.0	0.0	1.7	24.2	85.9
All other forms of chronic ischemic heart disease	61.5	**	0.0	0.0	1.4	26.0	311.8
Other heart diseases	45.9	**	**	**	4.9	25.3	216.5
Acute and subacute endocarditis	0.6	0.0	0.0	0.0	0.4	0.7	1.6
Diseases of pericardium and acute myocarditis	0.3	0.0	0.0	0.0	0.3	**	1.2
Heart failure	11.7	0.0	0.0	0.0	0.3	4.1	60.1
All other forms of heart disease	33.3	**	**	**	3.9	20.3	153.6
Essential (primary) hypertension and hypertensive renal disease	14.0	0.0	0.0	0.0	1.0	7.7	67.5
Cerebrovascular diseases	39.6	**	0.5	**	2.0	18.4	195.6
Atherosclerosis	1.1	0.0	0.0	0.0	**	0.6	5.5

TABLE 2C-28 (continued)  
COMPARISON OF CAUSE-SPECIFIC MORTALITY RATES<sup>a</sup> BY AGE GROUP, ARIZONA, 2019

	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	6.1	0.0	**	0.0	0.0	4.6	26.7
Aortic aneurysm and dissection	2.9	0.0	0.0	0.0	0.0	2.6	12.3
Other disease of arteries, arterioles and capillaries	3.1	0.0	**	0.0	0.3	2.0	14.4
Other disorders of circulatory system	1.7	0.0	0.0	**	0.7	2.6	4.6
Influenza and pneumonia	13.2	**	**	**	1.3	9.9	58.6
Influenza	1.1	0.0	0.0	0.0	0.3	1.7	3.6
Pneumonia	12.0	**	**	**	1.0	8.2	55.1
Other acute lower respiratory infections	0.1	**	0.0	0.0	0.0	**	**
Acute bronchiolitis	0.1	**	0.0	0.0	0.0	**	**
Unspecified acute lower respiratory infection	0.0	0.0	0.0	0.0	0.0	0.0	**
Chronic lower respiratory diseases	51.2	0.0	**	**	1.3	23.5	256.1
Bronchitis, chronic and unspecified	0.1	0.0	0.0	0.0	0.0	0.0	**
Emphysema	2.2	0.0	0.0	0.0	**	1.8	10.1
Asthma	1.2	0.0	**	**	1.1	1.2	2.9
Other chronic lower respiratory diseases	47.7	0.0	**	0.0	**	20.6	242.6
Pneumoconioses and chemical effects	0.2	0.0	0.0	0.0	0.0	0.0	1.0
Pneumonitis due to solids and liquids	3.1	0.0	0.0	0.0	**	2.6	14.0
Other disease of respiratory system	12.3	**	**	0.0	0.8	6.5	58.7
Peptic ulcer	1.6	0.0	0.0	0.0	**	1.5	7.0
Diseases of appendix	0.1	0.0	0.0	0.0	**	**	**
Hernia	0.7	0.0	0.0	0.0	0.0	0.5	3.6
Chronic liver disease and cirrhosis	16.8	0.0	0.0	0.0	7.7	33.6	35.6
Alcoholic liver disease	10.7	0.0	0.0	0.0	6.1	24.6	15.9
Other chronic liver disease and cirrhosis	6.1	0.0	0.0	0.0	1.7	9.0	19.7
Cholelithiasis and other disorders of gallbladder	1.1	0.0	0.0	0.0	**	0.6	5.1
Nephritis, nephrotic syndrome and nephrosis	10.6	**	0.0	0.0	0.8	7.3	48.4
Acute and rapidly progressive nephritic and nephrotic syndrome	0.1	0.0	0.0	0.0	0.0	**	**
Chronic glomerulonephritis	0.1	0.0	0.0	0.0	**	**	**
Renal failure	10.4	**	0.0	0.0	0.8	7.1	47.9
Others disorders of kidney	0.0	0.0	0.0	0.0	**	0.0	0.0
Infections of kidney	0.3	0.0	0.0	0.0	**	**	1.1
Hyperplasia of prostate	0.4	0.0	0.0	0.0	0.0	0.0	2.2
Inflammatory diseases of female pelvic organs	0.2	0.0	0.0	0.0	**	**	**
Pregnancy, childbirth and the puerperium	1.2	0.0	0.0	0.0	2.9	1.0	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	1.2	0.0	0.0	0.0	2.9	1.0	0.0

**TABLE 2C-28 (continued)  
COMPARISON OF CAUSE-SPECIFIC MORTALITY RATES<sup>a</sup> BY AGE GROUP, ARIZONA, 2019**

	All ages	Infants <1	Children 1-14	Adoles- cents 15-19	Young adults 20-44	Middle- aged adults 45-64	Elderly 65+
Perinatal conditions	2.5	228.6	**	0.0	0.0	0.0	0.0
Congenital anomalies, deformations and chromosomal abnormalities	2.8	130.1	1.2	**	0.9	1.3	2.5
Symptoms, signs, abnormal findings	14.1	74.5	1.1	**	2.5	7.4	59.6
Total accidents	62.9	25.3	4.6	30.3	64.0	71.3	123.4
Transport accidents	14.7	**	2.7	13.9	17.9	17.0	18.7
Motor vehicle accidents	13.5	**	2.5	13.5	16.7	15.2	17.2
Other land transport accidents	0.5	0.0	**	**	0.6	0.8	0.6
Water, air, space	0.7	0.0	0.0	**	0.7	1.1	0.9
Nontransport accidents	48.2	24.0	1.9	16.4	46.1	54.2	104.7
Falls	15.4	0.0	**	**	0.9	5.3	78.5
Accidental discharge of firearms	0.2	0.0	**	**	0.3	**	0.0
Accidental drowning and submersion	1.4	**	0.7	**	0.9	2.0	2.3
Accidental exposure to smoke, fire and flames	0.6	0.0	**	0.0	**	1.0	1.7
Accidental poisoning	25.0	**	**	14.1	40.9	39.1	7.0
Other and unspecified nontransport accidents	5.6	21.5	0.7	**	3.0	6.5	15.4
Intentional self-harm (suicide)	19.6	0.0	1.2	10.7	23.1	26.8	26.8
By discharge of firearms	11.2	0.0	**	4.2	12.3	14.0	20.0
By other means	8.4	0.0	0.8	6.5	10.8	12.8	6.8
Assault (homicide)	5.7	10.1	1.5	9.1	9.7	4.6	2.5
By discharge of firearms	4.0	0.0	0.6	8.2	7.6	2.8	0.8
By other means	1.7	10.1	0.9	**	2.1	1.7	1.7
Legal intervention	0.2	0.0	0.0	0.0	0.6	0.0	**
Events of undetermined intent	2.0	16.4	**	1.7	2.3	2.5	1.7
Discharge of firearms	0.2	0.0	0.0	**	0.4	**	**
Other and unspecified events of undetermined intent	1.8	16.4	**	**	1.9	2.4	1.7
Operations of war	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Complications of medical and surgical care	1.6	**	**	0.0	**	1.5	6.5
Injury by firearms <sup>b</sup>	15.8	0.0	1.1	13.7	21.0	17.1	21.0
Drug-induced deaths <sup>b</sup>	27.9	**	**	15.2	43.1	43.7	12.4
Opioid-induced deaths	17.9	**	**	12.0	33.1	21.8	5.5
Alcohol-induced deaths <sup>b</sup>	17.7	0.0	0.0	0.0	12.1	39.9	24.0

Notes: \*\* Cell suppressed due to rate/ratio/percent based on non-zero count less than 6; <sup>a</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>b</sup> Included in selected categories above.





## 2D.

### **PATTERNS OF PREMATURE MORTALITY**

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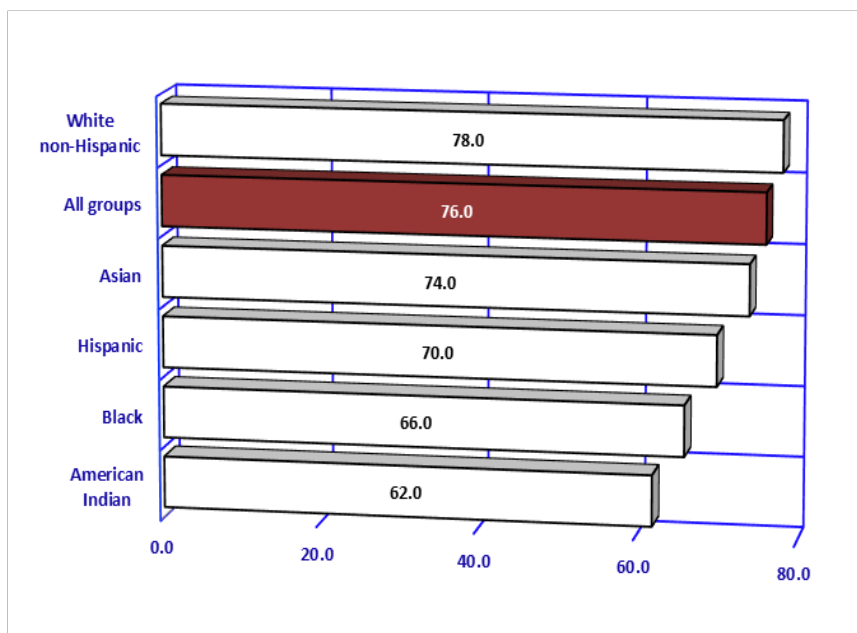
In 2019, among the race/ethnic minority groups, people younger than 25 years represented 42.6 percent of the group total, while among White non-Hispanics the same age demographic accounted for 24.3 percent of the group total. In contrast, people aged 65 years and older accounted for 25.4 percent of White non-Hispanics, but only 7.9 percent of all ethnic minority groups combined (percentages based on race-and-age-specific population denominators in **Table 10C-1**).

Arizona's population distribution by age and race/ethnicity is related to patterns of mortality among these subgroups. In 2019, of all deaths among the elderly (65 years and older), 81.4 percent were White non-Hispanics, 11.3 percent were Hispanic or Latino, with the three remaining racial/ethnic groups comprising only 6.8 percent of all deaths in this age group (**Table 2C-26**). Looking at younger ages, Native American children comprised only 5.3 percent of Arizona's population age 1-14, but accounted for 11.2 percent of all childhood deaths. Native American adolescents (ages 15-19) represented only 4.9 percent of all adolescents, but accounted for 10.3 percent of all adolescent deaths. Finally, Native American young adults (ages 20-44) represented 4.7 percent of all young adults but comprised 14.3 percent of all young adult deaths. In summary, Arizona's racial/ethnic minority groups tend to experience mortality earlier in life than Arizona's White non-Hispanics.

Beginning with the 2005 edition of the report, information about the arithmetic mean age at death was supplemented with information about the median age, or the age in the center of the distribution when sorted by age (see **Table 2D-1**). The median age is higher than the arithmetic mean age in negatively skewed distributions.

## 2D. PATTERNS OF PREMATURE MORTALITY

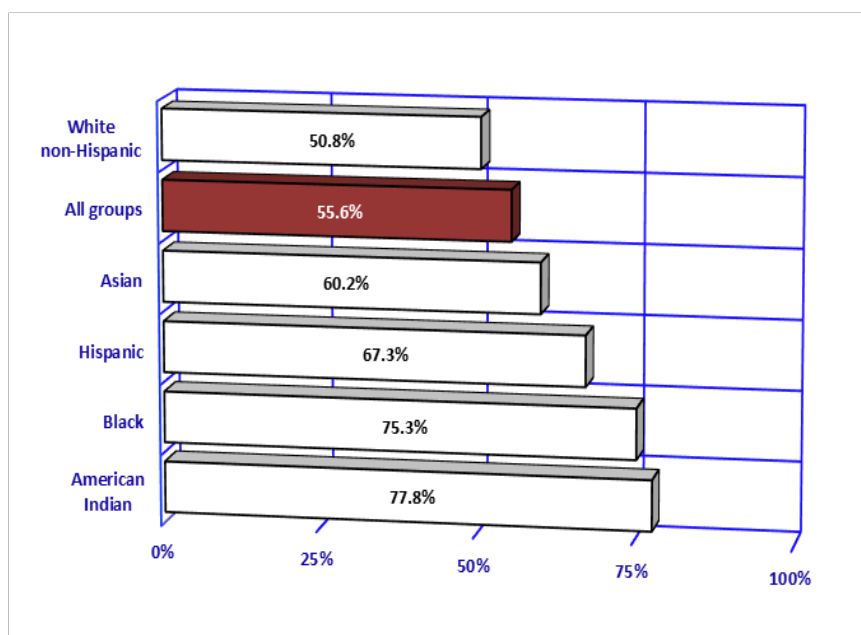
**Figure 2D-1**  
Median Age at Death by Race/Ethnicity, Arizona, 2019



The median age at death remained at 76 years from 2014 to 2019 (**Table 2D-1**). In other words, one of every two Arizonans who died in 2019 was older than 76 years of age. Among Arizona females, 50 percent were 79 years old when they died in 2019. Among males, the median age at death was 74 years in 2019. **Table 2D-1** shows both the median age at death by race/ethnicity and gender from 2009-2019.

In 2019, compared to White non-Hispanics, on average Asians were 4 years younger at time of death, Hispanics were 8 years younger, Blacks were 12 years younger, and American Indian residents of Arizona were 16 years younger (based on the median age at death).

**Figure 2D-2**  
Percent of Deaths before Expected<sup>a</sup> Years of Life Reached by Race/Ethnicity, Arizona, 2019



In 2019, the percent of deaths before expected years of life reached (a premature death ratio) was 55.6 percent, a level that remained unchanged from the prior year (**Figure 2D-2**).

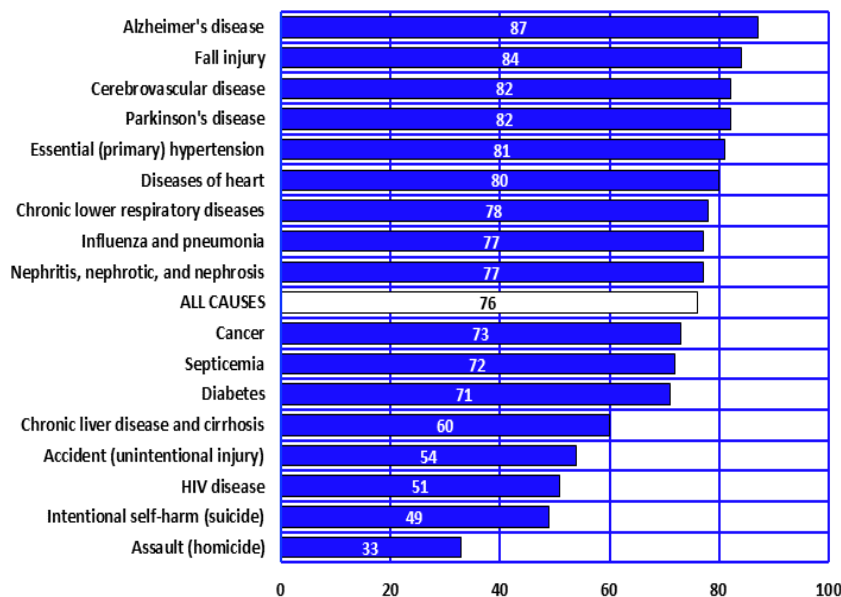
As expected, based on the findings for average and median age at death, White non-Hispanics were the only group with about 50 percent of all deaths (50.8 percent) occurring before the expected years of life were reached (**Figure 2D-2**). On average, 70.2 percent of the deaths among racial/ethnic minority groups occurred prematurely.

Among American Indians, nearly eight out of ten deaths (77.8 percent) were premature (**Table 2D-2**).

Note: <sup>a</sup> Expected years of life at birth for all U.S. residents (78.8 years).

## 2D. PATTERNS OF PREMATURE MORTALITY

**Figure 2D-3**  
**Median Age at Death for Selected Leading Causes of Death,**  
**Arizona, 2019**

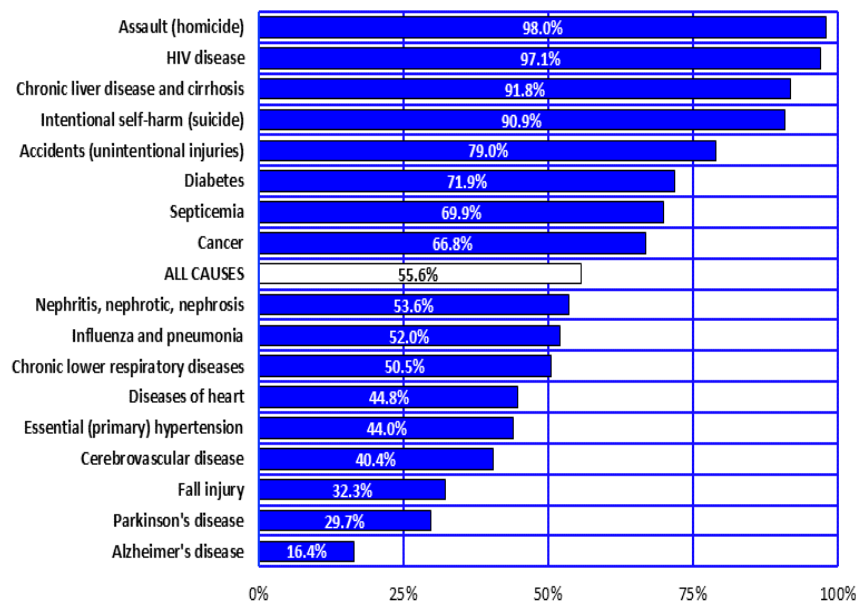


In 2019, *Alzheimer's disease* had the highest median age of death at 87 years (**Figure 2D-3**), exceeding by 11 years the median age at death for all causes (**Figure 2D-3**, **Table 2D-3**).

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

From 2010-2015, *cancer* replaced *diseases of the heart* as the leading cause of death (based on the number of deaths). 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* (80 years).

**Figure 2D-4**  
**Percent of Deaths before Expected Years of Life<sup>a</sup> Reached for**  
**Selected Leading Causes of Death, Arizona, 2019**



Only 16.4 percent of deaths from *Alzheimer's disease* occurred before the age of 78.8 years, i.e., before the expected years of life were reached. In contrast, almost all deaths from *homicide* were premature (98.0 percent; **Figure 2D-4**, **Table 2D-4**). The median age at death from *homicide* was 33 years in 2019, showing an increase from 32 years recorded in 2018 (**Figure 2D-3**, **Table 2D-3**).

A minority of deaths from *diseases of heart* were premature (44.8 percent). In contrast 66.8 percent of deaths from *cancer* occurred before the expected years of life were reached.

Note: <sup>a</sup> Expected years of life at birth for all U.S. residents (78.8 years).

**TABLE 2D-1  
AVERAGE AND MEDIUM AGE AT DEATH FROM ALL CAUSES BY GENDER AND RACE/ETHNICITY, ARIZONA, 2009-2019**

Year	Gender	Race/ethnicity													
		All ethnic groups		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	Mean	Median		
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		
2010	Total	72.1	77.0	74.8	79.0	62.4	68.0	62.6	65.0	57.0	58.0	65.7	71.0		
	Male	69.1	73.0	72.1	75.0	58.3	63.0	60.5	63.0	52.7	53.0	64.2	70.0		
	Female	75.4	80.0	77.7	82.0	67.4	74.0	65.3	69.0	62.6	65.0	67.4	74.0		
2011	Total	72.8	77.0	75.3	79.0	63.6	68.0	63.6	66.0	58.4	60.0	68.2	72.0		
	Male	69.7	73.0	72.5	76.0	59.8	63.0	61.0	64.0	54.4	54.0	65.6	69.0		
	Female	76.2	81.0	78.3	82.0	68.5	75.0	66.6	69.0	63.2	67.0	70.8	75.0		
2012	Total	72.7	77.0	75.2	78.8	63.8	68.8	62.6	65.9	57.8	59.8	68.6	73.1		
	Male	69.9	73.7	72.6	75.9	60.7	64.3	59.6	63.2	54.3	55.5	64.2	68.7		
	Female	75.9	80.6	78.1	82.1	67.8	74.7	66.0	69.6	62.0	65.0	72.3	78.5		
2013	Total	72.5	77.0	75.2	79.0	64.3	69.0	63.1	66.0	58.3	60.0	70.9	76.0		
	Male	69.6	74.0	72.6	76.0	60.6	64.0	59.5	63.0	54.7	55.0	68.4	73.0		
	Female	75.8	81.0	78.0	82.0	68.6	75.0	67.7	73.0	63.1	67.0	73.3	78.0		
2014	Total	72.7	76.0	75.1	78.0	64.7	69.0	62.7	65.0	59.3	61.0	70.3	74.0		
	Male	70.0	73.0	72.6	75.0	61.7	65.0	60.5	63.0	55.7	57.0	66.2	71.0		
	Female	75.8	80.0	77.9	81.0	68.4	74.0	65.3	67.0	63.8	66.0	74.1	79.0		
2015	Total	72.5	76.0	74.9	78.0	64.8	69.0	62.8	66.0	58.5	60.0	70.0	75.0		
	Male	69.9	73.0	72.5	75.0	61.7	66.0	60.4	64.0	55.0	56.0	67.3	71.0		
	Female	75.5	79.0	77.5	81.0	68.7	74.0	65.9	69.0	62.9	66.0	72.6	77.0		
2016	Total	72.9	76.0	75.4	78.0	65.0	69.0	63.4	66.0	58.9	60.0	69.2	74.0		
	Male	70.3	73.0	73.2	75.0	61.9	65.0	60.3	63.0	55.8	56.0	65.1	69.5		
	Female	75.9	79.0	78.0	81.0	69.1	75.0	67.6	71.0	63.3	66.0	72.9	78.0		
2017	Total	72.6	76.0	75.2	78.0	64.9	69.0	62.7	65.0	58.9	61.0	70.3	75.0		
	Male	69.9	73.0	72.8	76.0	61.5	65.0	58.7	62.0	55.7	57.0	67.6	72.0		
	Female	75.8	79.0	77.9	81.0	69.3	75.0	67.8	69.0	63.1	67.0	72.7	77.0		
2018	Total	72.5	76.0	75.2	78.0	65.2	70.0	63.5	67.0	58.2	60.0	71.2	75.0		
	Male	69.7	73.0	72.8	76.0	61.4	65.0	60.2	63.0	54.7	56.0	68.3	72.0		
	Female	75.9	80.0	77.9	81.0	70.2	76.0	67.3	70.0	62.9	66.0	73.8	78.0		
2019	Total	72.5	76.0	75.3	78.0	65.0	70.0	62.3	66.0	59.7	62.0	69.9	74.0		
	Male	69.8	74.0	72.9	76.0	61.1	65.0	59.9	65.0	56.5	58.0	66.5	71.0		
	Female	75.7	79.0	78.0	81.0	70.0	75.0	65.1	68.0	63.8	67.0	73.5	77.0		

Notes: 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  
BY GENDER AND RACE/ETHNICITY, ARIZONA, 2009-2019**

<b>Year/gender</b>	<b>All racial/ethnic groups</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>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
<b>2010 Total</b>	54.5	49.9	68.7	73.4	79.6	65.1
<b>Male</b>	62.4	57.8	76.2	78.4	85.3	69.0
<b>Female</b>	45.8	41.5	59.5	67.4	71.9	60.7
<b>2011 Total</b>	53.8	49.6	67.4	74.4	77.7	66.3
<b>Male</b>	61.8	57.5	75.4	80.7	84.3	71.3
<b>Female</b>	45.1	41.2	57.3	67.1	70.0	61.5
<b>2012 Total</b>	55.0	50.9	68.4	74.4	78.7	62.3
<b>Male</b>	62.3	58.1	75.7	81.6	83.9	74.2
<b>Female</b>	46.7	43.0	59.1	66.1	72.2	51.9
<b>2013 Total</b>	54.6	50.1	67.1	72.8	76.7	58.9
<b>Male</b>	62.0	57.5	75.0	80.8	82.7	65.0
<b>Female</b>	46.2	42.1	57.7	62.4	68.9	53.2
<b>2014<sup>a</sup> Total</b>	54.8	50.9	66.7	75.2	77.8	58.9
<b>Male</b>	62.0	58.0	74.1	79.7	84.1	68.9
<b>Female</b>	46.7	43.1	57.7	69.8	69.8	49.7
<b>2015<sup>a</sup> Total</b>	54.9	50.9	67.4	74.1	77.4	59.9
<b>Male</b>	61.6	57.6	73.9	78.5	83.2	66.8
<b>Female</b>	47.2	43.4	59.1	68.6	70.2	53.1
<b>2016 Total</b>	55.3	51.4	66.7	73.5	77.1	58.5
<b>Male</b>	62.1	57.9	73.4	79.9	82.4	67.3
<b>Female</b>	47.5	44.1	57.9	64.9	69.7	50.6
<b>2017 Total</b>	55.1	50.6	67.0	75.1	77.9	58.7
<b>Male</b>	61.8	57.0	74.1	82.0	84.0	63.1
<b>Female</b>	47.3	43.3	58.0	66.1	69.9	54.7
<b>2018 Total</b>	55.1	50.8	65.6	73.3	78.8	57.7
<b>Male</b>	62.1	57.4	73.4	80.3	83.9	64.9
<b>Female</b>	46.9	43.2	55.1	65.2	71.9	51.2
<b>2019 Total</b>	55.6	50.8	67.3	75.3	77.8	60.2
<b>Male</b>	61.9	56.9	74.7	78.8	82.8	67.7
<b>Female</b>	48.2	43.9	57.9	71.0	71.5	52.3

Note: <sup>a</sup> Based on updated expected years of life at birth for all U.S. residents (78.8 years in 2019).

**TABLE 2D-3  
MEDIAN AGE AT DEATH FOR LEADING CAUSES OF MORTALITY BY GENDER, RACE/ETHNICITY, AND  
URBAN/RURAL AREAS<sup>a</sup>, ARIZONA, 2019**

	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	
<b>Total, all causes</b>	76.0	74.0	79.0	76.0	74.0	79.0	75.0	74.0	78.0	78.0	70.0	66.0	62.0	74.0	
<b>Major cardiovascular diseases</b>	81.0	77.0	84.0	81.0	77.5	84.0	79.0	77.0	83.0	82.0	77.0	69.0	72.0	78.0	
<b>Diseases of heart</b>	80.0	77.0	84.0	81.0	77.0	84.0	79.0	77.0	83.0	82.0	76.0	68.0	71.0	77.0	
<b>Coronary heart disease</b>	80.0	77.0	84.0	80.0	77.0	84.0	78.0	77.0	82.0	81.0	75.0	69.0	72.0	75.5	
<b>Malignant neoplasms</b>	73.0	73.0	73.0	73.0	73.0	73.0	74.0	74.0	73.0	74.0	69.0	67.0	67.0	70.0	
<b>Lung cancer</b>	74.0	73.0	74.0	74.0	74.0	74.0	73.0	73.0	74.0	74.0	73.0	67.5	68.5	74.5	
<b>Prostate cancer</b>	79.0	79.0	0.0	79.0	79.0	0.0	80.0	80.0	0.0	80.0	79.0	75.0	81.0	86.0	
<b>Breast cancer</b>	70.0	66.5	70.0	70.0	66.5	70.0	71.0	0.0	71.0	71.0	68.0	64.0	59.5	58.0	
<b>Colorectal cancer</b>	71.0	70.0	73.5	70.0	69.0	73.0	75.0	74.0	76.5	73.0	66.0	67.0	58.5	65.0	
<b>Malignant melanoma of skin</b>	72.5	74.0	70.0	72.5	74.0	70.0	72.0	75.0	69.0	73.5	66.0	53.0	61.0	0.0	
<b>Cerebrovascular diseases</b>	82.0	79.0	84.0	82.0	79.0	84.0	81.0	77.0	83.0	83.0	78.0	70.0	73.0	80.0	
<b>Chronic lower respiratory diseases</b>	78.0	77.0	79.0	78.0	78.0	79.0	78.0	77.0	78.0	78.0	80.0	72.0	75.0	79.0	
<b>Accidents (unintentional injuries)</b>	54.0	50.0	62.0	53.0	49.0	62.0	57.0	56.0	62.0	60.0	39.0	39.0	41.0	50.0	
<b>Motor vehicle accidents</b>	44.0	44.0	44.0	43.0	43.0	44.0	47.5	48.0	47.0	53.0	36.0	28.5	34.0	59.0	
<b>Falls</b>	84.0	81.0	86.0	84.0	82.0	86.0	82.0	78.0	84.0	84.0	80.0	74.5	68.5	87.0	
<b>Accidental poisoning</b>	40.0	39.0	43.0	39.0	38.0	42.0	45.0	45.0	46.0	43.0	33.5	38.0	40.0	38.0	
<b>Accidental drowning</b>	52.0	51.0	61.0	56.0	52.0	64.0	47.0	51.0	22.0	63.0	24.0	16.0	35.0	49.5	
<b>Influenza and pneumonia</b>	77.0	77.0	79.0	78.0	77.0	79.0	76.0	76.0	76.5	79.0	74.0	63.0	70.0	79.5	
<b>Alzheimer's disease</b>	87.0	85.0	88.0	87.0	85.0	88.0	87.0	86.0	87.0	87.0	87.0	87.0	88.0	87.0	
<b>Diabetes</b>	71.0	70.0	73.0	71.0	71.0	72.0	71.0	69.0	75.0	73.0	69.0	70.0	65.0	74.0	
<b>Intentional self-harm (suicide)</b>	49.0	48.0	51.0	48.0	47.0	49.5	53.0	52.0	54.0	54.0	33.0	32.5	30.5	45.0	
<b>Chronic liver disease and cirrhosis</b>	60.0	60.0	61.0	61.0	60.0	62.0	57.0	58.0	56.0	63.0	60.0	53.0	51.0	66.5	
<b>Nephritis, nephrotic syndrome and nephrosis</b>	77.0	75.0	79.0	77.0	77.0	79.0	75.0	74.0	80.0	79.0	72.0	70.0	69.0	70.0	
<b>Septicemia</b>	72.0	71.5	72.0	71.5	70.0	72.0	74.0	75.0	72.5	75.0	63.0	67.5	57.5	68.0	
<b>Assault (homicide)</b>	33.0	32.0	37.0	31.0	30.0	34.0	44.0	43.0	51.0	41.0	28.0	28.5	32.0	33.0	
<b>Parkinson's disease</b>	82.0	82.0	83.0	82.0	82.0	83.0	82.0	82.0	82.0	82.0	83.0	87.5	82.0	83.0	
<b>Essential (primary) hypertension and hypertensive renal disease</b>	81.0	77.0	84.0	81.0	76.0	84.0	79.0	78.0	83.0	82.0	78.0	71.0	74.0	84.0	
<b>Human immunodeficiency virus (HIV) disease</b>	51.0	51.0	51.0	51.0	51.0	51.0	53.0	53.0	56.0	54.0	49.5	45.0	51.0	0.0	
<b>Injury by firearms</b>	44.0	43.0	46.0	40.0	39.0	42.0	57.0	59.0	51.0	53.0	28.0	28.0	31.5	29.5	
<b>Drug-induced deaths</b>	42.0	40.0	47.0	41.0	39.0	46.0	48.0	47.0	51.0	46.0	34.0	38.5	38.5	38.0	
<b>Opioid-induced deaths</b>	36.5	35.0	41.0	36.0	35.0	40.0	41.0	36.5	49.0	39.0	31.0	35.0	35.0	34.0	
<b>Alcohol-induced deaths</b>	56.0	56.0	55.0	57.0	57.0	57.0	55.0	55.0	54.0	58.0	56.0	51.0	48.0	59.0	

Notes: <sup>a</sup> 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<sup>a</sup> YEARS OF LIFE REACHED FOR THE LEADING CAUSES OF MORTALITY BY  
GENDER, RACE/ETHNICITY, AND URBAN/RURAL AREAS<sup>b</sup>, ARIZONA, 2019**

	ARIZONA			Area/gender						Race/ethnicity					
	Total	Male	Female	Total	Urban		Rural		Rural Male	Rural Female	White Non-Hispanic	Hispanic or Latino	Black or African American	American Indian or Alaska Native	Asian or Pacific Islander
					Urban	Male	Female	Total							
<b>Total, all causes</b>	55.6%	61.9%	48.2%	54.8%	61.3%	47.3%	58.2%	63.4%	51.6%	50.8%	67.3%	75.3%	77.8%	60.2%	
<b>Major cardiovascular diseases</b>	44.3%	52.3%	34.8%	43.4%	51.8%	33.9%	47.4%	54.0%	38.7%	40.5%	53.8%	70.8%	63.9%	50.9%	
<b>Diseases of heart</b>	44.8%	52.4%	34.7%	43.8%	51.9%	33.6%	48.0%	53.7%	39.5%	40.9%	55.2%	70.8%	66.3%	53.1%	
<b>Coronary heart disease</b>	46.2%	53.5%	35.3%	45.2%	53.2%	33.8%	49.5%	54.4%	41.3%	42.5%	57.4%	68.7%	66.7%	57.9%	
<b>Malignant neoplasms</b>	66.8%	66.7%	66.9%	66.6%	66.6%	66.7%	67.1%	66.6%	67.7%	64.0%	75.7%	76.9%	81.2%	73.9%	
<b>Lung cancer</b>	67.5%	70.2%	64.4%	66.5%	68.8%	63.8%	70.4%	74.6%	66.2%	67.0%	67.1%	76.1%	75.0%	60.4%	
<b>Colorectal cancer</b>	67.7%	72.0%	62.3%	69.5%	74.3%	63.6%	61.0%	63.8%	57.3%	63.9%	77.7%	84.6%	81.3%	75.0%	
<b>Breast cancer</b>	72.3%	83.3%	72.2%	71.7%	83.3%	71.5%	74.9%	0.0%	74.9%	69.3%	75.6%	81.5%	91.7%	100.0%	
<b>Prostate cancer</b>	46.3%	46.3%	0.0%	46.0%	46.0%	0.0%	47.0%	47.0%	0.0%	45.5%	48.8%	58.5%	46.7%	14.3%	
<b>Malignant melanoma of skin</b>	64.6%	62.4%	68.5%	64.6%	62.6%	68.4%	65.9%	61.5%	73.3%	62.0%	100.0%	100.0%	100.0%	0.0%	
<b>Accidents (unintentional injuries)</b>	79.0%	85.1%	66.6%	78.4%	84.8%	65.2%	80.7%	85.4%	71.7%	71.7%	91.6%	96.0%	93.8%	78.0%	
<b>Accidental poisoning</b>	99.8%	99.9%	99.6%	99.9%	100.0%	99.7%	99.2%	99.4%	98.8%	99.8%	100.0%	100.0%	99.2%	100.0%	
<b>Falls</b>	32.3%	40.9%	23.4%	30.2%	39.0%	21.1%	41.2%	49.5%	33.0%	28.9%	46.8%	62.5%	63.9%	16.7%	
<b>Motor vehicle accidents</b>	92.4%	93.1%	90.6%	91.7%	92.4%	90.0%	93.9%	94.8%	92.0%	88.6%	96.6%	100.0%	97.2%	94.1%	
<b>Accidental drowning</b>	92.0%	98.6%	75.9%	89.2%	98.0%	69.6%	100.0%	100.0%	100.0%	86.9%	100.0%	100.0%	100.0%	100.0%	
<b>Chronic lower respiratory diseases</b>	50.5%	53.1%	48.1%	49.5%	52.3%	47.0%	53.0%	54.7%	51.2%	49.6%	46.6%	69.5%	67.5%	48.0%	
<b>Alzheimer's disease</b>	16.4%	20.7%	14.1%	16.7%	22.1%	13.9%	14.7%	13.9%	15.1%	16.3%	16.8%	13.8%	15.8%	17.1%	
<b>Cerebrovascular diseases</b>	40.4%	48.7%	34.0%	39.6%	47.2%	33.8%	43.4%	53.4%	34.7%	36.3%	49.5%	73.0%	61.7%	44.0%	
<b>Diabetes</b>	71.9%	75.0%	67.3%	72.1%	74.1%	69.2%	70.8%	78.3%	58.8%	68.9%	74.2%	78.2%	79.8%	73.3%	
<b>Intentional self-harm (suicide)</b>	90.9%	89.7%	94.9%	91.5%	90.5%	94.7%	88.8%	87.0%	95.5%	88.7%	96.7%	97.8%	98.8%	90.5%	
<b>Chronic liver disease and cirrhosis</b>	91.8%	92.2%	91.2%	91.6%	91.7%	91.2%	92.3%	93.2%	91.2%	90.5%	90.4%	100.0%	96.8%	80.0%	
<b>Essential (primary) hypertension and hypertensive renal disease</b>	44.0%	54.0%	35.0%	43.6%	54.3%	34.0%	4.5%	51.3%	40.5%	40.7%	49.1%	64.9%	53.2%	37.0%	
<b>Influenza and pneumonia</b>	52.0%	54.0%	49.5%	50.1%	52.5%	47.4%	57.3%	58.3%	56.0%	48.6%	57.4%	83.3%	60.7%	45.5%	
<b>Parkinson's disease</b>	29.7%	30.9%	27.2%	29.0%	29.9%	27.4%	31.9%	35.2%	26.4%	29.2%	31.3%	0.0%	34.8%	33.3%	
<b>Nephritis, nephrotic syndrome and nephrosis</b>	53.6%	57.0%	49.1%	52.1%	54.2%	49.4%	58.4%	64.9%	46.9%	48.2%	64.2%	74.1%	62.3%	52.9%	
<b>Septicemia</b>	69.9%	66.7%	73.6%	71.7%	68.8%	74.8%	64.8%	62.3%	68.4%	64.4%	78.3%	80.0%	86.1%	66.7%	
<b>Assault (homicide)</b>	98.0%	98.4%	96.7%	98.0%	98.2%	97.3%	98.2%	100.0%	94.7%	94.4%	100.0%	100.0%	100.0%	100.0%	
<b>Human immunodeficiency virus (HIV) disease</b>	97.1%	96.2%	100.0%	96.4%	95.3%	100.0%	100.0%	100.0%	100.0%	94.7%	100.0%	100.0%	100.0%	0.0%	
<b>Injury by firearms</b>	91.3%	90.3%	96.1%	92.3%	91.5%	96.5%	87.1%	85.6%	94.6%	87.8%	98.3%	98.6%	100.0%	100.0%	
<b>Drug-induced deaths</b>	98.7%	99.1%	97.7%	99.0%	99.5%	97.6%	97.0%	96.3%	98.1%	98.1%	99.8%	99.2%	99.0%	100.0%	
<b>Opioid-induced deaths</b>	99.3%	99.5%	98.9%	99.5%	99.8%	98.7%	97.8%	96.5%	100.0%	98.9%	100.0%	100.0%	100.0%	100.0%	
<b>Alcohol-induced deaths</b>	96.5%	95.8%	98.3%	96.7%	95.7%	98.9%	96.2%	95.8%	97.0%	96.3%	94.1%	100.0%	98.9%	75.0%	

Notes: <sup>a</sup> Expected years of life at birth for all U.S. residents (78.8 years in 2019); <sup>b</sup> Urban = Maricopa, Pima, Pinal, and Yuma counties.