

CHAPTER 2

TRENDS AND PATTERNS IN MORTALITY, ARIZONA, 2007-2017

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- **MIDDLE-AGED ADULT MORTALITY**
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2D. PATTERNS OF PREMATURE MORTALITY



2A.

TOTAL MORTALITY

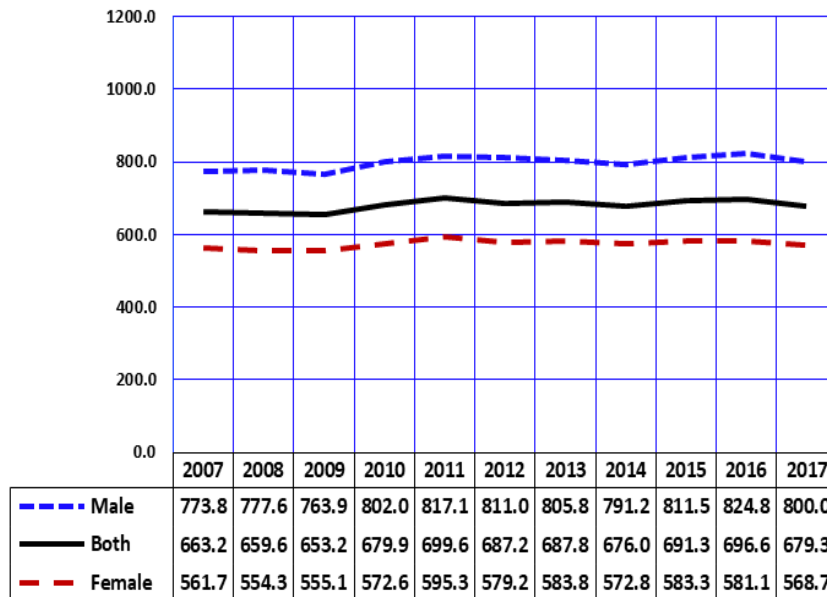
The total number of deaths from all causes among Arizona residents increased by 1.4 percent from 2016 (56,480) to 2017 (57,261; **Table 2A-1**). The age-adjusted mortality rate for all causes of death also increased from 696.6/100,000 in 2016 to 679.3 /100,000 in 2017.

Between 2016 and 2017, the increase in mortality did not affect all leading causes of death. A reduction in the number of deaths was recorded for septicemia (8.7 percent), chronic liver disease and cirrhosis (4.0 percent), Alzheimer's disease (1.0 percent), influenza and pneumonia (0.8 percent), and chronic lower respiratory (0.2 percent).

When considering race/ethnicity and gender, the increase in the age-adjusted mortality rate for deaths due to cerebrovascular diseases was the highest among Hispanic males (21.4 percent) from 2016 to 2017. In terms of mortality due to diabetes, the overall mortality rate for males and females decreased from 2016 (24.5 /100,000) to 2017 (23.8/100,000) following a period of stability during 2011 to 2014 (**Table 2B-2**). The decrease in deaths due to diabetes affected all race/ethnic groups, except American Indian or Alaska Natives where a 2.11 percent increase was observed between 2016 and 2017.

2A. TOTAL MORTALITY

Figure 2A-1
Age-adjusted Mortality Rates^a for all Causes by Gender and Year,
Arizona, 2007-2017



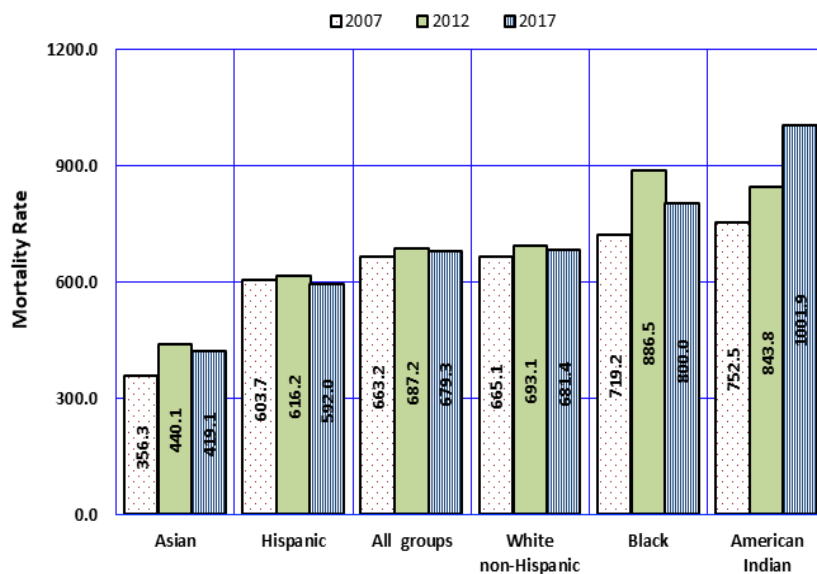
The age-adjusted mortality rates discussed below are based on the year 2000 population standard. All mortality rates in sections 2A and 2B are age-adjusted. A detailed explanation of the age-adjustment of mortality rates is given in the **Technical Notes**.

The total age-adjusted mortality rate decreased by 2.5 percent, from 696.6 in 2016 to 679.3 in 2017 (**Figure 2A-1, Table 2B-2**). Over this period, the age-adjusted mortality rates decreased for both males and females.

The difference between male and female mortality rates increased between 2007 and 2017. The male age-adjusted mortality rate was 37.8 percent greater than the female age-adjusted mortality rate in 2007, but 40.7 percent greater in 2017.

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

Figure 2A-2
Age-adjusted Mortality Rates^a for all Causes by Race/Ethnicity and Year,
Arizona Residents, 2007, 2012, and 2017



The 2017 age-adjusted death rates for the major racial/ethnic groups were as follows: for Asian or Pacific Islander, 419.1 deaths per 100,000 population; Hispanic or Latino, 592.0; White non-Hispanic, 681.4; Black or African American, 800.0; and American Indian or Alaska Native, 1001.9 (**Figure 2A-2, Table 2B-4**).

In 2017, as in 2007 and 2012, Blacks and American Indians 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 2007, 2012, and 2017.

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

2A. TOTAL MORTALITY

Figure 2A-3
Percent of Annual Deaths by Month of Occurrence and Residence Status, Arizona, 2017

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, December (9.2 percent), January (8.9 percent), and March (8.9 percent) were higher in 2017 from the expected value (**Figure 2A-3**). September was the month with the lowest proportional contributions to the total annual deaths among Arizona residents.

The majority of the 2,185 non-residents who died in Arizona during 2017 did so during the months of January, March, December, and February.

August was the month with the lowest percent contribution (5.9 percent) to the annual death among out-of-State residents who died in Arizona.

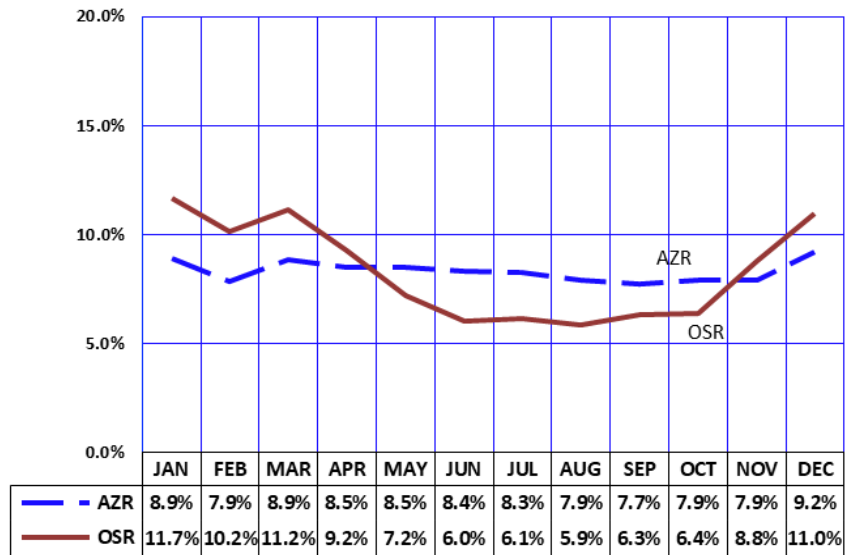
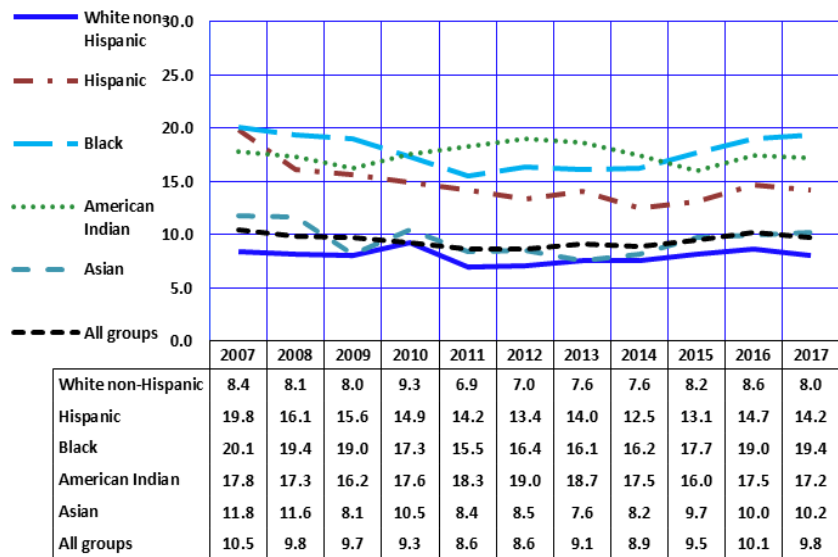


Figure 2A-4
Percentage of Deaths for which Autopsies were Reported by Race/Ethnicity and Year, Arizona Residents, 2007-2017

Autopsies were reported as performed on 5,600 decedents, or 9.8 percent of the deaths that occurred among Arizona residents in 2017. From 2007 – 2017, the percentage of deaths for which autopsies were reported varied from a high of 10.5 percent in 2007, to a low of 8.6 percent in 2011 and 2012 then to 10.1 percent in 2016.

The percentage autopsied varies by the decedent’s demographic characteristics. By race/ethnicity (**Figure 2A-4**) the percentage autopsied was lower for the White non-Hispanic and Asian population than for other 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, 2007-2017**

	2007	2008	2009	2010	2011	2012 ^a	2013 ^a	2014 ^a	2015 ^a	2016 ^a	2017
TOTAL											
Total	44,640	45,128	45,065	45,871	47,547	48,459	49,929	51,074	54,152	56,480	57,261
Male	23,321	23,744	23,535	24,163	24,785	25,577	26,222	27,037	28,814	30,431	30,721
Female	21,319	21,384	21,530	21,708	22,762	22,874	23,703	24,034	25,334	26,046	26,537
White non-Hispanic											
Total	35,805	36,235	35,829	36,066	37,211	38,629	39,543	40,391	42,750	44,092	44,191
Male	18,339	18,758	18,476	18,693	19,307	20,206	20,550	21,207	22,504	23,439	23,375
Female	17,466	17,477	17,353	17,373	17,904	18,416	18,989	19,181	20,242	20,653	20,816
Hispanic or Latino											
Total	5,496	5,313	5,401	5,374	5,575	5,963	6,300	6,444	6,839	7,343	7,539
Male	3,146	2,996	2,978	2,959	2,982	3,323	3,412	3,543	3,814	4,154	4,197
Female	2,350	2,317	2,423	2,415	2,593	2,640	2,888	2,901	3,025	3,189	3,341
Black or African American											
Total	1,276	1,295	1,334	1,336	1,399	1,509	1,593	1,578	1,742	1,925	1,896
Male	695	712	697	735	734	803	897	852	971	1,108	1,076
Female	581	583	637	601	665	706	696	726	771	817	820
American Indian or Alaska Native											
Total	1,661	1,722	1,871	1,781	1,681	1,806	1,955	2,074	2,140	2,346	2,355
Male	950	981	1,028	1,015	876	993	1,103	1,152	1,187	1,365	1,334
Female	711	741	843	766	805	812	852	922	953	981	1,021
Asian or Pacific Islander											
Total	365	449	469	487	528	552	538	582	673	769	796
Male	168	230	241	258	269	252	260	280	334	364	377
Female	197	219	228	229	259	300	278	302	339	405	419
Refused/Unknown race											
Total	37	114	161	827	1,153	^b	^b	10 [†]	10 [†]	0 [†]	484
Male	23	67	115	503	617	^b	^b	*	*	*	362
Female	14	47	46	324	536	^b	^b	*	*	*	120

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; ^a Deaths with unknown gender (Total, n=3; Hispanic, n=1; Unknown race/ethnicity, n=2, were included in total for 2017); ^b 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, 2007-2017**

Month of death		2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
JAN	Count	4,213	4,149	3,983	3,950	4,321	4,210	5,079	4,824	5,028	5,119	5,111
	Percent	9.4%	9.2%	8.8%	8.6%	9.1%	8.7%	10.2%	9.4%	9.3%	9.1%	8.9%
FEB	Count	3,726	4,059	3,592	3,582	4,070	4,147	4,383	4,227	4,267	5,135	4,514
	Percent	8.3%	9.0%	8.0%	7.8%	8.6%	8.6%	8.8%	8.3%	7.9%	9.1%	7.9%
MAR	Count	4,062	4,426	3,954	4,084	4,358	4,414	4,484	4,333	4,819	5,387	5,070
	Percent	9.1%	9.8%	8.8%	8.9%	9.2%	9.1%	9.0%	8.5%	8.9%	9.5%	8.9%
APR	Count	3,781	3,949	3,945	3,845	3,967	4,176	4,231	4,278	4,547	4,689	4,854
	Percent	8.5%	8.8%	8.8%	8.4%	8.3%	8.6%	8.5%	8.4%	8.4%	8.3%	8.5%
MAY	Count	3,656	3,754	3,699	3,811	3,899	3,980	4,076	4,291	4,527	4,603	4,867
	Percent	8.2%	8.3%	8.2%	8.3%	8.2%	8.2%	8.2%	8.4%	8.4%	8.1%	8.5%
JUN	Count	3,427	3,542	3,500	3,651	3,823	3,868	3,831	4,072	4,396	4,464	4,782
	Percent	7.7%	7.8%	7.8%	8.0%	8.0%	8.0%	7.7%	8.0%	8.1%	7.9%	8.4%
JUL	Count	3,636	3,467	3,741	3,843	3,791	3,862	3,926	4,071	4,338	4,496	4,739
	Percent	8.1%	7.7%	8.3%	8.4%	8.0%	8.0%	7.9%	8.0%	8.0%	8.0%	8.3%
AUG	Count	3,466	3,512	3,617	3,756	3,913	3,850	3,893	4,112	4,338	4,432	4,534
	Percent	7.8%	7.8%	8.0%	8.2%	8.2%	7.9%	7.8%	8.1%	8.0%	7.8%	7.9%
SEP	Count	3,554	3,279	3,604	3,633	3,678	3,849	3,804	3,994	4,183	4,253	4,423
	Percent	8.0%	7.3%	8.0%	7.9%	7.7%	7.9%	7.6%	7.8%	7.7%	7.5%	7.7%
OCT	Count	3,651	3,636	3,739	3,678	3,888	3,956	3,868	4,184	4,284	4,501	4,548
	Percent	8.2%	8.1%	8.3%	8.0%	8.2%	8.2%	7.7%	8.2%	7.9%	8.0%	7.9%
NOV	Count	3,608	3,519	3,694	3,806	3,753	3,894	3,924	4,239	4,543	4,518	4,547
	Percent	8.1%	7.8%	8.2%	8.3%	7.9%	8.0%	7.9%	8.3%	8.4%	8.0%	7.9%
DEC	Count	3,860	3,836	3,997	4,232	4,086	4,253	4,430	4,449	4,882	4,883	5,272
	Percent	8.6%	8.5%	8.9%	9.2%	8.6%	8.8%	8.9%	8.7%	9.0%	8.6%	9.2%
TOTAL	Count	44,640	45,128	45,065	45,871	47,547	48,459	49,929	51,074	54,152	56,480	57,261
	Percent	100.0%	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, 2017**

Day of death	Month of death												Total
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	
1	149	154	161	165	159	187	161	144	161	161	151	164	1,917
2	154	168	152	164	173	187	156	139	136	158	140	126	1,853
3	175	174	170	184	174	141	157	151	154	147	144	157	1,928
4	177	171	173	174	179	157	167	171	159	139	157	135	1,959
5	172	163	154	162	162	183	139	136	170	126	145	144	1,856
6	154	158	160	139	163	157	161	145	142	170	127	169	1,845
7	156	168	167	147	169	168	177	137	132	146	157	140	1,864
8	154	178	146	182	164	165	171	164	159	148	137	161	1,929
9	180	168	167	139	156	169	152	164	147	145	137	145	1,869
10	162	173	171	139	141	139	159	162	128	144	150	130	1,798
11	165	169	166	161	160	143	147	154	145	150	142	171	1,873
12	179	170	168	169	139	158	168	144	162	144	157	163	1,921
13	177	144	191	191	177	148	145	155	141	147	136	186	1,938
14	176	177	150	164	143	148	153	136	148	151	165	151	1,862
15	147	144	157	162	148	170	149	118	157	141	152	157	1,802
16	129	143	169	159	147	150	151	138	160	156	186	156	1,844
17	169	148	168	155	146	157	153	127	132	143	142	167	1,807
18	156	171	161	166	157	148	159	140	146	147	161	187	1,899
19	150	150	192	155	166	136	141	166	155	153	136	173	1,873
20	158	151	148	170	160	165	148	142	143	139	173	191	1,888
21	178	157	153	146	147	152	160	141	149	141	145	189	1,858
22	155	167	174	151	156	153	161	147	139	144	144	183	1,874
23	169	155	160	169	176	189	141	145	161	139	148	184	1,936
24	178	137	183	157	153	169	156	127	126	142	153	205	1,886
25	166	157	163	153	147	139	135	142	147	140	167	183	1,839
26	154	168	157	192	148	173	132	159	147	133	141	172	1,876
27	183	169	162	172	128	155	140	147	139	154	148	206	1,903
28	145	162	178	156	165	155	151	141	116	150	164	200	1,883
29	203		146	162	151	154	153	139	150	158	160	198	1,774
30	153		164	149	159	167	153	166	172	157	182	192	1,814
31	188		139		154		143	147		135		187	1,093
Total	5,111	4,514	5,070	4,854	4,867	4,782	4,739	4,534	4,423	4,548	4,547	5,272	57,261

**TABLE 2A-4
AGE-SPECIFIC MORTALITY BY PLACE OF DEATH AND DECEDENT STATUS, ARIZONA, 2017**

	Age											Un- known	Total			
	<1	1-4	5-14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	85+					
IN HOSPITAL																
In-patient	332	32	50	160	318	474	952	1,990	3,077	3,093	2,164	*	12,643			
Out-patient^a	83	36	26	143	218	243	336	495	584	503	335	0	3,002			
Died on arrival	*	0	0	*	*	*	*	8	13	*	*	0	40 ⁺			
Status unknown	24	16	25	165	341	543	1,215	2,806	4,221	4,951	5,223	0	19,530			
Subtotal	440 ⁺	84	101	470 ⁺	880 ⁺	1,260 ⁺	2,510 ⁺	5,299	7,895	8,550 ⁺	7,730 ⁺	0 ⁺	35,217			
NOT IN HOSPITAL																
Nursing home^b	9	*	9	17	40	101	336	917	1,599	1,945	2,112	0	7,090 ⁺			
Residence	0	0	0	*	9	21	82	239	691	1,303	2,301	0	4,650 ⁺			
Other^c	12	9	22	239	401	352	488	700	1,143	2,337	4,595	6	10,304			
Unspecified	0	0	*	*	0	0	0	0	0	0	0	0	0 ⁺			
Subtotal	21	10 ⁺	32	260 ⁺	450	474	906	1,856	3,433	5,585	9,008	6	22,040 ⁺			
TOTAL	461	98	133	729	1,329	1,738	3,412	7,155	11,328	14,136	16,735	7	57,261			

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



2B.

LEADING CAUSES OF DEATH

In 2010, the Office of Vital Records (OVR) of the Arizona Department of Health Services implemented the new (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).

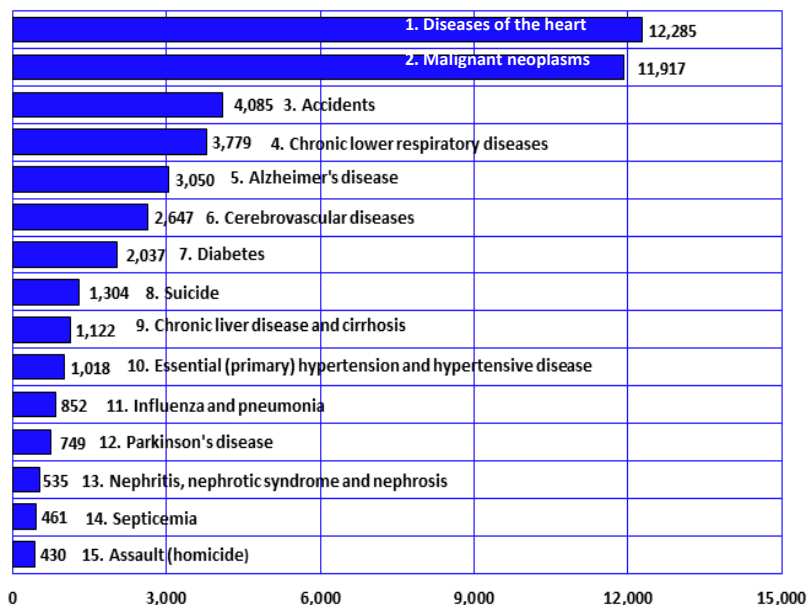
The death certificate now includes a new classification of the decedent's racial/ethnic status, consistent with the revised federal standards for collecting and reporting racial and ethnic status. These standards were published in the Federal Register on October 30, 1997, as "Revisions to the Standards 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 2017

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

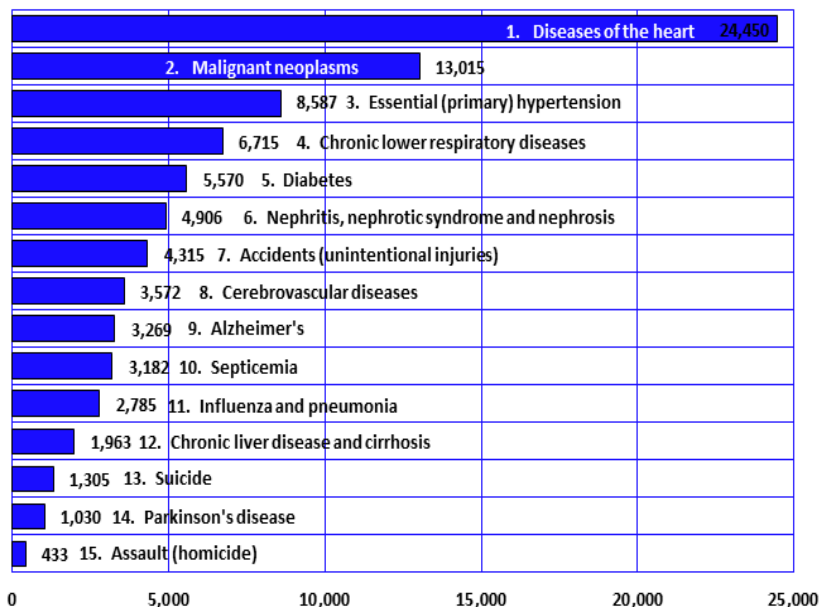


Based on the number of deaths (but not age-adjusted mortality rate), the leading underlying cause of death to Arizona residents in 2017 was *heart disease* (12,285 or 21.5 percent of all deaths), closely followed by *cancer*, which accounted for 11,917 or 20.8 percent of deaths (**Figure 2B-1A**, **Table 2B-1**, **Table 5E-14**).

The third leading cause of death, *accidents (unintentional injuries)*, accounted for 4,085 or 7.1 percent of total deaths. Deaths due to *chronic lower respiratory diseases* ranked fourth in 2017, with 3,779 resident deaths reported. Deaths due to *Alzheimer's disease* ranked fifth in 2017, with 3,050 resident deaths reported. Together, these five causes accounted for 61.3 percent of total deaths in 2017. The fifteen leading causes accounted for 80.8 percent of all deaths among Arizona residents.

Figure 2B-1B
Leading Causes of Death among Arizona Residents in 2017

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 12,285 deaths that had diseases of the heart assigned as the underlying cause, another 12,165 deaths had diseases of the heart assigned as a secondary cause of death. The sum of these two counts (24,450, **Figure 2B-1B**) is the total number of deaths that had any mention of diseases of the heart on the 2017 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 10th as the underlying cause but ranked 3rd when any mention of it was counted.

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

Figure 2B-2
Age-adjusted Mortality Rates^a for the Five Leading Causes of Death for Both Genders by Race/Ethnicity, Arizona, 2017

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 2017, diseases of the heart were the leading cause of death for all race/ethnic groups, except for Asian or Pacific Islanders. Cancer was the second leading cause of death for White non-Hispanics, Hispanic or Latinos, and Black or African Americans. Unintentional injury was among the third leading cause of death for White non-Hispanics, Hispanics, Blacks, and Asians or Pacific Islanders while it ranked second among American Indians. (Figure 2B-2, Table 2B-4).

In 2017, chronic lower respiratory diseases were the fourth leading cause of death specific to White non-Hispanics and Alzheimer's disease was the fifth leading cause of death unique to this race/ethnic group. In parallel, chronic liver disease and cirrhosis ranked fifth among the leading causes of death for American Indians alone. (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 146.1	Diseases of heart 112.5	Diseases of heart 169.6	Diseases of heart 150.9	Cancer 99.4
2	Cancer 141.4	Cancer 110.9	Cancer 158.5	Unintentional injury 142.0	Diseases of heart 87.2
3	Unintentional injury 54.5	Unintentional injury 45.9	Unintentional injury 60.3	Cancer 117.1	Unintentional injury 24.3
4	Chronic lower respiratory diseases 48.0	Diabetes 39.4	Stroke 49.2	Diabetes 81.6	Stroke 23.6
5	Alzheimer's disease 36.1	Stroke 34.5	Diabetes 45.9	Chronic liver disease and cirrhosis 74.0	Diabetes 21.3

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

Figure 2B-3
Age-adjusted Mortality Rates^a for the Five Leading Causes of Death by Race/Ethnicity among Females, Arizona, 2017

Based on age-adjusted mortality rates, cancer was the leading cause of death among White non-Hispanic, Hispanic, and Asian females. Diseases of the heart were the leading cause of death specific to Black and American Indian females (Figure 2B-3, Table 2B-4).

Chronic lower respiratory diseases were the third leading cause of death specific to White non-Hispanic females. Chronic liver disease and cirrhosis was unique to American Indian women and ranked fifth among the leading causes of death.

Rank	White non-Hispanic	Hispanic or Latino	Black or African American	American Indian or Alaska Native	Asian or Pacific Islander
1	Cancer 119.1	Cancer 95.9	Diseases of heart 151.2	Diseases of heart 118.2	Cancer 85.6
2	Diseases of heart 112.8	Diseases of heart 86.6	Cancer 134.3	Cancer 103.9	Diseases of heart 76.4
3	Chronic lower respiratory diseases 46.5	Alzheimer's disease 39.5	Stroke 50.3	Unintentional injury 88.1	Alzheimer's disease 23.2
4	Alzheimer's disease 40.5	Diabetes 31.7	Diabetes 42.3	Diabetes 64.8	Stroke 22.0
5	Unintentional injury 37.3	Stroke 31.3	Alzheimer's disease 39.3	Chronic liver disease and cirrhosis 63.7	Diabetes 20.3

Note: ^a 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^a for the Five Leading Causes of Death
by Race/Ethnicity among Males, Arizona, 2017**

Rank	White non-Hispanic	Hispanic or Latino	Black or African American	American Indian or Alaska Native	Asian or Pacific Islander
1	Diseases of heart 183.4	Diseases of heart 144.9	Diseases of heart 210.0	Diseases of heart 217.2	Cancer 121.4
2	Cancer 167.7	Cancer 130.9	Cancer 164.8	Cancer 114.6	Diseases of heart 105.3
3	Unintentional injury 71.5	Unintentional injury 61.4	Unintentional injury 89.3	Unintentional injury 206.1	Unintentional injury 31.2
4	Chronic lower respiratory diseases 49.7	Diabetes 48.7	Diabetes 49.5	Diabetes 101.9	Chronic lower respiratory diseases 29.6
5	Intentional Self-harm Suicide 33.8	Stroke 38.1	Stroke 45.6	Chronic liver disease and cirrhosis 85.4	Stroke 26.2

Note: ^a 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 among males for all the race/ethnic groups except Asian or Pacific Islander males (**Figure 2B-4; Table 2B-4**). Unintentional injury ranked third position for all race/ethnic groups.

In 2017, based on the age-adjusted mortality rates, diabetes was among the fourth leading causes of death for Hispanic, Black, and American Indian males, while chronic lower respiratory diseases was the fourth for White non-Hispanic and Asian or Pacific Islander males.

Ranking fifth was suicide (White males) stroke (Hispanic, Black and Asian males) and chronic liver disease (American Indian males).

**Figure 2B-5
Age-adjusted Mortality Rates^a for the Five Leading Causes of Death
by Gender in Urban^b and Rural Areas, Arizona, 2017**

Rank	Urban male	Urban female	Rural male	Rural female
1	Diseases of heart 169.7	Cancer 115.3	Diseases of heart 212.0	Diseases of heart 121.2
2	Cancer 156.6	Diseases of heart 106.4	Cancer 174.2	Cancer 121.0
3	Unintentional injury 66.4	Alzheimer's disease 40.3	Unintentional injury 99.0	Chronic lower respiratory diseases 49.5
4	Chronic lower respiratory diseases 41.7	Chronic lower respiratory diseases 39.0	Chronic lower respiratory diseases 58.7	Unintentional injury 49.3
5	Diabetes 29.8	Unintentional injury 34.3	Intentional Self-harm (suicide) 47.1	Alzheimer's disease 36.2

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

In 2017, 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 both rural males and females. Diseases of the heart were the leading cause of deaths for urban males while cancer was the top leading cause for rural males.

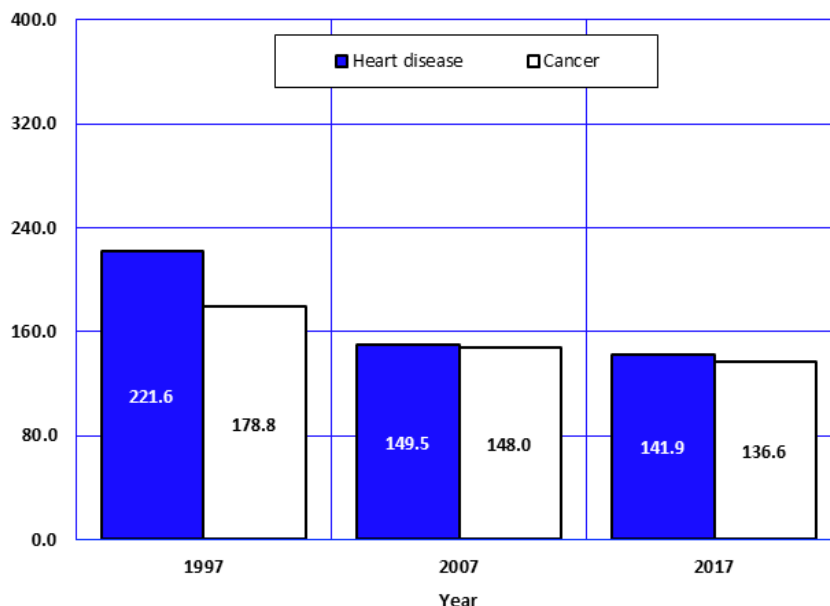
Alzheimer's disease was the third leading cause of death among urban females but the fifth among rural females. Chronic lower respiratory diseases were the fourth leading cause of death in urban areas and among rural males, while it was the third among rural females. Among the fifth leading cause of death, diabetes was specific to urban males while suicide was 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^a for Heart Disease and Cancer
(Malignant Neoplasm), Arizona, 1997, 2007, and 2017

The age-adjusted mortality rate for diseases of the heart decreased by 36.0 percent from 221.6 deaths per 100,000 population in 1997 to 141.9/100,000 in 2017 (**Figure 2B-6**). The age-adjusted mortality rate for cancer declined less, by 23.6 percent, from 1997-2017. In Arizona, the relative risk of death from heart disease versus cancer changed from 23.9 percent greater in 1997 to 3.9 percent less in 2017.

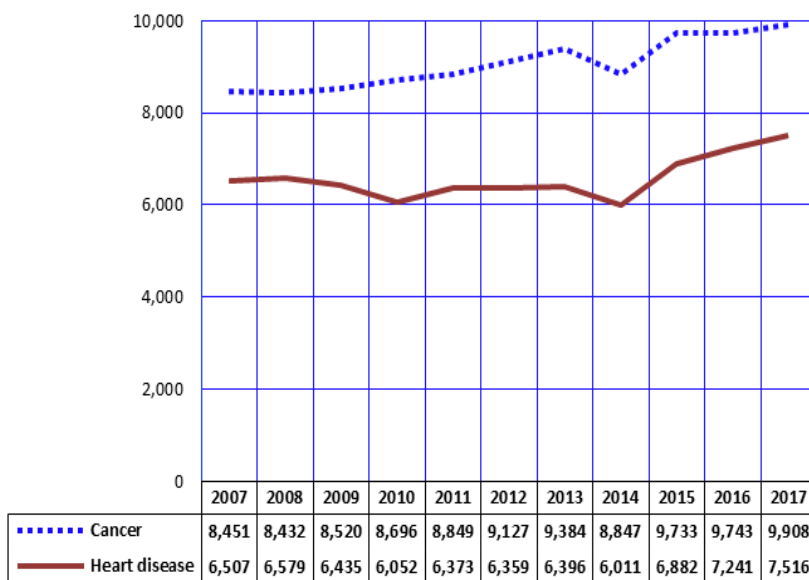
In 2007, 192 more Arizonans died from diseases of the heart than cancer (**Table 2B-1**). In 2017, the number of deaths due to the diseases of heart exceeded by 368 cases (**Table 2B-4**).



Note: ^a 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, 2007-2017

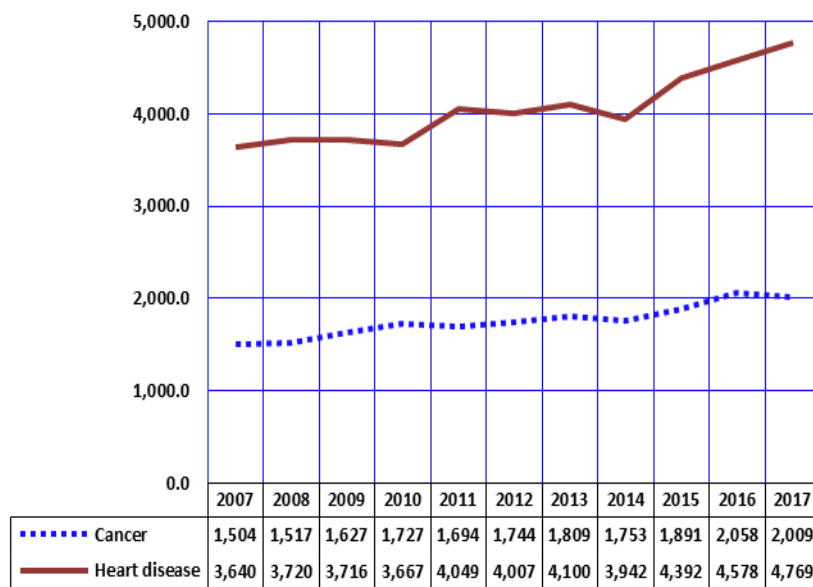
For the past several years, cancer has been the number one cause of death among Arizonans aged 0-84 years (**Figure 2B-7**). Beginning in 1996, the annual number of cancer deaths exceeded the number of deaths from heart disease. In 2017, 2,392 more Arizonans 0-84 years old died from cancer (9,908) than heart disease (7,516).



Note: 2008 counts for cancer and heart disease were updated due to misclassification of 2008 death records.

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

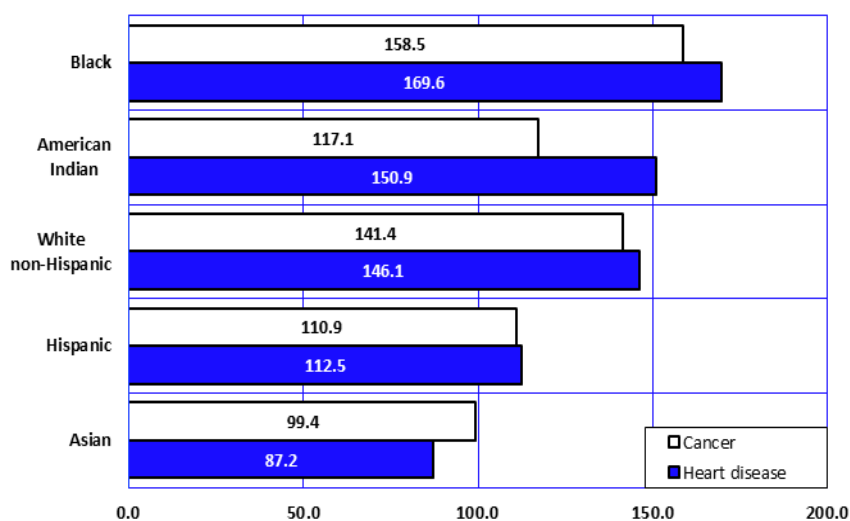
Figure 2B-8
Deaths from Heart Disease and Cancer among Arizonans 85+, 2007-2017



Among Arizonans age 85 and over, heart disease is the number one leading cause of death by a wide margin. In 2017, adults aged 85 and over accounted for 16.9 percent of all deaths from cancer but 38.8 percent of all deaths from heart disease. In 2017, the median age at death for heart disease was 80 years (**Table 2D-3**); and a minority of deaths (44.6 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 2007 to 2017, the number of deaths from cancer increased by 33.6 percent among Arizonans 85 years or older, more than the increase observed in diseases of the heart (31.0 percent increase).

Figure 2B-9
Age-adjusted Mortality Rates^a for Heart Disease and Cancer by Race/Ethnicity, Arizona, 2017



In Arizona, Black or African Americans were 1.9 times more likely to die from diseases of the heart and 1.6 times more likely to die from malignant neoplasms in 2017 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 1.7 times more likely to die of heart disease and 1.4 times more likely to die of cancer.

In 2017, the relative risk of death from heart disease exceeded cancer mortality risk (**Table 2B-3**) for all the racial/ethnic groups, except for Asians.

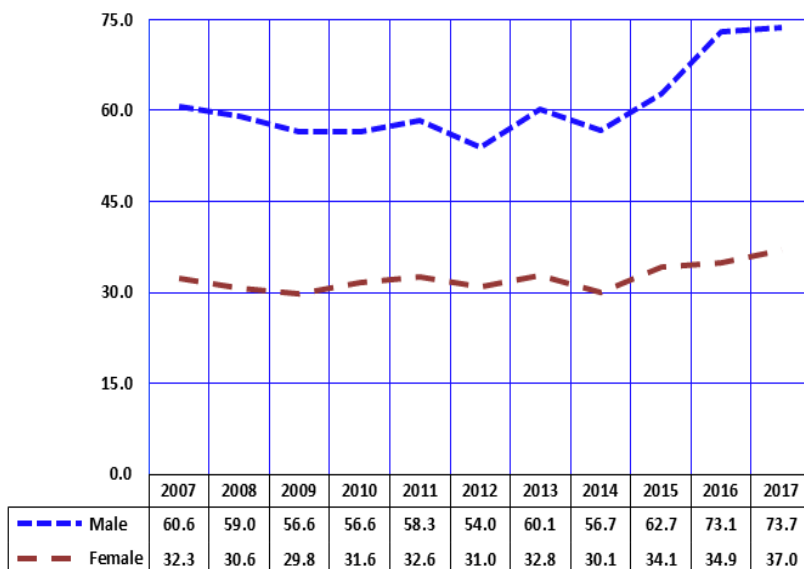
Note: ^a Number of deaths per 100,000 population age-adjusted to the 2000 U.S. standard.

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

Figure 2B-10
Age-adjusted Mortality Rates^a for Accidents (Unintentional Injuries) by Gender and Year, Arizona, 2007-2017

The number of deaths from unintentional injuries increased by 14.6 percent from 3,403 in 2015 to 3,899 in 2016 (**Table 2B-1**). In 2017, based on age-adjusted mortality rates, accidents ranked third as a leading cause of death for males and fifth for females (**Table 2B-4**). From 2016 to 2017, the age-adjusted mortality rate for accidents increased 0.9 percent for males compared to 6.02 percent for females (**Figure 2B-10**).

In 2017, 979 deaths were caused by motor vehicle accidents, an increase of 1.2 percent from 2016. Heat induced mortality has seen a 9.1 percent spike from 2016 to 2017. Deaths due to accidental drowning and submersion increased slightly by 0.9 percent over this period. Additionally, Arizonans experienced a 15.9 percent increase in the number of accidental poisonings due to drugs and/or medicaments from 2016 (1,095) to 2017 (1,269); **Table 2B-9**.

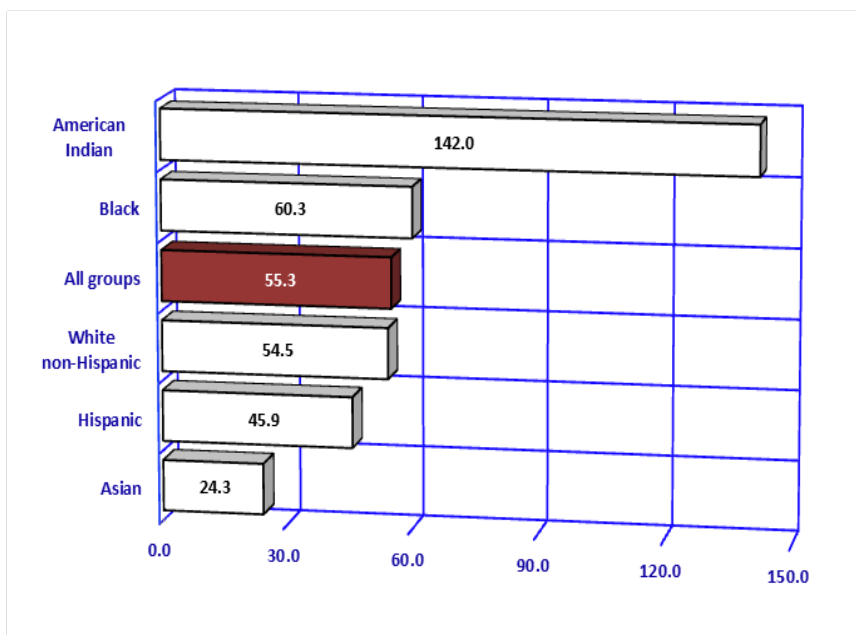


Note: ^a Number of deaths per 100,000 population age-adjusted to the 2000 U.S. standard.

Figure 2B-11
Age-adjusted Mortality Rates^a for Accidents (Unintentional Injuries) by Race/Ethnicity, Arizona, 2017

The American Indian death rate for unintentional injuries (142.0/100,000) was 5.8 times greater than the rate for Asians (24.3/100,000), the group at the lowest risk of unintentional injury death among racial/ethnic groups in the State (**Figure 2B-11, Table 2B-4**).

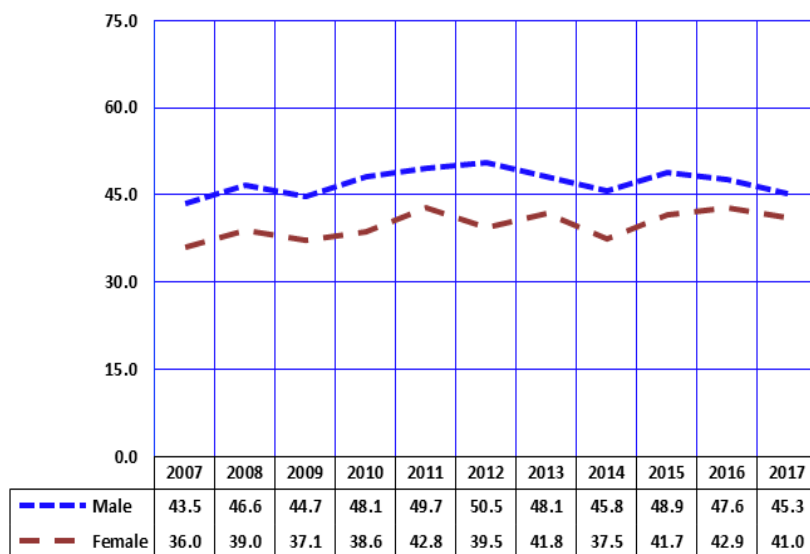
In 2017, Apache (142.7/100,000) and Navajo (105.2/100,000) counties had the two highest age-adjusted mortality rates for unintentional injuries (**Table 5E-11**).



Note: ^a 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^a for Chronic Lower Respiratory Diseases^b by Gender and Year, Arizona, 2007-2017

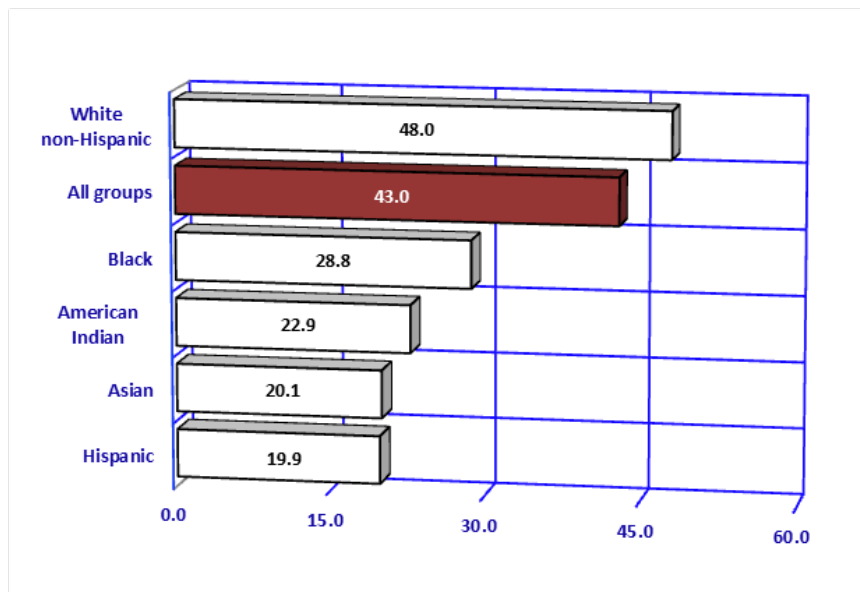


In 2017, chronic lower respiratory diseases (bronchitis, emphysema, asthma) were the 4th leading cause of death among Arizona residents (**Table 2B-1**). From 2016 to 2017, the mortality rate for chronic lower respiratory diseases decreased almost at the same rate for both males and females (**Figure 2B-12, Table 2B-2**).

Urban females had the lowest mortality rate for chronic lower respiratory diseases (39.0/100,000) among the genders and by regional group (**Table 2B-5**). Rural males were the group with the highest mortality risk for chronic lower respiratory diseases (58.7/100,000), followed by rural females (49.5/100,000) and urban males (41.7 deaths per 100,000).

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

Figure 2B-13
Age-adjusted Mortality Rates^a for Chronic Lower Respiratory Diseases by Race/Ethnicity, Arizona, 2017



Mortality rates for emphysema, chronic bronchitis, asthma, and other lower respiratory disorders were substantially higher among White non-Hispanics (48.0 deaths per 100,000) than any other race/ethnic groups. Hispanics recorded the lowest rate at 19.9 deaths per 100,000 population (**Figure 2B-13, Table 2B-4**).

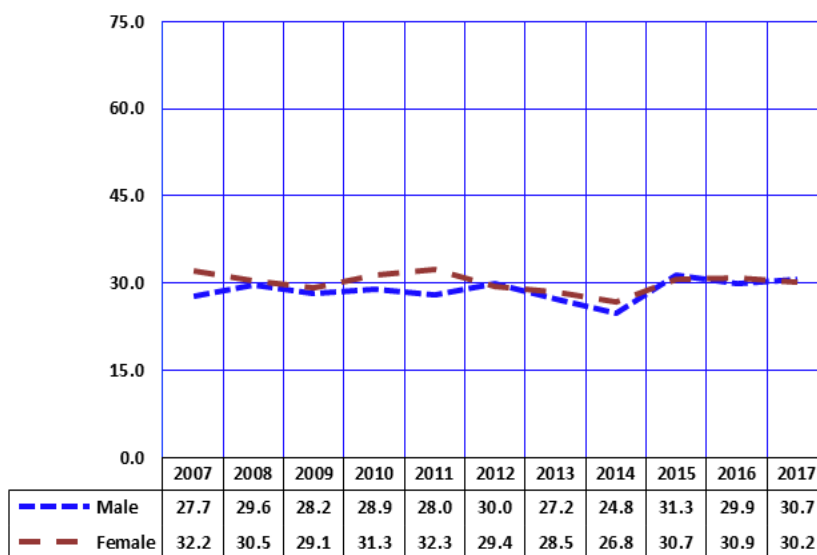
Note: ^a Number of deaths per 100,000 population age-adjusted to the 2000 U.S. standard.

2B. LEADING CAUSES OF DEATH
Cerebrovascular diseases

Figure 2B-14
Age-adjusted Mortality Rates^a for Cerebrovascular Diseases
by Gender and Year, Arizona, 2007-2017

Diseases of the heart and cerebrovascular diseases 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 increased by 0.15 percent from 30.6 deaths per 100,000 population in 2007 to 30.7/100,000 in 2017 (Table 2B-3).

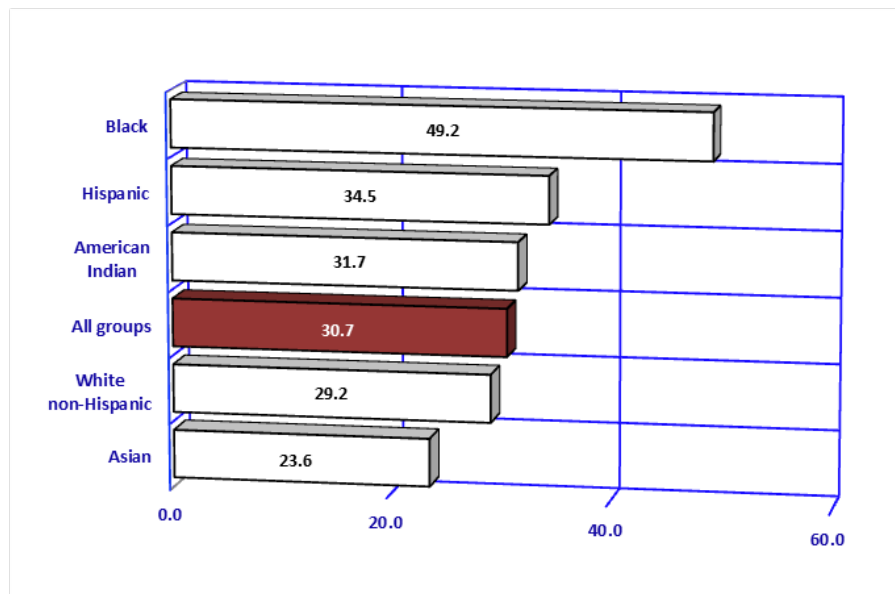
With some exceptions, the risk of dying from cerebrovascular diseases was generally higher among females than males for the period 2007-2017. In 2012, the age-adjusted mortality rate for cerebrovascular diseases was greater among males than females, with male risk being slightly higher than female risk (Figure 2B-14). In 2015, as in 2017, males experienced a higher risk of dying from cerebrovascular diseases than females. (Figure 2B-14, Table 2B-2).



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

Figure 2B-15
Age-adjusted Mortality Rates^a for Cerebrovascular Diseases
by Race/Ethnicity, Arizona, 2017

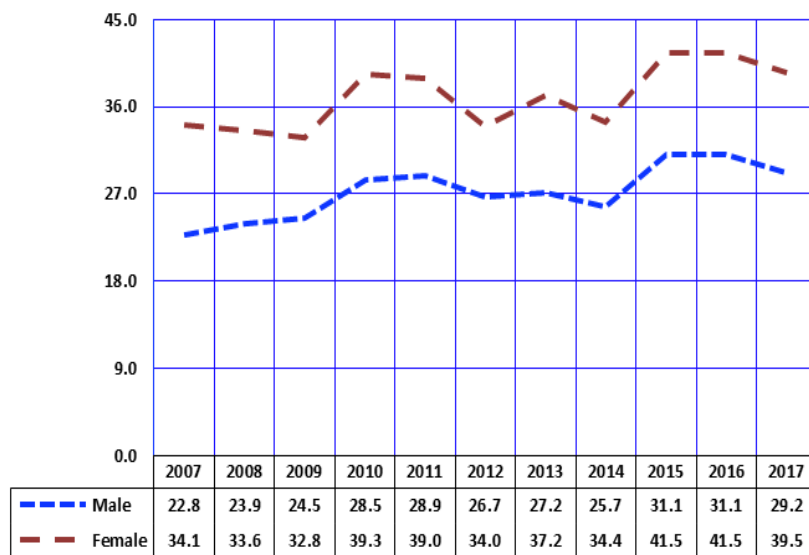
Compared to Arizona's overall rate, Black or African Americans were 60.2 percent more likely to die from cerebrovascular diseases in 2017 (Figure 2B-15, Table 2B-4). The 2017 mortality rate for cerebrovascular diseases among Asians (23.6/100,000) was the lowest among racial/ethnic groups.



Note: ^a 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^a for Alzheimer's Disease by Gender and Year, Arizona, 2007-2017

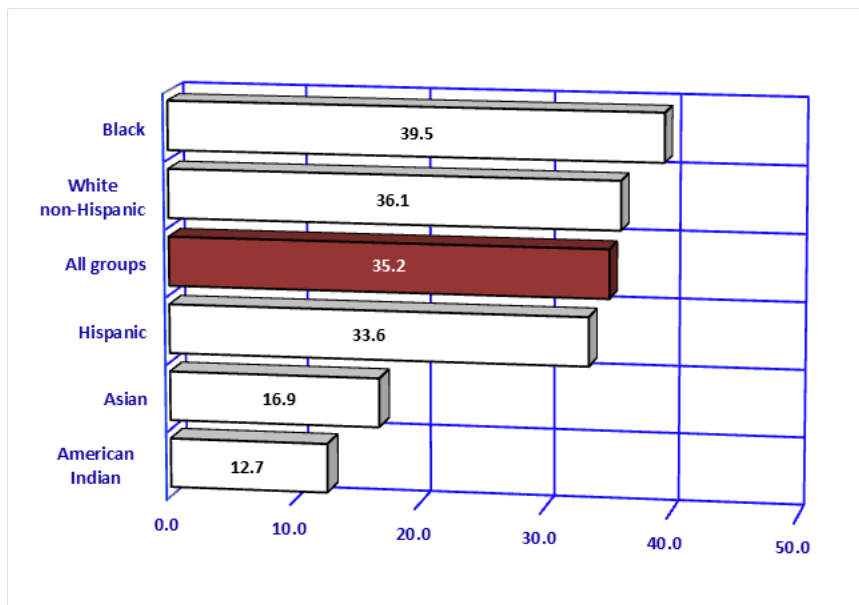


Based on the number of deaths in 2017, Alzheimer's disease was the 4th leading cause of death for females and 7th leading cause for males (**Table 2B-4**)

From 2016 to 2017, the age-adjusted mortality rate for Alzheimer's disease decreased for both genders, at 39.5/100,000 for females and 29.2/100,000 for males (**Figure 2B-16**).

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

Figure 2B-17
Age-adjusted Mortality Rates^a for Alzheimer's Disease by Race/Ethnicity, Arizona, 2017



The age-adjusted mortality rates for Alzheimer's disease in 2017 were higher among Black or African Americans (39.5/100,000), White non-Hispanics (36.1/100,000), and Hispanics (33.6/100,000) than among Asian residents of Arizona (16.9/100,000) or American Indian (12.7/100,000) (**Figure 2B-17, Table 2B-4**).

White non-Hispanic residents of Arizona disproportionately contributed to mortality from Alzheimer's disease. In 2017, White non-Hispanics accounted for 56.4 percent (**Table 10C-1**) of the State's population, but 85.4 percent of all deaths from Alzheimer's disease (2,604 out of 3,050; **Table 2B-4**).

In 2017, the median age at death from Alzheimer's disease was 88 for females and 86 for males (**Table 2D-3**).

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

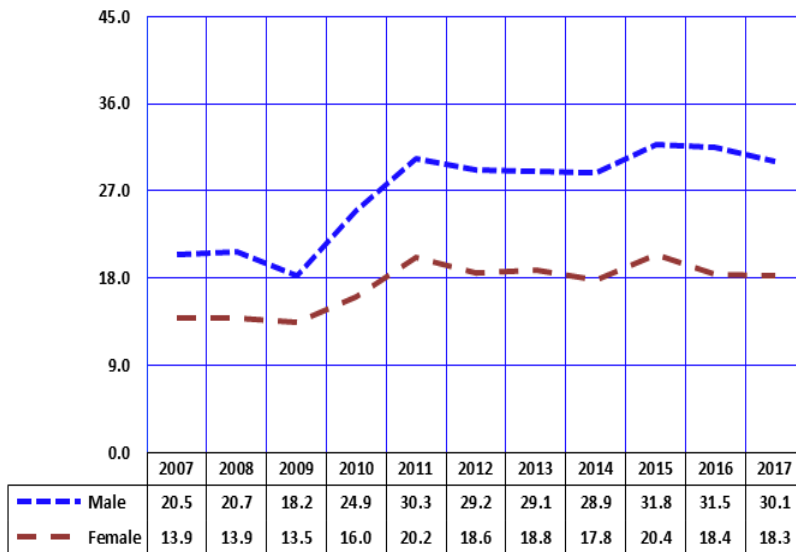
2B. LEADING CAUSES OF DEATH
Diabetes

Figure 2B-18
Age-adjusted Mortality Rates^a for Diabetes by Gender and Year, Arizona, 2007-2017

In 2017, mortality rates for diabetes decreased for both genders, and to a greater extent among males than females (**Figure 2B-18**).

In addition to 2,037 deaths that had diabetes assigned as the underlying cause in 2017, another 3,409 deaths had diabetes assigned as a contributing factor. The diabetes-related death rate of 64.7/100,000 (**Table 6A-6**) was 2.7 times greater than the rate for diabetes as an underlying cause (23.8/100,000; **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.

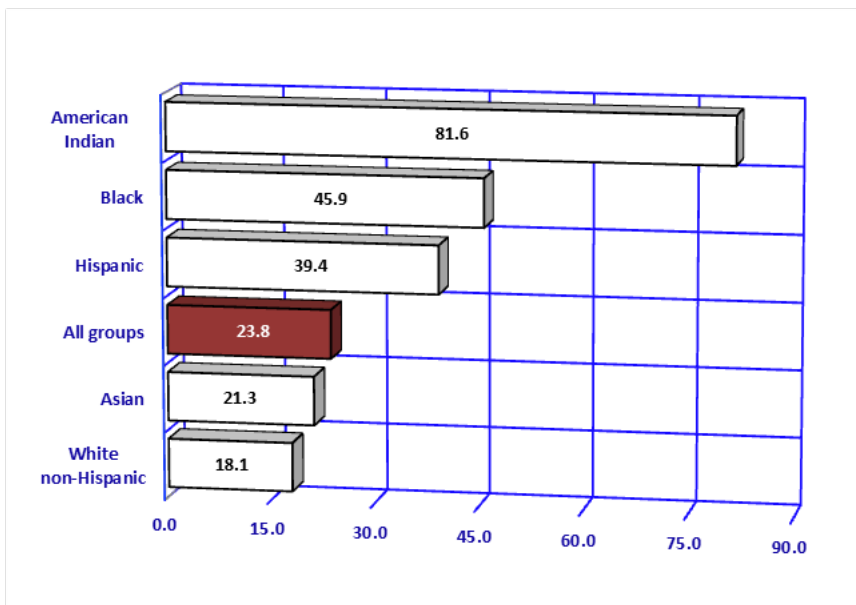


Note: ^a Number of deaths per 100,000 population age-adjusted to the 2000 U.S. standard.

Figure 2B-19
Age-adjusted Mortality Rates^a for Diabetes by Race/Ethnicity, Arizona, 2017

In 2017, compared to Arizona's rate, American Indians were 3.4 times more likely to die from diabetes (81.6 deaths per 100,000; **Figure 2B-19, Table 2B-4**). The rate of 18.1 deaths per 100,000 among White non-Hispanics was the lowest rate among all racial/ethnic groups in the State.

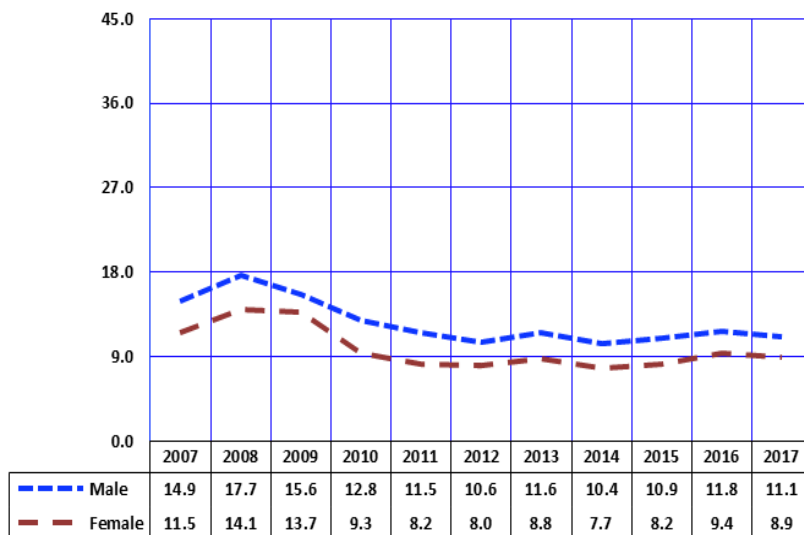
Among the 15 Arizona counties, in 2017, Apache (55.4/100,000), Graham (60.2/100,000) and Greenlee (37.5/100,000) counties had the highest mortality rates for diabetes (**Table 5E-11**).



Note: ^a 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^a for Influenza and Pneumonia by Gender and Year, Arizona, 2007-2017



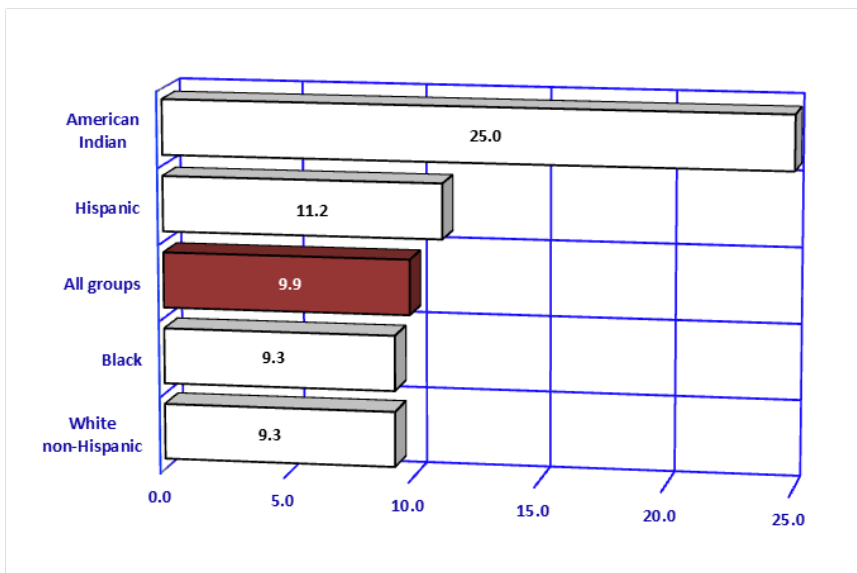
The number of deaths from influenza and pneumonia decreased by 2.6 percent from 875 in 2007 to 852 in 2017. (**Table 2B-1**). Among the 852 deaths, influenza was identified as the underlying cause for 118 of them, while pneumonia was listed as the underlying cause on 734 death certificates (**Table 2B-6**).

The mortality rate for influenza and pneumonia decreased for females from 9.4 deaths per 100,000 in 2016 to 8.9 deaths in 2017 (**Figure 2B-20, Table 2B-2**). The mortality rate for influenza and pneumonia also decreased for males from 11.8 deaths per 100,000 in 2016 to 11.1/100,000 in 2017.

In 2017, the age-adjusted mortality rate for Arizona males was 24.7 percent greater than that of Arizona females.

Note: ^a Number of deaths per 100,000 population age-adjusted 2000 U.S. standard.

Figure 2B-21
Age-adjusted Mortality Rates^a for Influenza and Pneumonia by Race/Ethnicity, Arizona, 2017



In 2017, American Indian residents of Arizona had the highest mortality rate for influenza and pneumonia (25.0 deaths per 100,000) among the racial/ethnic groups. The age-adjusted mortality of 9.3/100,000 among White non-Hispanics and Blacks was the lowest rate among racial/ethnic groups in the State (**Figure 2B-21, Table 2B-4**).

Compared to the State death rate for influenza and pneumonia, Greenlee County's rate was 4.1 times greater (40.7/100,000). The mortality rate was also higher in Apache, Graham, and Yuma Counties (**Table 5E-11**).

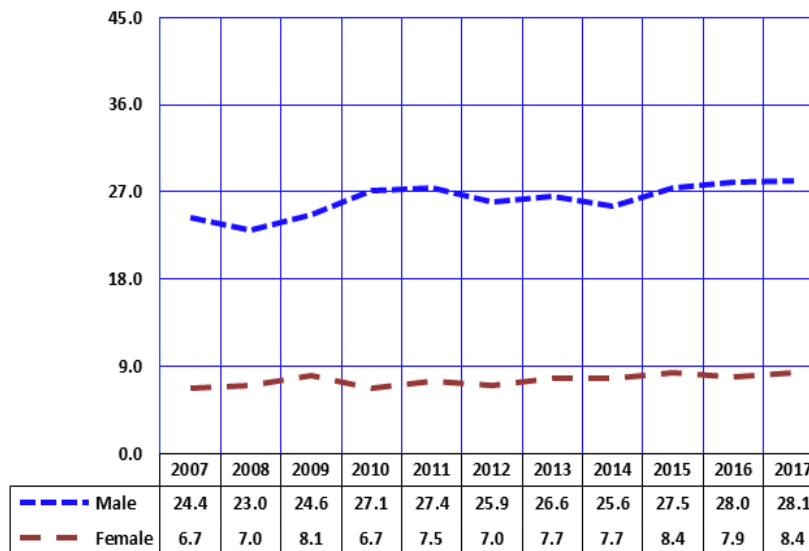
Note: ^a Number of deaths per 100,000 population age-adjusted to the 2000 U.S. standard.

2B. LEADING CAUSES OF DEATH
Suicide

Figure 2B-22
Age-adjusted Mortality Rates^a for Suicide by Gender and Year,
Arizona, 2007-2017

In 2017, based on age-adjusted mortality rates, suicide was the 8th leading cause of death among males. It ranked as the 11th cause of mortality for females. The age-adjusted suicide rate increased from 17.7 suicides per 100,000 in 2016 to 18.0 in 2017 (**Table 2B-4**).

From 2016 to 2017, the suicide rate increased for both genders, but more so among females than males (**Figure 2B-22, Table 2B-4**). In 2017, suicide posed a 3.3 times greater mortality risk for males (28.1/100,000) than for females (8.4/100,000).

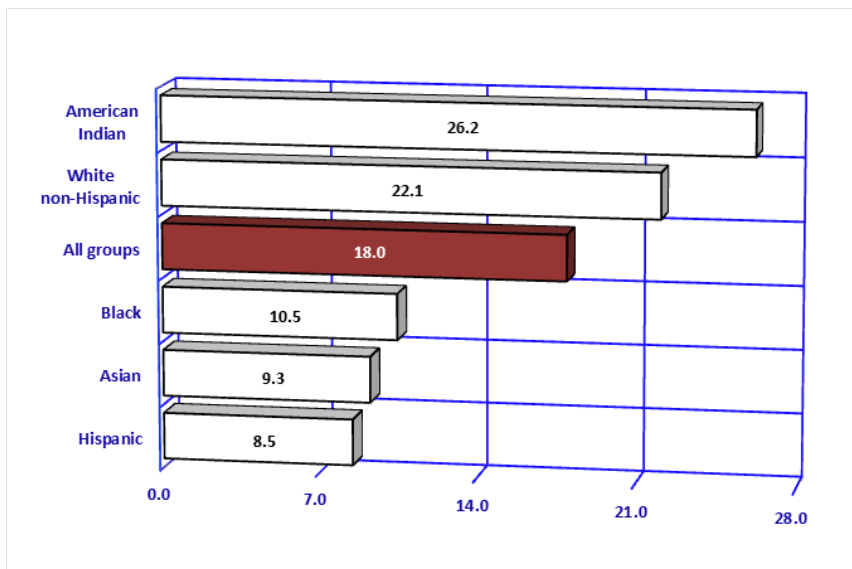


Note: ^a Number of deaths per 100,000 population age-adjusted to the 2000 U.S. standard.

Figure 2B-23
Age-adjusted Mortality Rates^a for Suicide by Race/Ethnicity,
Arizona, 2017

In 2017, American Indians had the highest age-adjusted suicide rate (26.2 suicides per 100,000) among racial/ethnic groups, followed by White non-Hispanics (22.1/100,000), while Hispanics recorded the lowest age-adjusted suicide rate (8.5/100,000; **Figure 2B-23, Table 2B-4**).

The age-adjusted mortality rates for suicide varied in Arizona in 2017 from a low rate of 4.3 suicides per 100,000 residents in Santa Cruz County to a high of 46.2 suicides per 100,000 residents of La Paz County (**Table 5E-11**).



Note: ^a 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^a for Chronic Liver Disease and Cirrhosis
by Gender and Year, Arizona, 2007-2017



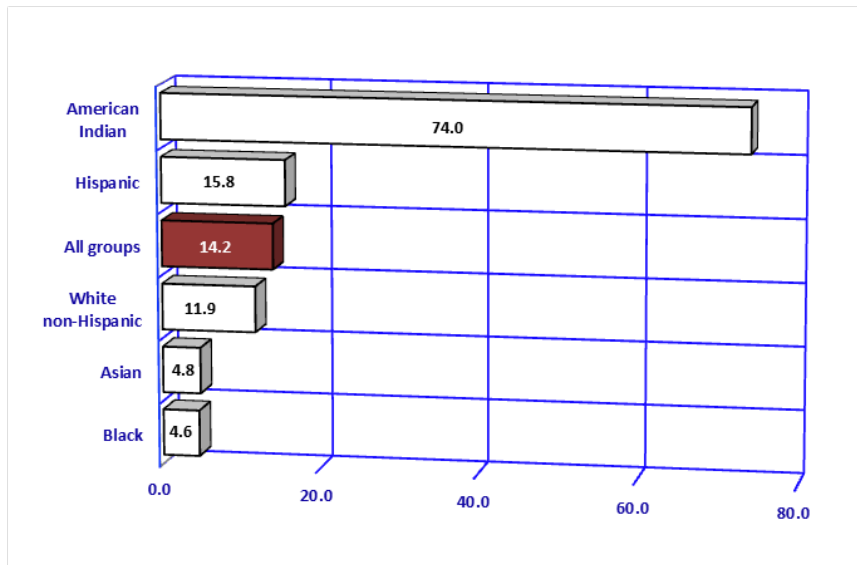
Chronic liver disease and cirrhosis was the 9th leading cause of death in Arizona in 2017 (**Figure 2B-1, Table 2B-1**). Among the 1,122 deaths due to chronic liver disease and cirrhosis, 690 (61.5 percent) were males (**Table 2B-4**).

Among females, the age-adjusted mortality rate for chronic liver disease and cirrhosis decreased 0.5 percent from 2016 to 2017. Among males, the mortality rate decreased 8.9 percent from 19.8/100,000 in 2016 to 18.0/100,000 in 2017 (**Figure 2B-24, Table 2B-3**).

In 2017, Apache, Gila, Navajo, and La Paz counties had the highest mortality rates for chronic liver disease and cirrhosis (**Table 5E-11**).

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

Figure 2B-25
Age-adjusted Mortality Rates^a for Chronic Liver Disease and Cirrhosis
by Race/Ethnicity, Arizona, 2017



The 2017 death rate for chronic liver disease and cirrhosis among American Indians (74.0 deaths per 100,000) was 5.2 times greater than the state average (14.2/100,000; **Figure 2B-25, Table 2B-4**). The rate for Blacks (4.6 deaths per 100,000 population) was the lowest among all racial/ethnic groups in the State.

Compared to the median age at death from all causes (76 years), those who died from chronic liver disease and cirrhosis were on average 17 years younger (59 years, **Table 2D-3**). In 2017, the median age at death of American Indians who died from chronic liver disease and cirrhosis was 51 years, which was on average 10 years younger than all the other race/ethnic groups (**Table 2D-3**).

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

**TABLE 2B-1
NUMBER OF DEATHS FOR THE LEADING CAUSES OF MORTALITY BY YEAR, ARIZONA, 2007-2017**

Rank in 2007	Rank in 2017	Cause of death	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
1	1	Diseases of heart	10,147	10,299	10,151	9,719	10,424	10,366	10,497	9,953	11,274	11,820	12,285
2	2	Malignant neoplasms	9,955	9,949	10,147	10,423	10,543	10,871	11,193	10,600	11,624	11,801	11,917
3	3	Accidents (unintentional injury)	3,014	2,951	2,887	2,834	2,959	2,804	3,137	3,011	3,403	3,899	4,085
4	4	Chronic lower respiratory diseases	2,651	2,896	2,808	2,892	3,143	3,167	3,295	3,185	3,648	3,788	3,779
6	5	Alzheimer's disease	2,041	2,086	2,086	2,314	2,336	2,154	2,384	2,345	2,942	3,081	3,050
5	6	Cerebrovascular diseases	2,079	2,089	2,010	2,051	2,067	2,096	2,047	1,995	2,463	2,536	2,647
7	7	Diabetes	1,145	1,162	1,078	1,372	1,721	1,698	1,744	1,776	2,050	2,013	2,037
8	8	Intentional self-harm (suicide)	986	968	1,060	1,070	1,113	1,070	1,116	1,124	1,233	1,256	1,304
10	9	Chronic liver disease and cirrhosis	734	778	818	843	933	971	1,040	984	1,120	1,169	1,122
15	10	Essential primary hypertension and hypertensive renal disease	389	475	475	498	725	739	711	758	896	1,010	1,018
9	11	Influenza and pneumonia	875	1,075	1,007	729	649	635	724	669	739	859	852
14	12	Parkinson's disease	455	487	446	488	545	579	578	569	719	712	749
11	14	Nephritis, nephrotic syndrome and nephrosis	510	488	532	516	409	440	391	353	498	485	535
12	13	Septicemia	547	539	528	425	321	319	354	336	436	505	461
13	15	Assault (homicide)	494	461	360	404	387	376	383	294	364	416	430
ALL CAUSES			44,640	45,128	45,065	45,871	47,547	48,459	49,929	51,074	54,152	56,480	57,261

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 2007-2017 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. The ICD-10 code for the underlying cause of death was missing for as many as 140 in 2008.

**TABLE 2B-2
AGE-ADJUSTED MORTALITY RATES* BY GENDER AND YEAR FOR SELECTED LEADING CAUSES OF DEATH,
ARIZONA, 2007-2017**

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
TOTAL, ALL CAUSES											
Total	663.2	659.6	653.2	679.9	699.6	687.2	687.8	676.0	691.3	696.6	679.3
Male	773.8	777.6	763.9	802.0	817.1	811.0	805.8	791.2	811.5	824.8	800.0
Female	561.7	554.3	555.1	572.6	595.3	579.2	583.8	572.8	583.3	581.1	568.7
CARDIOVASCULAR DISEASE											
Total	194.4	194.1	188.8	188.6	201.0	193.3	187.7	171.6	189.0	190.8	189.9
Male	227.5	235.8	228.1	225.1	239.2	233.6	229.0	206.9	226.7	230.7	228.6
Female	164.3	158.1	154.9	156.7	168.0	159.1	152.4	140.7	156.1	155.9	155.5
-----DISEASES OF HEART											
Total	149.5	149.3	145.9	143.3	152.7	145.8	143.0	129.9	141.3	142.5	141.9
Male	184.0	189.3	183.1	179.8	192.8	184.4	183.6	164.1	177.1	180.5	179.4
Female	119.4	115.1	114.1	112.2	119.0	113.7	109.2	100.5	110.5	109.8	109.3
-----CEREBROVASCULAR DISEASE											
Total	30.6	30.3	28.9	30.7	30.6	29.9	28.2	26.2	31.1	30.7	30.7
Male	27.7	29.6	28.2	28.9	28.0	30.0	27.2	24.8	31.3	29.9	30.7
Female	32.2	30.5	29.1	31.3	32.3	29.4	28.5	26.8	30.7	30.9	30.2
MALIGNANT NEOPLASMS											
Total	148.0	145.5	147.2	150.5	151.3	149.8	149.6	136.3	144.0	140.7	136.6
Male	176.7	173.8	174.9	180.6	179.3	180.3	175.0	160.8	169.0	166.3	161.0
Female	125.6	123.0	125.8	127.1	129.5	125.9	129.9	116.8	123.8	120.0	116.6
CHRONIC LOWER RESPIRATORY DISEASE											
Total	39.2	42.1	40.5	42.6	45.9	44.2	44.5	41.1	45.1	45.0	43.0
Male	43.5	46.5	44.7	48.1	49.7	50.5	48.1	45.8	48.9	47.6	45.3
Female	36.0	38.9	37.1	38.6	42.8	39.5	41.8	37.5	41.7	42.9	41.0
ACCIDENTS (UNINTENTIONAL INJURIES)											
Total	46.6	44.7	43.1	43.8	45.5	42.4	46.3	43.3	48.1	53.7	55.3
Male	60.6	59.0	56.6	56.6	58.3	54.0	60.1	56.7	62.7	73.1	73.7
Female	32.3	30.6	29.8	31.6	32.6	31.0	32.8	30.1	34.1	34.9	37.0
-----MOTOR VEHICLE ACCIDENTS											
Total	16.2	13.6	11.6	11.1	12.1	11.4	11.4	10.3	12.6	13.9	13.8
Male	22.2	19.5	16.8	15.9	17.6	16.8	16.3	14.5	18.0	20.1	19.5
Female	10.1	7.9	6.5	6.4	6.9	6.3	6.6	6.0	7.2	7.8	8.2
INFLUENZA AND PNEUMONIA											
Total	12.9	15.6	14.6	10.9	9.7	9.1	10.0	8.9	9.4	10.4	9.9
Male	14.9	17.7	15.6	12.8	11.5	7.4	11.6	10.4	10.9	11.8	11.1
Female	11.5	14.1	13.7	9.3	8.2	5.6	8.8	7.7	8.2	9.4	8.9

**TABLE 2B-2 (continued)
AGE-ADJUSTED MORTALITY RATES^a BY GENDER AND YEAR FOR SELECTED LEADING CAUSES OF DEATH,
ARIZONA, 2007-2017**

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
ALZHEIMER'S DISEASE											
Total	29.6	29.8	29.5	35.1	35.2	29.9	33.2	30.9	37.3	37.3	35.2
Male	22.8	23.9	24.5	28.5	28.9	41.5	27.2	25.7	31.1	31.1	29.2
Female	34.1	33.6	32.8	39.3	39.0	52.8	37.2	34.4	41.5	41.5	39.5
DIABETES											
Total	17.0	17.0	15.7	20.1	24.8	23.5	23.6	23.0	25.7	24.5	23.8
Male	20.5	20.7	18.2	24.9	30.3	29.2	29.1	28.9	31.8	31.5	30.1
Female	13.9	13.9	13.5	16.0	20.2	18.6	18.8	17.8	20.4	18.4	18.3
CHRONIC LIVER DISEASE AND											
Total	11.3	11.7	12.2	12.3	13.4	13.6	14.5	13.2	14.9	15.1	14.2
Male	15.4	15.3	15.4	16.1	18.0	18.7	18.2	16.5	19.2	19.8	18.0
Female	7.6	8.4	9.1	8.8	9.2	9.0	11.1	10.1	11.0	10.8	10.7
NEPHRITIS, NEPHROTIC SYNDROME, AND NEPHROSIS											
Total	7.6	7.1	7.7	7.6	6.0	6.2	5.3	4.6	6.3	5.8	6.2
Male	8.8	8.6	9.2	9.0	7.2	8.9	6.1	5.2	7.7	6.9	7.7
Female	6.6	5.9	6.5	6.4	5.1	6.7	4.8	4.2	5.2	4.9	4.9
INTENTIONAL SELF-HARM (SUICIDE)											
Total	15.4	14.8	16.1	16.7	17.2	16.2	17.0	16.5	17.8	17.7	18.0
Male	24.4	23.0	24.6	27.1	27.4	25.9	26.6	25.6	27.5	28.0	28.1
Female	6.7	7.0	8.1	6.7	7.5	7.0	7.7	7.7	8.4	7.9	8.4
ASSAULT (HOMICIDE)											
Total	7.7	7.1	5.5	6.5	6.1	5.9	5.9	4.6	5.6	6.3	6.4
Male	11.8	11.2	8.0	10.5	9.6	8.6	9.2	7.1	8.6	9.9	10.0
Female	3.2	2.7	2.9	2.4	2.6	3.1	2.5	2.1	2.5	2.5	2.8
SEPTICEMIA											
Total	8.1	7.9	7.7	7.4	4.7	4.5	4.8	4.4	5.4	6.2	5.5
Male	8.4	9.4	8.2	10.8	5.4	6.1	5.6	5.0	6.4	7.1	5.9
Female	7.9	6.7	7.3	5.1	4.0	4.8	4.3	4.0	4.6	5.5	5.1

Notes: ^a 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-4
NUMBER OF DEATHS AND AGE-ADJUSTED MORTALITY RATES^a FOR SELECTED CAUSES OF DEATH BY RACE/ETHNICITY AND
GENDER, ARIZONA, 2017**

	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
Total, all causes^b	57,261	30,721	26,537	44,191	23,375	20,816	7,539	4,197	3,341	1,896	1,076	820	2,355	1,334	1,021	796	377	419			
Major cardiovascular diseases	16,429	8,868	7,561	13,196	7,061	6,135	1,875	1,039	836	569	315	254	434	242	192	227	111	116			
Diseases of heart	12,285	6,973	5,312	10,045	5,650	4,395	1,270	741	529	380	223	157	322	195	127	159	79	80			
Coronary heart disease	8,936	5,355	3,581	7,255	4,334	2,921	961	585	376	273	160	113	226	138	88	127	64	63			
Malignant neoplasms	11,917	6,493	5,424	9,565	5,292	4,273	1,421	740	681	392	200	192	266	115	151	202	97	105			
Malignant neoplasm of trachea, bronchus and lung	2,750 [†]	1,490 [†]	1,267	2,409	1,298	1,111	179	103	76	73	47	26	20 [†]	*	15	57	24	33			
Malignant neoplasm of colon, rectum, and anus	1,120 [†]	639	480 [†]	867	492	375	169	100	69	36	17	19	27	16	11	10 [†]	10	*			
Malignant neoplasm of breast	830 [†]	10 [†]	826	640	7	633	110 [†]	*	104	50	0	50	17	0	17	19	0	19			
Malignant neoplasm of prostate	NA	659	NA	NA	531	NA	NA	74	NA	NA	28	NA	NA	15	NA	NA	7	NA			
Malignant melanoma of skin	190 [†]	130 [†]	60 [†]	174	121	53	10 [†]	6	*	0 [†]	0	*	0 [†]	*	*	0 [†]	0	*			
Malignant neoplasm of cervix uteri	NA	NA	80 [†]	NA	NA	46	NA	23	NA	NA	*	NA	NA	NA	NA	NA	NA	*			
Accidents (unintentional injury)	4,085	2,607	1,478	2,612	1,590	1,022	795	541	254	174	131	43	378	258	120	51	28	23			
Accidental poisoning	1,370 [†]	960 [†]	420 [†]	825	540	285	309	236	73	79	63	16	105	77	28	10 [†]	*	*			
Falls	1,080 [†]	510	570 [†]	900	418	482	109	48	61	10 [†]	7	*	39	27	12	12	6	6			
Motor vehicle accidents	979	691	288	502	374	128	246	165	81	54	40	14	151	96	55	18	11	7			
Accidental drowning and submersion	110 [†]	70 [†]	30 [†]	50	35	15	30 [†]	22	*	10 [†]	8	*	10 [†]	*	6	10 [†]	*	*			
Chronic lower respiratory diseases	3,779	1,807	1,972	3,383	1,604	1,779	216	110	106	62	22	40	45	21	24	35	19	16			
Alzheimer's disease	3,050 [†]	1,080 [†]	1,974	2,604	937	1,667	321	96	225	64	26	38	23	6	17	30 [†]	*	22			
Cerebrovascular diseases	2,647	1,173	1,474	2,040	883	1,157	388	191	197	99	43	56	65	29	36	43	19	24			
Diabetes	2,037	1,190	847	1,195	724	471	490	275	215	107	57	50	188	106	82	42	18	24			
Intentional self-harm (suicide)	1,300 [†]	1,000	300 [†]	973	738	235	177	144	33	30 [†]	30	*	78	58	20	23	13	10			
Chronic liver disease and cirrhosis	1,120 [†]	690	430 [†]	649	389	260	239	165	74	10 [†]	11	*	195	105	90	10 [†]	9	*			
Essential (primary) hypertension and hypertensive renal disease	1,018	483	535	733	333	400	159	80	79	69	40	29	33	15	18	18	9	9			
Influenza and pneumonia	850 [†]	426	430 [†]	634	317	317	127	57	70	20 [†]	14	*	55	28	27	10 [†]	7	*			
Parkinson's disease	750 [†]	475	270 [†]	646	412	234	58	36	22	10 [†]	6	*	18	11	7	16	8	8			
Nephritis, nephrotic syndrome and nephrosis	540 [†]	300 [†]	239	374	208	166	86	50	36	23	14	9	41	20	21	10 [†]	*	7			
Septicemia	460 [†]	220 [†]	240 [†]	317	154	163	86	43	43	17	8	9	32	13	19	10 [†]	*	*			
Assault (homicide)	430 [†]	340 [†]	100 [†]	153	103	50	156	128	28	61	54	7	53	45	8	0 [†]	*	*			
Human immunodeficiency virus (HIV) disease	90 [†]	80 [†]	10 [†]	44	37	7	20 [†]	21	*	10 [†]	11	*	0 [†]	*	0	0	0	0			
Injury by firearms	1,120 [†]	943	180 [†]	747	614	133	221	193	28	76	66	10	50 [†]	46	*	10 [†]	8	*			
Drug-induced deaths	1,590 [†]	1,040 [†]	549	1,037	638	399	337	243	94	87	68	19	69	50	19	10 [†]	*	7			
Opioid-induced deaths	910 [†]	600 [†]	310 [†]	598	368	230	221	164	57	40 [†]	36	*	33	24	9	10 [†]	*	*			
Alcohol-induced deaths	1,210 [†]	840	370 [†]	689	463	226	202	169	33	20	14	6	271	171	100	10 [†]	8	*			

TABLE 2B-4 (continued)
NUMBER OF DEATHS AND AGE-ADJUSTED MORTALITY RATES^a FOR SELECTED CAUSES OF DEATH BY RACE/ETHNICITY AND GENDER, ARIZONA, 2017

	AGE-ADJUSTED MORTALITY RATES ^a																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
	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																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
Total, all causes	679.3	800.0	568.7	681.4	796.3	574.9	592.0	705.7	493.5	800.0	912.2	680.8	1001.9	1244.9	796.7	419.1	478.8	377.9	189.9	228.6	155.5	191.4	228.9	157.3	166.2	204.8	134.8	258.3	297.4	220.1	204.2	268.3	157.4	125.2	150.3	110.3	141.9	179.4	109.3	146.1	183.4	112.8	112.5	144.9	86.6	169.6	210.0	134.3	150.9	217.2	103.9	87.2	105.3	76.4	102.8	136.8	73.4	105.4	140.1	74.7	85.1	113.9	62.0	122.8	148.0	98.7	109.5	161.2	73.6	70.6	83.4	62.6	136.6	161.0	116.6	141.4	167.7	119.1	110.9	130.9	95.9	158.5	164.8	151.2	117.1	114.6	118.2	99.4	121.4	85.6	30.8	36.0	26.5	34.3	39.6	29.7	15.2	19.6	11.7	27.9	35.6	20.6	8.5	**	11.6	29.2	30.5	28.1	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	**	9.8	0.2	18.2	10.0	0.2	18.7	7.2	**	13.3	18.9	0.0	36.7	7.4	0.0	13.0	8.5	0.0	14.5	NA	16.8	NA	NA	16.5	NA	NA	16.3	NA	NA	26.3	NA	NA	NA	19.9	NA	NA	9.7	NA	2.2	3.2	1.4	2.7	4.0	1.6	0.7	0.9	**	**	0.0	**	**	**	**	**	0.0	**	**	NA	NA	2.1	NA	NA	1.8	NA	NA	2.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	**	55.3	73.7	37.0	54.5	71.5	37.3	45.9	61.4	30.4	60.3	89.3	31.1	142.0	206.1	88.1	24.3	31.2	19.3	20.4	28.6	12.1	21.7	28.9	14.3	15.1	22.9	7.2	25.0	38.0	10.7	39.6	61.6	20.6	4.0	**	**	12.4	13.3	11.4	12.9	13.6	12.1	10.1	9.3	10.2	6.4	9.2	**	**	17.1	26.9	9.7	7.8	10.0	6.5	13.8	19.5	8.2	12.0	17.8	6.1	12.7	17.7	8.1	17.1	26.0	8.6	54.0	70.0	39.7	7.5	10.1	5.2	1.5	2.1	0.9	1.2	1.7	0.7	1.2	1.9	**	3.2	4.2	**	3.4	**	3.7	**	**	**	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	35.2	29.2	39.5	36.1	30.3	40.5	33.6	24.6	39.5	39.5	36.4	39.3	12.7	9.1	15.1	16.9	**	23.2	30.7	30.7	30.2	29.2	28.5	29.3	34.5	38.1	31.3	49.2	45.6	50.3	31.7	30.7	31.1	23.6	26.2	22.0	23.8	30.1	18.3	18.1	23.5	13.3	39.4	48.7	31.7	45.9	49.5	42.3	81.6	101.9	64.8	21.3	22.6	20.3	18.0	28.1	8.4	22.1	33.8	10.8	8.5	14.1	3.0	10.5	19.1	**	26.2	40.4	12.7	9.3	10.6	7.8	14.2	18.0	10.7	11.9	14.6	9.3	15.8	23.1	9.6	4.6	7.2	**	74.0	85.4	63.7	4.8	8.8	**	11.8	12.5	11.0	10.6	10.8	10.2	14.1	16.4	12.2	29.6	32.9	25.3	14.9	16.6	13.9	10.6	14.0	9.1	9.9	11.1	8.9	9.3	10.4	8.5	11.2	11.1	10.9	9.3	14.0	**	25.0	28.1	22.0	5.1	7.7	**	8.7	12.6	5.7	9.1	13.1	5.9	5.9	8.6	3.8	3.8	7.0	**	10.2	16.5	6.3	9.4	13.1	7.3	6.2	7.7	4.9	5.4	6.7	4.2	7.1	8.9	5.6	9.4	12.7	6.9	18.7	21.4	16.7	6.4	**	7.1	5.5	5.9	5.1	4.9	5.3	4.6	7.1	8.0	6.5	8.0	10.2	7.0	14.5	11.7	15.6	4.0	**	**	6.4	10.0	2.8	4.1	5.5	2.7	6.8	11.1	2.5	17.9	30.0	4.1	17.9	30.7	5.5	**	**	**	1.2	2.1	0.3	1.0	1.6	0.3	1.3	2.3	**	3.6	6.6	**	**	**	0.0	0.0	0.0	0.0	15.8	26.7	5.0	17.0	28.0	6.3	9.9	17.2	2.5	22.8	38.6	6.2	17.1	31.5	**	4.4	6.5	**	23.3	30.9	15.5	26.4	33.4	19.1	16.5	23.4	9.5	27.5	41.2	12.4	25.2	37.7	13.6	4.7	**	5.0	13.4	17.8	8.8	15.5	19.7	11.1	10.3	15.2	5.3	12.8	21.4	**	11.5	16.6	6.7	2.3	**	**	16.1	22.7	9.8	13.7	18.6	9.1	12.3	21.9	3.7	6.6	9.6	3.8	104.1	142.3	71.6	4.0	7.4	**

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; ^a 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; ^b Includes records with unknown gender and race/ethnicity.

**TABLE 2B-5
AGE-ADJUSTED MORTALITY RATES^a FOR SELECTED CAUSES OF DEATH BY URBAN/RURAL AREA AND GENDER,
ARIZONA, 2017**

	Arizona			Urban			Rural		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
Total, all causes	679.3	800.0	568.7	653.2	762.5	554.1	781.2	935.5	633.6
Major cardiovascular diseases	189.9	228.6	155.5	183.8	218.5	153.2	211.0	262.1	164.1
Diseases of heart	141.9	179.4	109.3	135.7	169.7	106.4	164.5	212.0	121.2
Coronary heart disease	102.8	136.8	73.4	97.3	129.0	70.3	122.8	162.4	86.7
Malignant neoplasms	136.6	161.0	116.6	133.7	156.6	115.3	146.0	174.2	121.0
Malignant neoplasm of trachea, bronchus and lung	30.8	36.0	26.5	29.8	34.6	25.8	34.3	39.9	29.0
Malignant neoplasm of colon, rectum, and anus	13.0	16.0	10.2	12.8	15.5	10.4	13.4	17.9	9.2
Malignant neoplasm of breast	9.8	0.2	18.2	9.9	0.2	18.3	9.2	0.2	17.3
Malignant neoplasm of prostate	7.5	16.8	0.0	6.9	15.9	0.0	9.4	20.3	0.0
Malignant melanoma of skin	2.2	3.2	1.4	2.1	3.1	1.3	2.9	4.0	2.0
Malignant neoplasm of cervix uteri	1.1	0.0	2.1	1.1	0.0	2.2	0.9	0.0	1.9
Accidents (unintentional injury)	55.3	73.7	37.0	50.3	66.4	34.3	74.2	99.0	49.3
Accidental poisoning	20.4	28.6	12.1	19.2	27.0	11.4	21.1	27.6	14.5
Motor vehicle accidents	13.8	19.5	8.2	11.6	16.6	6.9	25.4	35.1	15.6
Falls	12.4	13.3	11.4	12.3	12.9	11.6	13.0	15.0	11.0
Accidental drowning and submersion	1.5	2.1	0.9	1.4	2.0	0.8	1.6	1.8	1.3
Chronic lower respiratory diseases	43.0	45.3	41.0	40.2	41.7	39.0	53.9	58.7	49.5
Alzheimer's disease	35.2	29.2	39.5	35.7	29.2	40.3	33.0	28.4	36.2
Cerebrovascular diseases	30.7	30.7	30.2	30.1	29.5	30.0	32.5	34.8	30.2
Diabetes	23.8	30.1	18.3	23.5	29.8	18.0	24.7	30.8	19.2
Intentional self-harm (suicide)	18.0	28.1	8.4	15.7	24.3	7.4	30.6	47.1	14.4
Chronic liver disease and cirrhosis	14.2	18.0	10.7	12.2	15.8	8.9	24.8	28.8	21.0
Essential (primary) hypertension and hypertensive renal disease	11.8	12.5	11.0	12.7	13.4	11.9	7.7	8.7	6.9
Influenza and pneumonia	9.9	11.1	8.9	9.2	10.5	8.1	12.9	13.1	12.6
Parkinson's disease	8.7	12.6	5.7	8.9	13.2	5.7	7.8	10.4	5.7
Assault (homicide)	6.4	10.0	2.8	6.1	9.3	2.9	6.2	10.3	1.8
Nephritis, nephrotic syndrome and nephrosis	6.2	7.7	4.9	5.4	6.6	4.3	10.3	12.9	7.7
Septicemia	5.5	5.9	5.1	5.3	5.7	4.9	6.4	6.6	6.0
(HIV) disease	1.2	2.1	0.3	1.2	2.0	0.4	1.2	2.5	0.0
Injury by firearms	15.8	26.7	5.0	14.4	24.1	4.9	22.0	38.3	5.8
Drug-induced deaths	23.3	30.9	15.5	22.1	29.7	14.3	24.5	28.6	20.3
Opioid-induced deaths	13.4	17.8	8.8	13.5	18.2	8.8	10.2	12.3	7.9
Alcohol-induced deaths	16.1	22.7	9.8	13.2	19.0	7.8	31.9	42.4	21.8

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

**TABLE 2B-6
DEATHS AND DEATH RATES BY GENDER FOR SELECTED CAUSES,
ARIZONA RESIDENTS, 2017**

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
Total, all causes^a	57,261	30,721	26,537	822.0	887.7	757.1
Salmonella infections	0†	*	*	**	**	**
Shigellosis and amebiasis	0	0	0	0.0	0.0	0.0
Certain other intestinal infections	208	84	124	3.0	2.4	3.5
Enterocolitis due to Clostridium difficile	144	59	85	2.1	1.7	2.4
Tuberculosis	10†	*	8	0.1	**	0.2
Respiratory tuberculosis	10†	*	*	0.1	**	**
Other tuberculosis	0†	0	*	**	0.0	**
Whooping cough	0†	*	0	**	**	0.0
Scarlet fever and erysipelas	0	0	0	0.0	0.0	0.0
Meningococcal infection	0	0	0	0.0	0.0	0.0
Septicemia	461	222	239	6.6	6.4	6.8
Syphilis	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	197	134	63	2.8	3.9	1.8
Human immunodeficiency virus (HIV) disease	88	76	12	1.3	2.2	0.3
Malaria	0	0	0	0.0	0.0	0.0
Other and unspecified infectious and parasitic diseases	194	96	98	2.8	2.8	2.8
Malignant neoplasms	11,917	6,493	5,424	171.1	187.6	154.7
Malignant neoplasm of lip, oral cavity and pharynx	180	128	52	2.6	3.7	1.5
Malignant neoplasm of esophagus	333	273	60	4.8	7.9	1.7
Malignant neoplasm of stomach	203	124	79	2.9	3.6	2.3
Malignant neoplasm of colon, rectum, and anus	1,118	639	479	16.0	18.5	13.7
Malignant neoplasm of liver and intrahepatic bile ducts	576	396	180	8.3	11.4	5.1
Malignant neoplasm of pancreas	914	484	430	13.1	14.0	12.3
Malignant neoplasm of larynx	69	56	13	1.0	1.6	0.4
Malignant neoplasm of trachea, bronchus and lung	2,754	1,487	1,267	39.5	43.0	36.1
Malignant melanoma of skin	190	129	61	2.7	3.7	1.7
Malignant neoplasm of breast	834	8	826	12.0	0.2	23.6
Malignant neoplasm of cervix uteri	78	0	78	1.1	0.0	2.2
Malignant neoplasm of corpus uteri and uterus, part unspecified	200	0	200	2.9	0.0	5.7
Malignant neoplasm of ovary	310	0	310	4.5	0.0	8.8
Malignant neoplasm of prostate	659	659	0	9.5	19.0	0.0
Malignant neoplasm of kidney and renal pelvis	323	208	115	4.6	6.0	3.3
Malignant neoplasm of bladder	362	279	83	5.2	8.1	2.4
Malignant neoplasm of meninges, brain and other parts of central nervous system	339	194	145	4.9	5.6	4.1
Malignant neoplasm of lymphoid, hematopoietic and related tissue	1,171	694	477	16.8	20.1	13.6
Hodgkin's disease	29	15	14	0.4	0.4	0.4
Non-Hodgkin's lymphoma	388	240	148	5.6	6.9	4.2
Leukemia	484	277	207	6.9	8.0	5.9
Multiple myeloma and immunoproliferative neoplasms	270	162	108	3.9	4.7	3.1
Other and unspecified malignant neoplasms of lymphoid tissue	0	0	0	0.0	0.0	0.0
All other and unspecified malignant neoplasm	1,304	735	569	18.7	21.2	16.2
In situ neoplasms	361	203	158	5.2	5.9	4.5
Anemias	56	23	33	0.8	0.7	0.9
Diabetes	2,037	1,190	847	29.2	34.4	24.2

TABLE 2B-6 (continued)
DEATHS AND DEATH RATES BY GENDER FOR SELECTED CAUSES,
ARIZONA RESIDENTS, 2017

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	220	85	135	3.2	2.5	3.9
Malnutrition	206	79	127	3.0	2.3	3.6
Other nutritional deficiencies	14	6	8	0.2	0.2	0.2
Obesity	205	124	81	2.9	3.6	2.3
Meningitis	21	10	11	0.3	0.3	0.3
Parkinson's disease	749	475	274	10.8	13.7	7.8
Alzheimer's disease	3,050	1,076	1,974	43.8	31.1	56.3
Major cardiovascular diseases	16,429	8,868	7,561	235.8	256.2	215.7
Diseases of heart	12,285	6,973	5,312	176.4	201.5	151.5
Acute rheumatic fever and chronic rheumatic heart disease	79	27	52	1.1	0.8	1.5
Hypertensive heart disease	1,122	526	596	16.1	15.2	17.0
Hypertensive heart and renal disease	147	73	74	2.1	2.1	2.1
Ischemic heart disease	7,814	4,829	2,985	112.2	139.5	85.2
Acute myocardial infarction	1,687	1,037	650	24.2	30.0	18.5
Other acute ischemic heart disease	41	22	19	0.6	0.6	0.5
Other forms of chronic ischemic heart disease	6,086	3,770	2,316	87.4	108.9	66.1
Atherosclerotic cardiovascular disease	1,950	1,281	669	28.0	37.0	19.1
All other forms of chronic ischemic heart disease	4,136	2,489	1,647	59.4	71.9	47.0
Other heart diseases	3,123	1,518	1,605	44.8	43.9	45.8
Acute and subacute endocarditis	25	16	9	0.4	0.5	0.3
Diseases of pericardium and acute myocarditis	10†	*	8	0.2	**	0.2
Heart failure	794	388	406	11.4	11.2	11.6
All other forms of heart disease	2,292	1,110	1,182	32.9	32.1	33.7
Essential (primary) hypertension and hypertensive renal disease	1,018	483	535	14.6	14.0	15.3
Cerebrovascular diseases	2,647	1,173	1,474	38.0	33.9	42.1
Atherosclerosis	90	38	52	1.3	1.1	1.5
Other diseases of circulatory system	389	201	188	5.6	5.8	5.4
Aortic aneurysm and dissection	202	115	87	2.9	3.3	2.5
Other disease of arteries, arterioles and capillaries	187	86	101	2.7	2.5	2.9
Other disorders of circulatory system	109	58	51	1.6	1.7	1.5
Influenza and pneumonia	852	426	426	12.2	12.3	12.2
Influenza	118	60	58	1.7	1.7	1.7
Pneumonia	734	366	368	10.5	10.6	10.5
Other acute lower respiratory infections	10†	*	*	0.1	**	**
Acute bronchiolitis	10†	*	*	**	**	**
Unspecified acute lower respiratory infection	0†	0	*	**	0.0	**
Chronic lower respiratory diseases	3,779	1,807	1,972	54.3	52.2	56.3
Bronchitis, chronic and unspecified	10†	*	6	0.1	**	0.2
Emphysema	148	75	73	2.1	2.2	2.1
Asthma	91	31	60	1.3	0.9	1.7
Other chronic lower respiratory diseases	3,530	1,697	1,833	50.7	49.0	52.3
Pneumoconioses and chemical effects	16	16	0	0.2	0.5	0.0
Pneumonitis due to solids and liquids	287	160	127	4.1	4.6	3.6
Other disease of respiratory system	710	403	307	10.2	11.6	8.8
Peptic ulcer	77	30	47	1.1	0.9	1.3
Diseases of appendix	10†	*	*	0.1	**	**
Hernia	38	24	14	0.5	0.7	0.4

TABLE 2B-6 (continued)
DEATHS AND DEATH RATES BY GENDER FOR SELECTED CAUSES,
ARIZONA RESIDENTS, 2017

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	1,122	690	432	16.1	19.9	12.3
Alcoholic liver disease	763	505	258	11.0	14.6	7.4
Other chronic liver disease and cirrhosis	359	185	174	5.2	5.3	5.0
Cholelithiasis and other disorders of gallbladder	72	38	34	1.0	1.1	1.0
Nephritis, nephrotic syndrome and nephrosis	535	296	239	7.7	8.6	6.8
Acute and rapidly progressive nephritic and nephrotic syndrome	10†	*	*	0.1	**	**
Chronic glomerulonephritis	10†	*	*	0.1	**	**
Renal failure	518	289	229	7.4	8.4	6.5
Others disorders of kidney	0†	0	*	**	0.0	**
Infections of kidney	23	9	14	0.3	0.3	0.4
Hyperplasia of prostate	14	14	0	0.2	0.4	0.0
Inflammatory diseases of female pelvic organs	0†	0	*	**	0.0	**
Pregnancy, childbirth and the puerperium	23	0	23	0.3	0.0	0.7
Pregnancy with abortive outcome	0	0	0	0.0	0.0	0.0
Other complications of pregnancy, childbirth and the puerperium	23	0	23	0.3	0.0	0.7
Perinatal conditions	216	128	87	3.1	3.7	2.5
Congenital malformations	201	111	90	2.9	3.2	2.6
Symptoms, signs, abnormal findings ^a	1,266	601	663	18.2	17.4	18.9
Total accidents	4,085	2,607	1,478	58.6	75.3	42.2
Transport accidents	1,068	763	305	15.3	22.0	8.7
Motor vehicle accidents	979	691	288	14.1	20.0	8.2
Other land transport accidents	30†	23	*	0.4	0.7	**
Water, air, space	61	49	12	0.9	1.4	0.3
Nontransport accidents	3,017	1,844	1,173	43.3	53.3	33.5
Falls	1,076	510	566	15.4	14.7	16.1
Accidental discharge of firearms	10†	7	*	0.1	0.2	**
Accidental drowning and submersion	106	74	32	1.5	2.1	0.9
Accidental exposure to smoke, fire and flames	51	35	16	0.7	1.0	0.5
Accidental poisoning	1,374	958	416	19.7	27.7	11.9
Other and unspecified non-transport accidents	402	260	142	5.8	7.5	4.1
Intentional self-harm (suicide)	1,304	1,000	304	18.7	28.9	8.7
By discharge of firearms	786	667	119	11.3	19.3	3.4
By other means	518	333	185	7.4	9.6	5.3
Assault (homicide)	430	335	95	6.2	9.7	2.7
By discharge of firearms	301	246	55	4.3	7.1	1.6
By other means	129	89	40	1.9	2.6	1.1
Legal intervention	10†	9	*	0.1	0.3	**
Events of undetermined intent	159	100	59	2.3	2.9	1.7
Discharge of firearms	20†	14	*	0.3	0.4	**
Other and unspecified events of undetermined intent	141	86	55	2.0	2.5	1.6
Operations of war	0	0	0	0.0	0.0	0.0
Complications of medical and surgical care	101	49	52	1.4	1.4	1.5
INJURY BY FIREARMS	1,123	943	180	16.1	27.2	5.1
DRUG-INDUCED DEATHS	1,593	1,044	549	22.9	30.2	15.7
OPIOID-INDUCED DEATHS	913	603	310	13.1	17.4	8.8
ALCOHOL-INDUCED DEATHS	1,210	840	370	17.4	24.3	10.6

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; ^a 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, 2007-2017**

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	
ALL FORMS OF HEART DISEASE	TOTAL	10,147	10,299	10,151	9,719	10,423	10,366	10,497	9,953	11,274	11,820	12,285
	Male	5,455	5,701	5,558	5,351	5,748	5,731	5,910	5,575	6,286	6,702	6,973
	Female	4,692	4,598	4,593	4,368	4,675	4,635	4,587	4,378	4,988	5,118	5,312
Acute rheumatic fever and chronic rheumatic heart disease	TOTAL	38	57	51	42	69	51	64	74	52	77	79
	Male	15	24	16	15	22	19	17	26	20	33	27
	Female	23	33	35	27	47	32	47	48	32	44	52
Hypertensive heart and renal disease	TOTAL	29	48	35	36	49	51	49	65	71	111	147
	Male	15	22	18	16	22	28	27	31	36	56	73
	Female	14	26	17	20	27	23	22	34	35	55	74
Ischemic heart disease	TOTAL	7,163	7,487	7,372	7,043	7,498	7,294	7,159	6,650	7,264	7,734	7,814
	Male	4,005	4,337	4,233	4,076	4,409	4,279	4,259	3,957	4,391	4,703	4,829
	Female	3,158	3,150	3,139	2,967	3,089	3,015	2,900	2,693	2,873	3,031	2,985
Hypertensive heart disease	TOTAL	646	675	698	644	739	761	943	991	1,118	1,114	1,122
	Male	332	348	340	302	348	375	462	491	517	554	526
	Female	314	327	358	342	391	386	481	500	601	560	596
Other heart diseases	TOTAL	2,271	2,032	1,995	1,954	2,069	2,209	2,282	2,173	2,769	2,784	3,123
	Male	1,088	970	951	942	947	1,030	1,145	1,070	1,322	1,356	1,518
	Female	1,183	1,062	1,044	1,012	1,121	1,179	1,137	1,103	1,447	1,428	1,605

**TABLE 2B-8
NUMBER OF DEATHS FOR SELECTED SUBCATEGORIES OF MALIGNANT NEOPLASMS BY GENDER AND YEAR,
ARIZONA, 2007-2017**

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	
ALL CANCERS^a	TOTAL^b	9,955	9,949	10,147	10,423	10,543	10,871	11,193	10,600	11,624	11,801	11,917
	Male	5,364	5,367	5,432	5,639	5,639	5,932	5,950	5,731	6,263	6,429	6,493
	Female	4,591	4,582	4,715	4,784	4,903	4,939	5,243	4,869	5,361	5,372	5,424
ICD-9 140-149/ICD-10 C00-C14 - Malignant neoplasm of lip, oral cavity and pharynx (oropharyngeal cancer)	TOTAL	133	151	125	134	132	144	150	137	160	205	180
	Male	91	101	89	98	105	106	101	98	109	157	128
	Female	42	50	36	36	27	38	49	39	51	48	52
ICD-9 150/ICD-10 C15 - Malignant neoplasm of esophagus	TOTAL	252	262	266	273	288	325	320	286	303	310	333
	Male	206	212	214	220	232	260	257	230	249	246	273
	Female	46	50	52	53	56	65	63	56	54	64	60
ICD-9 151/ICD-10 C16 - Malignant neoplasm of stomach	TOTAL	186	200	179	199	211	204	202	186	211	226	203
	Male	106	121	105	123	131	118	122	109	121	128	124
	Female	80	79	74	76	80	86	80	77	90	98	79
ICD-9 153, 154/ICD-10 C18-C21 - Malignant neoplasm of colon, rectum, sigmoid junction and anus	TOTAL	966	897	887	952	927	946	997	953	1,022	1,069	1,118
	Male	535	467	463	520	482	523	510	510	568	591	639
	Female	431	430	424	432	445	423	487	443	454	478	479
ICD-9 157/ICD-10 C25 - Malignant neoplasm of pancreas	TOTAL	629	636	622	707	708	813	755	769	852	901	914
	Male	362	340	304	373	355	450	392	400	461	494	484
	Female	267	296	318	334	353	363	363	369	391	407	430
ICD-9 162/ICD-10 C33-C34 - Malignant neoplasm of trachea, bronchus and lung	TOTAL	2,573	2,636	2,691	2,655	2,654	2,772	2,763	2,543	2,885	2,689	2,754
	Male	1,443	1,478	1,480	1,465	1,474	1,512	1,485	1,385	1,533	1,452	1,487
	Female	1,130	1,158	1,211	1,190	1,180	1,260	1,278	1,158	1,352	1,237	1,267
ICD-9 172/ICD-10 C43 - Malignant melanoma of skin	TOTAL	188	168	226	191	187	216	222	215	213	191	190
	Male	124	115	160	133	125	147	137	147	142	131	129
	Female	64	53	66	58	62	69	85	68	71	60	61
ICD-9 174,175/ICD-10 C50 - Malignant neoplasm of breast	TOTAL	724	734	716	732	747	740†	836	729	810†	853	834
	Male	6	9	8	12	6	*	9	6	*	9	8
	Female	718	725	708	720	741	740	827	723	809	844	826

**TABLE 2B-8 (continued)
NUMBER OF DEATHS FOR SELECTED SUBCATEGORIES OF MALIGNANT NEOPLASMS BY GENDER AND YEAR,
ARIZONA, 2007-2017**

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
ICD-9 180/ICD-10 C53 - Malignant neoplasm of cervix uteri	TOTAL	62	60	64	68	72	73	86	75	84	78
	Female	62	60	64	68	72	73	86	75	84	78
ICD-9 179, 182/ ICD-10 C54-C55 - Malignant neoplasm of body of uterus and of uterus, part unspecified	TOTAL	97	115	108	138	159	131	140	176	180	168
	Female	97	115	108	138	159	131	140	176	180	168
ICD-9 185/ICD-10 C61 - Malignant neoplasm of prostate	TOTAL	548	568	551	549	574	581	570	572	633	659
	Male	548	568	551	549	574	581	570	572	633	659
ICD-9 188/ICD-10 C67 - Malignant neoplasm of bladder	TOTAL^a	270	258	264	247	355	316	293	305	355	367
	Male	206	192	206	183	245	244	221	241	255	267
	Female	64	66	58	64	109	72	72	64	100	100
ICD-9 189/ICD-10 C64-C65 - Malignant neoplasm of kidney and other and unspecified urinary organs	TOTAL	231	247	240	286	267	252	274	254	309	308
	Male	147	154	161	189	178	171	179	177	224	205
	Female	84	93	79	97	89	81	95	77	85	103
ICD-9 191, 192/ICD-10 C70-C72 - Malignant neoplasm of brain	TOTAL	248	268	275	268	275	337	325	339	323	340
	Male	141	152	151	153	145	196	172	194	190	195
	Female	107	116	124	115	130	141	153	145	133	145
ICD-9 201/ICD-10 81 - Hodgkin's disease	TOTAL	30	17	16	22	19	17	26	10 [†]	30	22
	Male	19	10	9	12	9	8	16	10	21	10
	Female	11	7	7	10	10	9	10	*	9	12
ICD-9 200, 202/ICD-10 C82-C85 - Malignant lymphoma other than Hodgkin's disease	TOTAL	362	433	388	379	392	372	416	371	397	399
	Male	200	230	212	219	212	214	251	196	216	221
	Female	162	203	176	160	180	158	165	175	181	178
ICD-9 203/ICD-10 C88, C90 - Multiple myeloma and immunoproliferative neoplasms	TOTAL	213	203	189	206	219	221	247	221	240	243
	Male	118	123	107	117	133	128	129	133	139	149
	Female	95	80	82	89	86	93	118	88	101	94
Other malignant neoplasms	TOTAL	2,243	2,096	2,340	2,417	2,357	2,409	2,571	2,455	2,613	2,731
	Male	1,112	1,095	1,212	1,273	1,234	1,273	1,400	1,323	1,397	1,477
	Female	1,131	1,001	1,128	1,144	1,123	1,136	1,171	1,132	1,216	1,254

Notes: * Cell suppressed due to count less than 6; † Sum rounded to nearest tens unit due to addend less than 6; ^a All cancers total includes other forms of cancer; counts for other malignant neoplasms which are bolded reflect corrected counts; ^b Total includes records with unknown gender.

**TABLE 2B-9
NUMBER OF DEATHS FROM UNINTENTIONAL INJURIES IN ACCIDENTS BY CATEGORY AND YEAR AMONG
ARIZONA RESIDENTS, 2007-2017**

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Total unintentional injury deaths	3,014	2,951	2,887	2,834	2,959	2,804	3,137	3,011	3,403	3,899	4,085
Railway accident	12	9	8	12	6	7	7	8	6	11	9
Motor vehicle accident	1,035	891	771	711	787	747	767	702	855	967	979
Water transport accident	*	*	*	*	*	*	*	0	*	*	7
Accident involving aircraft	17	32	15	16	21	13	9	*	7	10	17
Poisoning by drugs/medicaments	669	689	802	798	781	731	853	885	955	1,095	1,269
Poisoning by gases and vapors	52	77	85	81	102	86	112	94	105	153	105
Falls	720	748	731	762	776	782	870	881	1,014	1,103	1,076
Fire, flames, smoke	31	50	31	25	33	43	68	30	25	40	51
Excessive natural heat	28	33	39	51	57	51	56	32	43	99	108
Excessive natural cold	20	25	24	17	22	9	28	19	20	21	24
Contact with venomous snakes and lizards	0	*	0	*	0	*	0	0	0	0	*
Contact with venomous spiders	*	0	0	0	0	0	*	0	0	0	*
Contact with scorpions	0	0	0	0	0	0	*	0	0	0	0
Contact with hornets, wasps, bees	0	0	0	0	0	0	*	0	*	*	*
Bitten or struck by dog	*	*	*	*	*	*	*	*	*	*	*
Lightning	*	0	*	*	*	*	*	0	*	*	*
Storms and floods	*	0	0	*	0	0	0	0	0	0	12
Accidental drowning and submersion	88	78	99	86	86	83	72	78	81	105	106
Choked on food	22	35	43	39	34	38	29	33	34	33	38
Choked on other objects	61	53	49	57	44	44	57	56	53	38	39
Mechanical suffocation	43	29	25	28	25	23	21	35	40	35	41
Accidental discharge of firearms	13	10	7	11	8	*	9	6	*	7	8
Exposure to electric current	11	6	7	*	6	0	6	*	*	10	*
Overexertion	0	0	0	*	0	0	0	0	0	0	*
Adverse effects of drugs in therapeutic use	*	7	8	10	*	6	10	10	12	*	*
Misadventures to patients during medical/surgical care	44	40	42	41	45	42	46	32	20	43	96

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); the bolded numbers represent corrections.

**TABLE 2B-10
NUMBER OF DEATHS FROM MOTOR VEHICLE-RELATED INJURIES BY PERSON INJURED, GENDER, AND YEAR,
ARIZONA RESIDENTS, 2007-2017**

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
TOTAL											
Total	1,035	891	771	711	787	747	767	702	855	967	979
Male	710	632	554	501	562	541	541	492	605	693	691
Female	325	259	217	210	225	206	226	210	250	274	288
Motorcyclist											
Total	103	113	100†	69	113	130	111	100	121	126	137
Male	92	106	94	61	96	113	98	93	106	118	122
Female	11	7	*	8	17	17	13	7	15	8	15
Pedestrian											
Total	155	136	122	152	153	128	152	138	160	218	245
Male	103	101	90	115	111	88	105	100	115	150	161
Female	52	35	32	37	42	40	47	38	45	68	84
Pedal cyclist											
Total	20†	10†	20†	20†	20†	11	20†	20†	20†	20†	30†
Male	17	11	19	20	16	11	19	15	15	18	24
Female	*	*	*	*	*	0	*	*	*	*	*
Other person											
Total	759	630	528	469	502	478	481	445	558	601	568
Male	498	414	351	305	339	329	319	284	369	407	384
Female	261	216	177	164	163	149	162	161	189	194	184

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, 2017**

Causes of death	IN HOSPITAL						NOT IN HOSPITAL					
	TOTAL	In-patient	Out-patient ^c	Died on arrival	Status Unknown	Subtotal	Nursing home ^b	Residence	Other ^e	Unspecified	Subtotal	
TOTAL, ALL CAUSES	57,261	12,643	3,002	42	19,530	35,217	7,090	4,648	10,304	2	22,044	
Diseases of heart	12,285	2,619	964	9	4,611	8,203	991	1,006	2,085	0	4,082	
Coronary heart disease	8,940†	1,705	797	*	3,602	6,110†	590	723	1,514	0	2,827	
Malignant neoplasms	11,920†	1,810	171	*	5,497	7,480†	2,473	634	1,330	0	4,437	
Malignant neoplasm of trachea, bronchus and lung	2,754	473	41	0	1,254	1,768	538	147	301	0	986	
Malignant neoplasm of colon, rectum, and anus	1,120†	126	15	*	537	680†	255	52	132	0	439	
Malignant neoplasm of breast	834	99	12	0	394	505	189	51	89	0	329	
Malignant neoplasm of prostate	660†	65	9	*	329	400†	111	55	89	0	255	
Malignant neoplasm of cervix uteri	80†	9	*	0	40	50†	19	*	*	0	30†	
Accidents (unintentional injury)	4,085	976	585	7	922	2,490	354	133	1,108	0	1,595	
Accidental poisoning	1,370†	175	213	0	631	1,019	12	*	342	0	360†	
Falls	1,076	386	47	0	131	564	278	99	135	0	512	
Motor vehicle accidents	979	247	241	7	12	507	28	7	437	0	472	
Accidental drowning and submersion	110†	8	31	0	18	57	*	0	48	0	50†	
Chronic lower respiratory diseases	3,780†	735	132	*	1,444	2,310†	525	376	566	0	1,467	
Alzheimer's disease	3,050	63	8	0	810	881	263	589	1,317	0	2,169	
Cerebrovascular diseases	2,650†	636	57	*	597	1,290†	601	265	489	0	1,355	
Diabetes	2,037	465	205	6	798	1,474	179	174	210	0	563	
Intentional self-harm (suicide)	1,300†	100	103	*	668	870†	10	*	420	0	430†	
Chronic liver disease and cirrhosis	1,122	433	32	0	318	783	204	58	77	0	339	
Essential (primary) hypertension & hypertensive renal disease	1,020†	185	39	*	395	620†	95	119	181	0	395	
Influenza and pneumonia	852	540	35	0	93	668	93	48	43	0	184	
Parkinson's disease	749	37	9	0	230	276	71	127	275	0	473	
Nephritis, nephrotic syndrome and nephrosis	535	186	12	0	148	346	70	52	67	0	189	
Septicemia	461	341	13	0	29	383	38	26	14	0	78	
Assault (homicide)	430†	56	110	*	74	240†	*	*	182	0	190†	
Human immunodeficiency virus (HIV) disease	90†	37	*	0	14	50†	21	6	8	0	35	
Injury by firearms	1,120†	87	139	*	476	700†	6	*	412	0	420†	
Drug-induced deaths	1,590†	242	229	0	740	1,211	29	*	349	0	380†	
Opioid-induced deaths	910†	103	128	0	474	705	11	*	196	0	210†	
Alcohol-induced deaths	1,210	351	58	0	447	856	175	46	133	0	354	

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



2C.

AGE-SPECIFIC MORTALITY

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

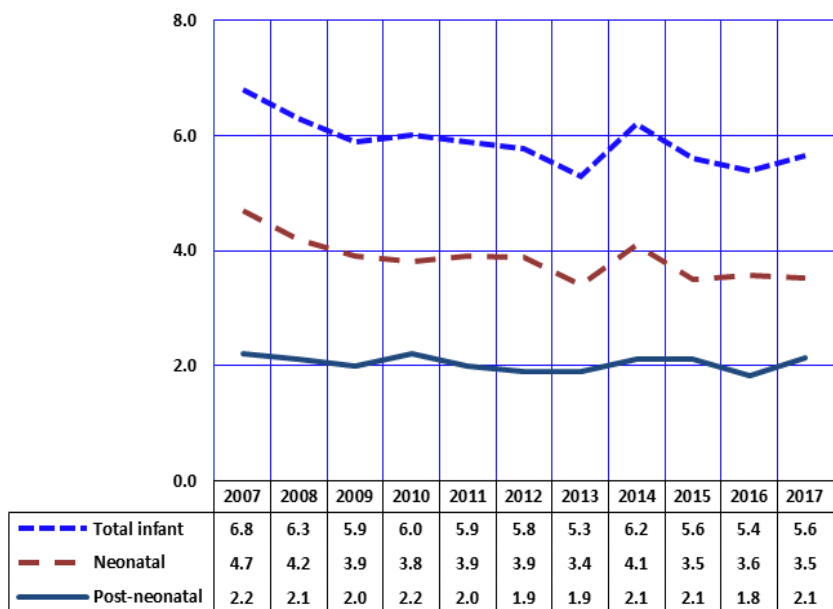
- **Infants** less than one year of age
- **Children** 1 to 14 years old
- **Adolescents** or persons 15 to 19 years old
- **Young adults** or persons 20 to 44 years old
- **Middle-aged adults** or persons 45 to 64 years old
- **Elderly** or persons 65 years or older.

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, 2007-2017



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

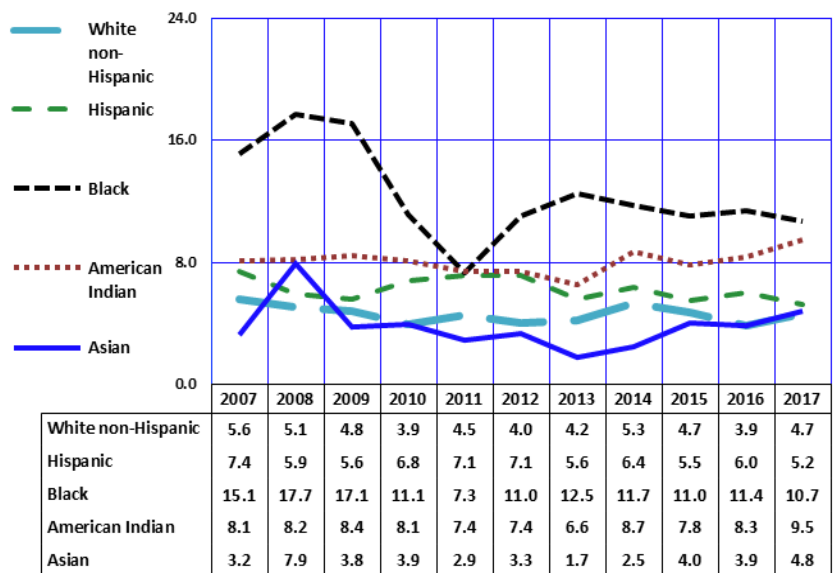
Infant mortality is defined as the number of deaths within the first year of life. The infant mortality rate is computed as the number of infant deaths in a calendar year per 1,000 live births recorded for the same period.

In 2017, 461 Arizona infants died before reaching their first birthday, 240 fewer than the latest peak of 701 infant deaths in 2007, and an increase of 7 deaths in comparison to 2016 (**Table 2C-2**).

Even if the infant mortality rate remained the same as it was in 2007, 143 fewer infant deaths can be attributed to the absolute reduction in the number of births by 21,023 from 2007 to 2017 ($(21,023 \times 6.8)/1,000 = 143$).

Based on the actual number of infant deaths and live births in 2017, the infant mortality increased by 3.7 percent from 5.4/1,000 in 2016 to 5.6/1,000 in 2017 (**Figure 2C-1**).

Figure 2C-2
Infant Mortality Rates^a by Race/Ethnicity and Year, Arizona, 2007-2017



Note: ^a Number of infant deaths per 1,000 live births in specified group.

In 2017, 91.1 percent (420/461)* of all infant death records were successfully matched to their corresponding birth records.

The mortality risk for infants varies by race/ethnicity. Infants born to White non-Hispanic mothers followed by infants born to Asian or Pacific Islander mothers had the lowest mortality rates among the racial/ethnic groups in 2017 (**Figure 2C-2, Table 2C-2**).

In 2017, Black or African American infants had the worst survival chances among the ethnic groups (**Figure 2C-2**). American Indian and Hispanic or Latino infants also had elevated mortality rates.

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

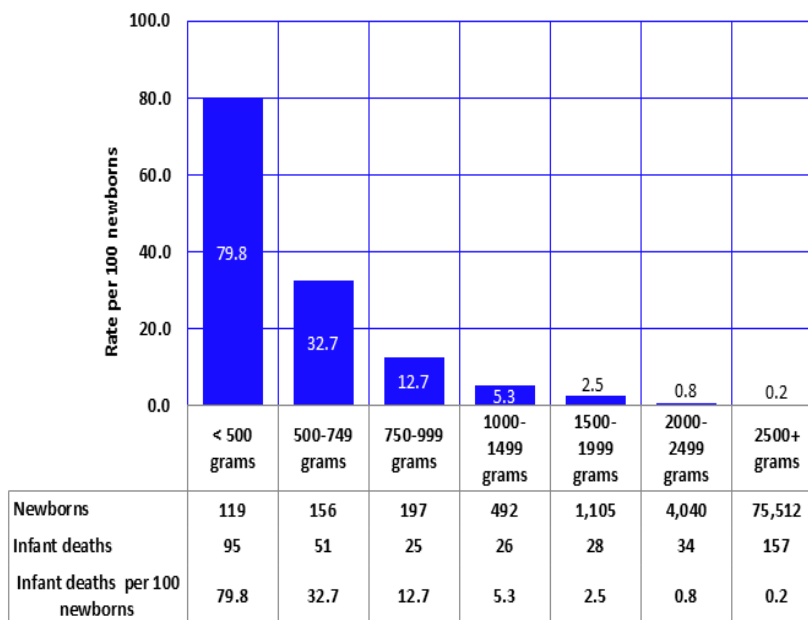
2C.AGE-SPECIFIC MORTALITY
Infant mortality

Figure 2C-3
Proportion of Infant Deaths by Birthweight, Arizona, 2017

Newborn weight at birth is one of the most important predictors of an infant's survival chances. In 2017, the mortality rate among babies weighing less than 500 grams at birth was 79.8 per 100 live births (**Figure 2C-3**).

The absolute number of low birthweight births remained lower in 2017 at 6,109 than at its peak in 2007 (7,285). The proportion of babies whose weight at birth was less than 1,000 grams decreased from 8.0 percent of all low birthweight births in 2016 to 7.7 percent in 2017 (**Table 1B-3**).

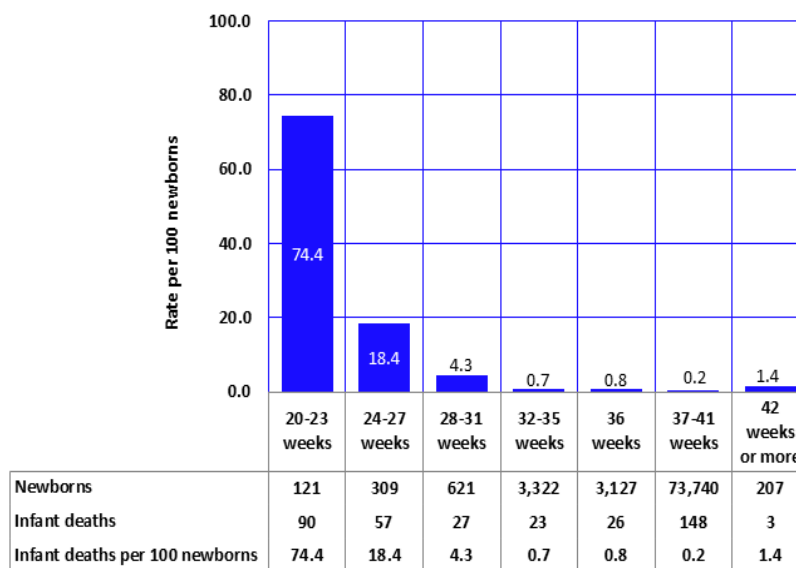
Together, infants weighing less than 1,500 grams accounted for 1.2 percent of births and 46.9 percent of all infant deaths with a matching birth record.



Note: 43 cases in the complete 2017 birth file had missing birthweight estimates.

Figure 2C-4
Proportion of Infant Deaths by Gestational Age, Arizona, 2017

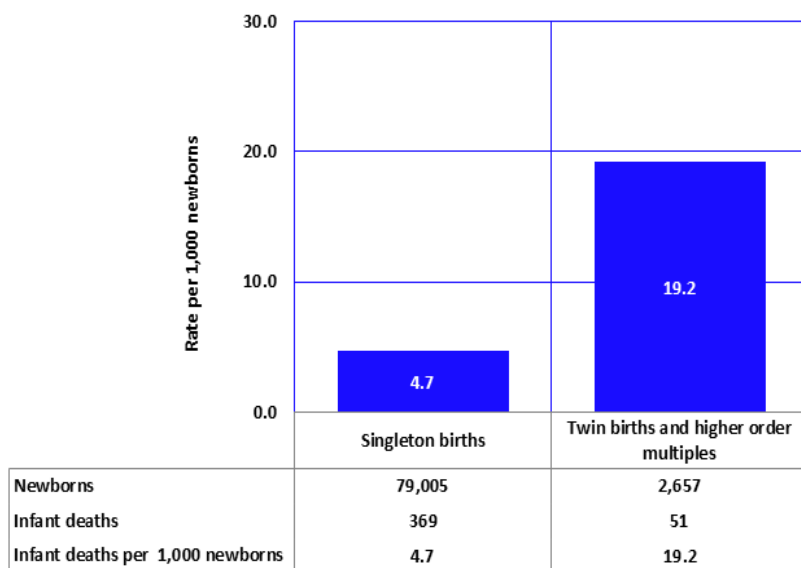
As with low birthweight infants, preterm and very preterm babies contribute greatly to the total infant mortality rate because of their higher risk of mortality. For example, births occurring between 20-27 weeks of gestation accounted for only 0.5 percent of all births but 35.0 percent of infant deaths with a matching death record. Births at less than 24 weeks of gestation have a very high infant mortality rate of 74.4 per 100 live births (**Figure 2C-4**). Overall, preterm infants (those born at less than 37 weeks of gestation) accounted for 9.3 percent of all births (**Table 1B-2**) and 53.1 percent of all infant deaths (only those with matching death records).



Note: 158 cases in the complete 2017 birth file had missing gestational age. 22 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, 2017



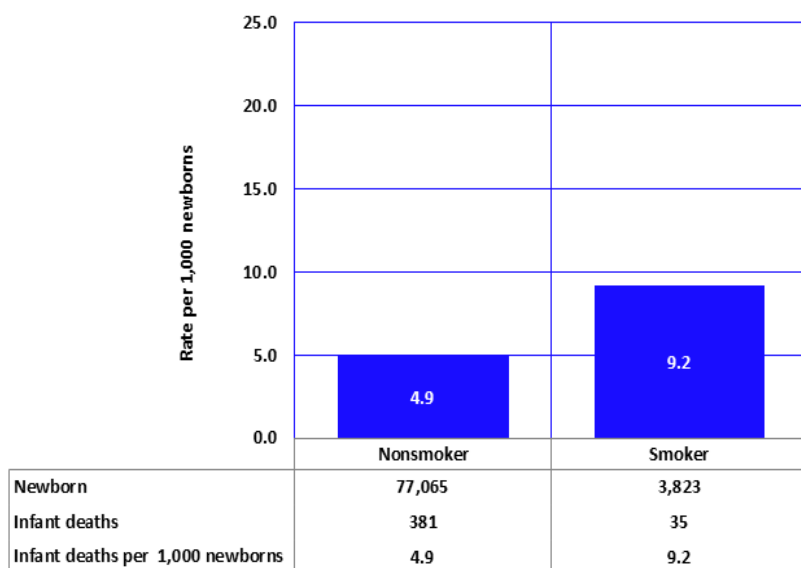
As already noted in Section 1B, infants born in multiple deliveries tend to be born at shorter gestations and smaller than those in singleton deliveries. In 2017, infants born in multiple deliveries were 12.0 times more likely (44.5 vs. 3.8 percent) to be born earlier than expected (at less than 37 completed 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 4.7/1,000 live births in 2017 (**Figure 2C-4.2**). The infant mortality rate for twin births or higher order multiples was 19.2/1,000 live births.

Babies born in multiple deliveries accounted for 3.3 percent of births (**Table 1B-16**), but 12.1 percent of all infant deaths in Arizona in 2017 (only those with matching birth and death records).

Note: 2 cases in the complete 2017 birth file were missing plurality.

Figure 2C-4.3
Infant Mortality Rates by Mother's Smoking Status during Pregnancy, Arizona, 2017



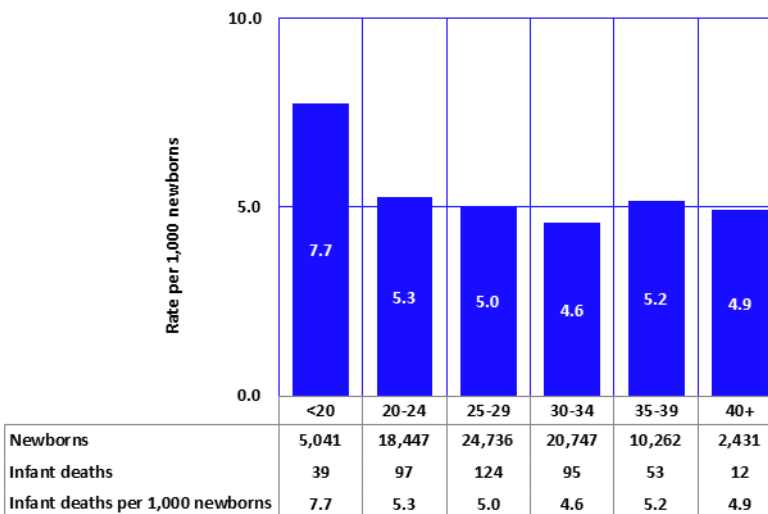
Smoking during pregnancy has been shown to increase the risk of preterm delivery, low birth weight and infant mortality. In 2017, among the 3,823 mothers who smoked during pregnancy, the risk of infant mortality was 1.9 times higher than among nonsmoker mothers (**Figure 2C-4.3**).

Note: 776 cases in the complete 2017 birth file were missing mothers' smoking status.

2C.AGE-SPECIFIC MORTALITY
Infant mortality

Figure 2C-4.4
Infant Mortality Rates by Mother's Age Group, Arizona, 2017

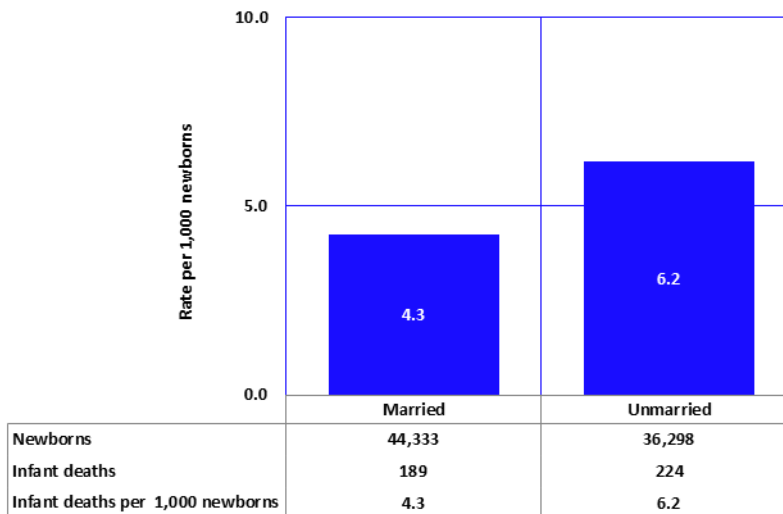
Infant mortality rates vary with maternal age. In 2017, infant mortality decreased with increasing maternal age through 30-34, but increased somewhat for infants born to women 35 years or older. Infants born to younger mothers (less than 20 years) had the highest infant mortality rate (**Figure 2C-4.4**).



Note: 3 cases in the complete 2017 birth file were missing mother's age.

Infants born to unmarried mothers accounted for the absolute majority of infant deaths in 2017 (224 infant deaths) compared to married mothers (189 infant deaths). The number of births to married mothers exceeded by 9.8 percent the number of births to unmarried mothers (44,333 vs. 36,298; **Table 1B-25**). In 2017, infants of unmarried mothers had an infant mortality rate of 6.2 deaths per 1,000 live births, 1.4 times higher than the rate for infants of married mothers (4.3 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, 2017



Note: 1,033 cases in the complete 2017 birth file were missing mother's marital status.

**TABLE 2C-1 (CORRECTION)
 INFANT, NEONATAL, AND POSTNEONATAL MORTALITY RATES AND PERCENT OF POSTNEONATAL DEATHS,
 UNITED STATES, ARIZONA AND URBAN/RURAL COUNTIES OF ARIZONA, 2007-2017**

UNITED STATES	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Infant mortality ^a	6.7	6.7	6.4	6.1	6.0	6.0	6.0	5.8	5.9	5.8	5.8
Neonatal mortality ^a	4.4	4.3	4.2	4.0	4.0	4.0	4.0	3.9	3.9	3.8	3.8
Postneonatal mortality ^a	2.3	2.3	2.2	2.1	2.0	2.0	2.0	1.8	1.9	2.0	1.9
Percent postneonatal mortality ^b	34.3	34.3	33.3	34.4	33.3	33.3	33.3	31.0	32.2	34.5	32.8
ARIZONA, STATEWIDE TOTAL											
Infant mortality ^a	6.8	6.3	5.9	6.0	5.9	5.8	5.3	6.2	5.6	5.4	5.6
Neonatal mortality ^a	4.7	4.2	3.9	3.8	3.9	3.9	3.4	4.1	3.5	3.6	3.5
Postneonatal mortality ^a	2.2	2.1	2.0	2.2	2.0	1.9	1.9	2.1	2.1	1.8	2.1
Percent postneonatal mortality ^b	32.4	33.3	34.0	36.7	34.3	32.9	35.3	33.4	37.8	33.7	37.7
URBAN COUNTIES											
Infant mortality ^a	6.6	6.3	5.9	5.7	5.8	5.7	5.2	6.1	5.3	5.2	5.4
Neonatal mortality ^a	4.6	4.3	4.0	3.7	3.9	3.9	3.3	4.0	3.3	3.5	3.4
Postneonatal mortality ^a	2.0	2.0	2.0	2.0	1.9	1.9	1.8	2.1	2.0	1.7	2.0
Percent postneonatal mortality ^b	30.3	31.8	33.0	35.1	32.6	32.9	35.1	34.1	37.4	32.5	36.6
RURAL COUNTIES											
Infant mortality ^a	8.0	6.2	5.5	7.4	6.6	5.9	5.8	6.6	7.3	5.6	6.9
Neonatal mortality ^a	4.8	3.5	3.9	4.5	3.7	3.9	3.7	4.5	4.4	3.1	3.7
Postneonatal mortality ^a	3.3	2.7	2.0	2.9	2.9	2.0	2.2	2.1	3.0	2.4	3.2
Percent postneonatal mortality ^b	41.3	43.6	38.7	37.7	43.8	33.8	37.3	31.6	40.5	43.8	46.7

Notes: ^a Rates per 1,000 live births; the U.S. rates are from the National Center for Health Statistics; ^b Total infant mortality = 100 percent; Urban = Maricopa, Pima, Pinal, and Yuma Counties; the remaining counties comprise Arizona's rural areas; records with unknown county of residence are included in the statewide totals, but are not distributed by urban/rural area.

**TABLE 2C-2
NUMBER AND RATE^a OF INFANT DEATHS BY RACE/ETHNICITY AND GENDER, ARIZONA, 2007-2017
NUMBER OF INFANT DEATHS**

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
White non-Hispanic											
Total	237	215	192	151	171	154	161	213	181	146	166
Male	135	114	109	88	98	81	93	122	99	87	93
Female	102	101	83	63	73	73	68	91	82	59	73
Hispanic or Latino											
Total	338	251	215	235	229	236	185	216	189	203	173
Male	186	142	115	144	122	138	97	108	94	111	98
Female	152	109	100	91	107	98	88	108	95	92	74
Black or African American											
Total	63	76	75	48	32	52	59	53	48	50	49
Male	42	42	41	20	16	22	30	35	24	23	30
Female	21	34	34	28	16	30	29	18	24	27	19
American Indian or Alaska Native											
Total	52	52	52	47	43	41	36	45	39	42	46
Male	29	27	28	28	15	22	19	24	21	22	23
Female	23	25	24	19	28	19	17	21	18	20	23
Asian or Pacific Islander											
Total	10†	27	13	10†	10†	10†	10†	10†	10†	13	16
Male	7	15	6	9	8	8	*	6	*	7	10
Female	*	12	7	*	*	*	*	*	9	6	6
All groups^b											
Total	701	625	547	519	504	495	447	535	473	454	461
Male	399	343	299	302	267	271	242	295	243	250	262
Female	302	282	248	217	237	224	205	240	230	204	198

INFANT MORTALITY RATES

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
White non-Hispanic											
Total	5.6	5.1	4.8	3.9	4.5	4.0	4.2	5.3	4.7	3.9	4.7
Male	6.3	5.3	5.4	4.4	5.0	4.1	4.7	5.9	5.0	4.5	5.1
Female	4.9	4.9	4.3	3.3	3.9	3.9	3.7	4.7	4.4	3.2	4.2
Hispanic or Latino											
Total	7.4	5.9	5.6	6.8	7.1	7.1	5.6	6.4	5.5	6.0	5.2
Male	7.9	6.5	5.8	8.3	7.3	8.1	5.7	6.2	5.4	6.4	5.8
Female	6.8	5.2	5.3	5.4	6.8	6.1	5.5	6.6	5.6	5.5	4.5
Black or African American											
Total	15.1	17.7	17.1	11.1	7.3	11.0	12.5	11.7	11.0	11.4	10.7
Male	19.5	18.7	18.0	9.1	7.3	9.2	12.3	14.9	10.7	10.3	12.6
Female	10.5	16.6	16.2	13.1	7.4	12.8	12.7	8.3	11.3	12.5	8.6
American Indian or Alaska Native											
Total	8.1	8.2	8.4	8.1	7.4	7.4	6.6	8.7	7.8	8.3	9.5
Male	9.0	8.5	9.0	9.5	5.1	7.8	6.7	9.4	8.3	8.7	9.2
Female	7.2	7.9	7.8	6.6	9.7	6.9	6.4	8.1	7.3	8.0	9.8
Asian or Pacific Islander											
Total	3.2	7.9	3.8	3.9	2.9	3.3	1.7	2.5	4.0	3.9	4.8
Male	3.9	8.5	3.4	5.4	4.4	4.2	**	**	**	4.0	5.9
Female	**	7.2	4.3	**	**	**	**	**	5.7	3.7	3.7
All groups^b											
Total	6.8	6.3	5.9	6.0	5.9	5.8	5.3	6.2	5.6	5.4	5.6
Male	7.6	6.8	6.3	6.8	6.1	6.2	5.5	6.6	5.6	5.8	6.3
Female	6.0	5.8	5.5	5.1	5.7	5.4	5.0	5.7	5.5	4.9	4.9

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; ^a 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; ^b Includes records with other and unknown ethnic group.

**TABLE 2C-3
NUMBER AND RATE^a OF INFANT DEATHS BY RACE/ETHNICITY AND AGE GROUP, 2007-2017
NUMBER OF INFANT DEATHS**

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
White non-Hispanic											
Total	237	215	192	151	171	154	161	213	181	146	166
Neonatal	161	138	129	96	120	100	97	138	108	92	106
Postneonatal	76	77	63	55	51	54	64	75	73	54	60
Hispanic or Latino											
Total	338	251	215	235	229	236	185	216	189	203	173
Neonatal	239	175	150	156	152	170	131	149	130	142	115
Postneonatal	99	76	65	79	77	66	54	67	59	61	58
Black or African American											
Total	63	76	75	48	32	52	59	53	48	50	49
Neonatal	43	51	46	32	20	34	38	34	25	33	30
Postneonatal	20	25	29	16	12	18	21	19	23	17	19
American Indian or Alaska Native											
Total	52	52	52	47	43	41	36	45	39	42	46
Neonatal	27	29	26	22	19	21	20	26	16	21	20
Postneonatal	25	23	26	25	24	20	16	19	23	21	26
Asian or Pacific Islander											
Total	10†	30†	10†	10†	10	10†	10†	10†	10†	13	16
Neonatal	9	22	10	11	10	7	*	7	12	13	7
Postneonatal	*	*	*	*	0	*	*	*	*	0	9
All groups^b											
Total	701	625	547	519	504	495	447	535	473	454	461
Neonatal	479	419	361	330	331	332	289	354	294	301	287
Postneonatal	222	206	186	189	173	163	158	181	179	153	174

INFANT MORTALITY RATES

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
White non-Hispanic											
Total	5.6	5.1	4.8	3.9	4.5	4.0	4.2	5.3	4.7	3.9	4.7
Neonatal	3.8	3.3	3.2	2.5	3.1	2.6	2.5	3.4	2.8	2.4	3.0
Postneonatal	1.8	1.8	1.6	1.4	1.3	1.4	1.7	1.9	1.9	1.4	1.7
Hispanic or Latino											
Total	7.4	5.9	5.6	6.8	7.1	7.1	5.6	6.4	5.5	6.0	5.2
Neonatal	5.2	4.1	3.9	4.5	4.7	5.1	4.0	4.4	3.8	4.2	3.5
Postneonatal	2.2	1.8	1.7	2.3	2.4	2.0	1.6	2.0	1.7	1.8	1.7
Black or African American											
Total	15.1	17.7	17.1	11.1	7.3	11.0	12.5	11.7	11.0	11.4	10.7
Neonatal	10.3	11.9	10.5	7.4	4.6	7.2	8.0	7.5	5.7	7.5	6.5
Postneonatal	4.8	5.8	6.6	3.7	2.7	3.8	4.4	4.2	5.3	3.9	4.1
American Indian or Alaska Native											
Total	8.1	8.2	8.4	8.1	7.4	7.4	6.6	8.7	7.8	8.3	9.5
Neonatal	4.2	4.6	4.2	3.8	3.3	3.8	3.7	5.1	3.2	4.2	4.1
Postneonatal	3.9	3.6	4.2	4.3	4.1	3.6	2.9	3.7	4.6	4.2	5.3
Asian or Pacific Islander											
Total	3.2	7.9	3.8	3.9	2.9	3.3	1.7	2.5	4.0	3.9	4.8
Neonatal	2.6	6.4	2.9	3.3	2.9	1.9	**	2.2	3.7	3.9	2.1
Postneonatal	**	**	**	**	0.0	**	**	**	**	0.0	2.7
All groups^b											
Total	6.8	6.3	5.9	6.0	5.9	5.8	5.3	6.2	5.6	5.4	5.6
Neonatal	4.7	4.2	3.9	3.8	3.9	3.9	3.4	4.1	3.5	3.6	3.5
Postneonatal	2.2	2.1	2.0	2.2	2.0	1.9	1.9	2.1	2.1	1.8	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 added less than 6; ^a 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; ^b 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, 2017**

	NUMBER OF DEATHS BY AGE			MORTALITY RATES ^a		
	Total	Neonatal	Postneonatal	Total	Neonatal	Postneonatal
TOTAL, ALL GROUPS	461	287	174	5.6	3.5	2.1
Male	262	170	92	6.3	4.1	2.2
Female	198	116	82	4.9	2.9	2.0
White non-Hispanic	166	106	60	4.7	3.0	1.7
Male	93	66	27	5.1	3.6	1.5
Female	73	40	33	4.2	2.3	1.9
Hispanic or Latino	173	115	58	5.2	3.5	1.7
Male	98	64	34	5.8	3.8	2.0
Female	74	50	24	4.5	3.0	1.5
Black or African American	49	30	19	10.7	6.5	4.1
Male	30	16	14	12.6	6.7	5.9
Female	20 [†]	14	*	8.6	6.3	**
American Indian or Alaska Native	46	20	26	9.5	4.1	5.3
Male	23	11	12	9.2	4.4	4.8
Female	23	9	14	9.8	3.8	5.9
Asian or Pacific Islander	16	7	9	4.8	2.1	2.7
Male	10 [†]	6	*	5.9	3.5	**
Female	10 [†]	*	*	3.7	**	**

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; ^a 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^a BY YEAR, ARIZONA, 2007-2017**

Causes of death	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Congenital malformations, deformations and chromosomal abnormalities	159	145	122	114	107	118	101	121	117	105	92
of brain, spinal cord or nervous system	20	24	15	21	13	19	13	24	20	14	18
of respiratory system	9	*	*	9	*	6	*	*	8	7	*
Short gestation and low birth weight	95	91	101	64	60	62	56	63	53	55	64
Maternal complications	30	53	31	27	33	46	28	39	39	28	31
Accidents (unintentional injuries)	30	19	18	18	23	16	14	27	29	16	23
Sudden infant death syndrome	43	21	42	34	25	13	14	13	15	7	14
Intrauterine hypoxia or birth asphyxia	11	11	*	*	11	*	6	9	*	6	11
Assault (homicide)	12	*	*	6	6	*	*	6	*	*	10
Respiratory distress syndrome	8	11	8	7	*	*	*	*	*	*	6
Influenza and pneumonia	*	*	10	*	*	*	*	*	*	*	*
Total, all causes	701	625	547	519	504	495	447	535	473	454	461

Notes: * Cell suppressed due to count less than 6; ^a 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).

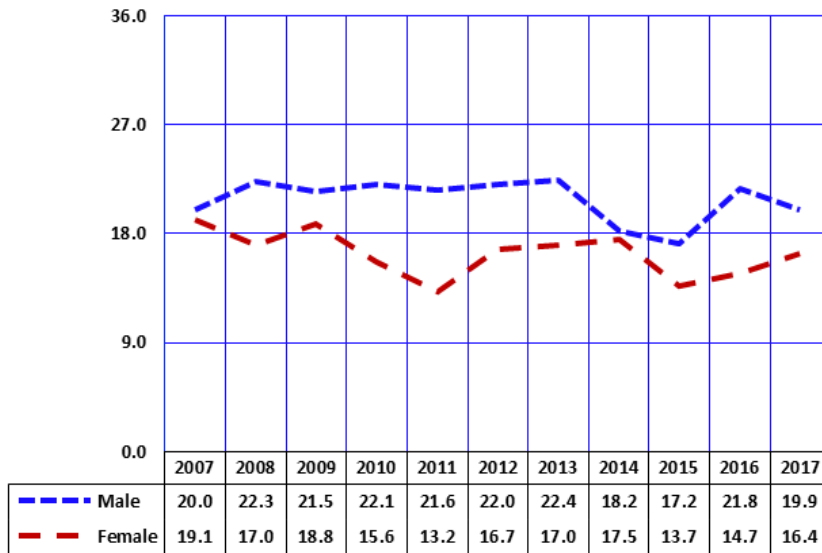
**TABLE 2C-6
INFANT MORTALITY RATES^a FOR SELECTED LEADING CAUSES OF DEATH BY YEAR, ARIZONA, 2007-2017**

Causes of death	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Congenital malformations, deformations and chromosomal abnormalities	1.5	1.5	1.3	1.3	1.3	1.4	1.2	1.4	1.4	1.2	1.1
of brain, spinal cord or nervous system	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2
of respiratory system	0.1	**	**	0.1	**	0.1	**	**	0.1	0.1	**
Short gestation and low birth weight	0.9	0.9	1.1	0.7	0.7	0.7	0.7	0.7	0.6	0.7	0.8
Maternal complications	0.3	0.5	0.3	0.3	0.4	0.5	0.3	0.5	0.5	0.3	0.4
Accidents (unintentional injuries)	0.3	0.2	0.2	0.2	0.3	0.2	0.2	0.3	0.3	0.2	0.3
Sudden infant death syndrome	0.4	0.2	0.4	0.4	0.3	0.2	0.2	0.2	0.2	0.1	0.2
Intrauterine hypoxia or birth asphyxia	0.1	0.1	**	**	0.1	**	0.1	0.1	**	0.1	0.1
Assault (homicide)	0.1	**	**	0.1	0.1	**	**	0.1	**	**	0.1
Respiratory distress syndrome	0.1	0.1	0.1	0.1	**	**	**	**	**	**	0.1
Influenza and pneumonia	**	**	0.1	**	**	**	**	**	**	**	**
Total, all causes	6.8	6.3	5.9	6.0	5.9	5.8	5.3	6.2	5.6	5.4	5.6

Notes: ** Cell suppressed due to rate/ratio/percent based on non-zero count less than 6; ^a 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^a by Gender and Year among Children 1-14 Years,
Arizona, 2007-2017

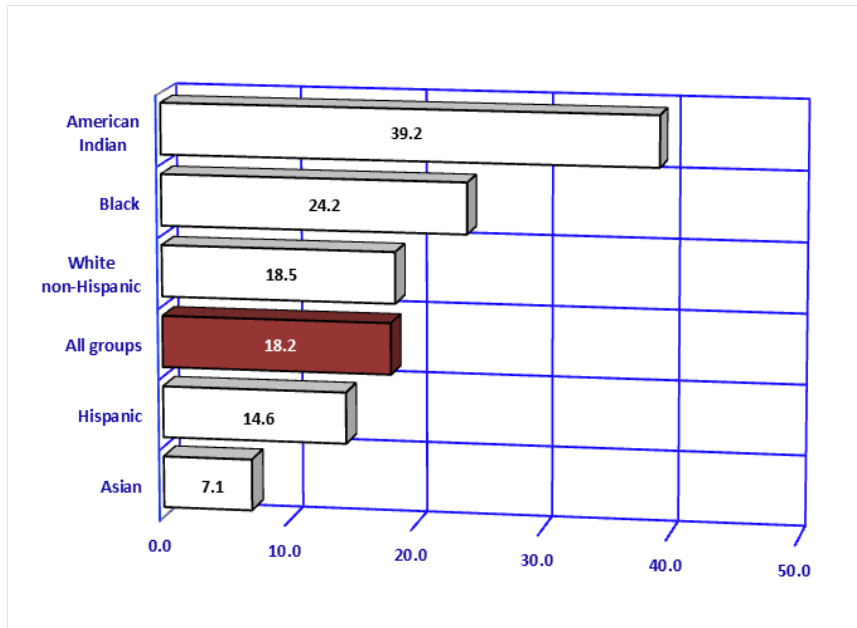


In 2017, a total of 231 deaths were recorded among 1,270,968 children aged 1-14 years residing in Arizona. The 2017 childhood mortality rate of 18.2 per 100,000 did not budge much from the rate of 18.3 recorded in 2016 (**Table 2C-7**). Between 2016 and 2017 the mortality rate for female children witnessed an increase while the rate for male children decreased (**Figure 2C-5, Table 2C-7**).

The five causes with the greatest mortality rates in childhood from 2007-2017 were *accidents* (unintentional injuries), *malignant neoplasms*, *congenital malformations*, *homicide*, and *suicide* (**Table 2C-7**).

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

Figure 2C-6
Mortality Rates^a by Race/Ethnicity among Children 1-14 Years,
Arizona, 2017



American Indian children had the highest 2017 total mortality rate (39.2 deaths per 100,000) followed by Black or African American children (24.2/100,000; **Figure 2C-6**). The mortality rates of Asian and Hispanic or Latino children were lower than the average rate for all groups.

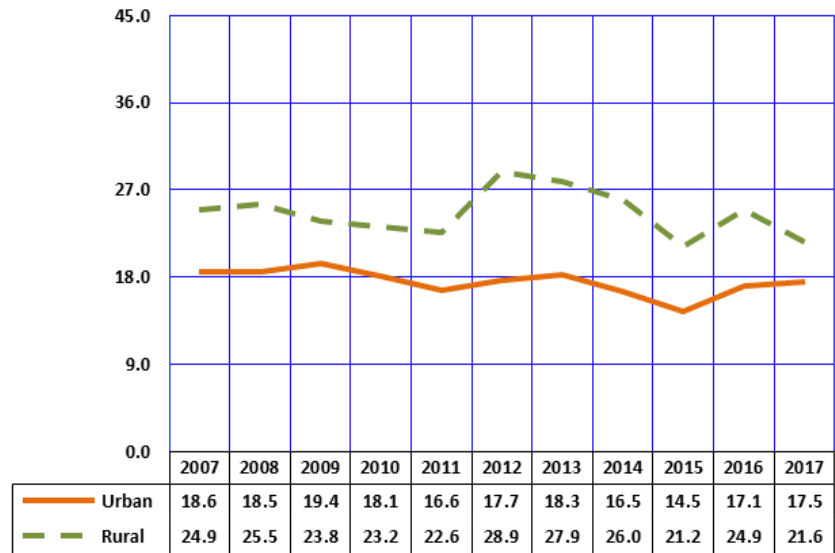
It is important to note that the mortality rate for Asians is based on a very low death count (**Table 2C-10**) thus not statistically reliable. In 2017, there 23 children aged 1-14 years who died of accidental drowning and submersion, and fewer than 20 children completed *suicides* among this age group (**Table 2C-10**).

Note: ^a 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^a by Urban/Rural Area^b and Year among Children 1-14 Years, Arizona, 2007-2017

From 2016 to 2017, overall mortality rates decreased for rural children while it increased slightly among their urban counterparts (Figure 2C-7, Table 2C-8). From 2007 to 2017, both urban and rural children have witnessed a decrease in mortality rate. The decline was however more markedly among rural children (13.5 percent) than urban children (5.7 percent).

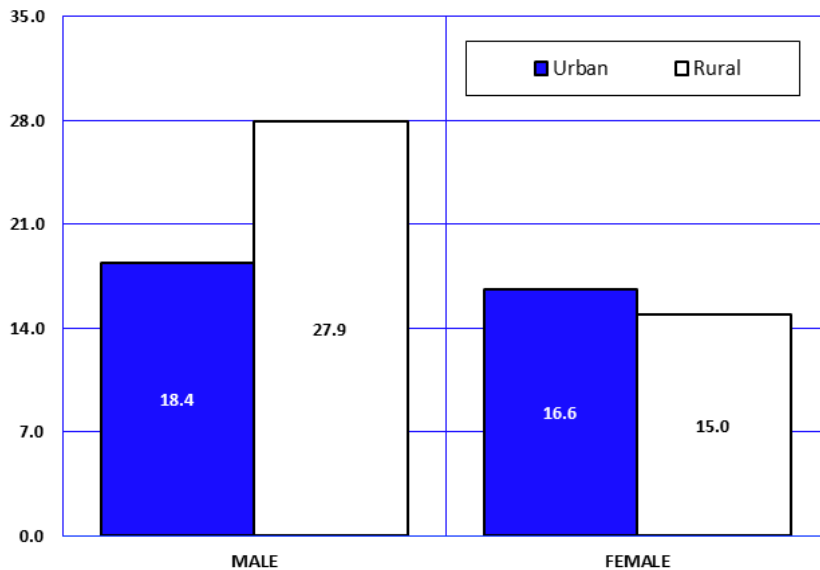


Notes: ^a Number of deaths per 100,000 persons, 1-14 years old in specified group; ^b Urban counties are Maricopa, Pima, Pinal, and Yuma Counties. Rural counties are those remaining.

Figure 2C-8
Mortality Rates^a by Gender in Urban/Rural^b Areas among Children 1-14 Years, Arizona, 2017

From 2016 to 2017, the mortality rate for accidents increased for urban children but decreased substantially for rural children (Table 2C-8). In 2017, the mortality rate for unintentional injuries among rural children (6.8/100,000) was 18.2 percent higher than the rate among urban children (5.8/100,000; Table 2C-8). In the same year, 23 children died of accidental drowning; all of them resided in urban areas (Table 2C-10).

Rural females aged 1-14 years old had the lowest mortality risk among gender by area groups in 2017, followed by urban females, urban males, and rural males.



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

**TABLE 2C-7
MORTALITY RATES^a FOR THE SELECTED FIVE LEADING CAUSES^b OF DEATH AMONG CHILDREN (1-14 YEARS) BY GENDER,
ARIZONA, 2007-2017**

Gender/Cause	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	% change from 2007
MALE												
Accidents (unintentional injuries)	8.3	7.8	8.0	8.2	9.6	7.4	8.6	6.5	5.7	7.0	6.8	-18.2
Motor vehicle accidents	4.6	2.5	4.2	3.1	4.0	3.5	4.5	2.5	2.0	4.0	2.9	-36.3
Drowning	1.5	2.9	2.6	2.5	2.6	2.2	1.8	2.2	1.9	2.3	2.3	54.3
Other	2.2	2.4	1.2	2.6	3.1	1.7	2.3	1.9	1.9	0.6	1.5	-29.8
Malignant neoplasms	2.2	2.5	3.1	1.9	1.7	2.8	2.5	1.7	1.7	1.6	2.3	5.2
Intentional self-harm (suicide)	0.4	0.9	0.4	1.2	1.1	1.1	0.6	1.1	1.1	0.8	1.7	324.4
Congenital malformations	0.7	1.8	1.5	1.5	1.7	1.8	0.9	0.9	0.9	1.1	0.9	32.3
Assault (homicide)	1.3	1.2	0.9	2.0	0.9	0.9	1.4	0.9	1.2	0.9	0.6	-52.5
ALL CAUSES	20.0	22.3	21.5	22.1	21.6	22.0	22.4	18.2	17.2	21.8	19.9	-0.5
(Number of all deaths)	(134)	(152)	(148)	(143)	(141)	(143)	(146)	(118)	(111)	(140)	(129)	(-3.7)
FEMALE												
Accidents (unintentional injuries)	6.3	4.6	5.5	5.1	3.2	3.7	4.5	3.7	4.3	4.5	5.1	-18.5
Motor vehicle accidents	3.6	2.8	2.9	2.4	1.1	1.8	2.6	2.6	1.9	2.7	2.2	-37.6
Other	1.9	0.9	2.0	1.4	0.8	1.1	0.6	0.6	1.8	1.0	1.6	-15.5
Drowning	0.8	0.9	0.6	1.3	1.3	0.8	1.3	0.5	0.6	0.8	1.3	60.5
Malignant neoplasms	4.2	2.0	1.8	2.2	2.4	2.4	2.1	2.9	0.5	1.3	2.4	-42.7
Congenital malformations	1.3	1.5	1.4	1.6	1.0	2.3	2.4	1.3	2.1	0.6	1.1	-13.6
Assault (homicide)	1.4	0.9	1.8	0.3	1.3	1.1	1.6	1.3	1.3	1.3	1.0	-31.2
Influenza and pneumonia	0.2	0.6	0.5	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3	60.5
ALL CAUSES	19.1	17.0	18.8	15.6	13.2	16.7	17.0	17.5	13.7	14.7	16.4	-14.3
(Number of all deaths)	(122)	(110)	(123)	(97)	(83)	(104)	(106)	(109)	(85)	(91)	(102)	(-16.4)
TOTAL												
Accidents (unintentional injuries)	7.3	6.2	6.8	6.7	6.5	5.6	6.6	5.1	5.0	5.8	6.0	-18.1
Motor vehicle accidents	4.1	2.6	3.6	2.8	2.6	2.7	3.5	2.5	2.0	3.4	2.6	-36.7
Drowning	1.1	2.0	1.6	1.9	2.0	1.5	1.6	1.3	1.3	1.6	1.8	64.5
Other	2.1	1.6	1.6	2.0	2.0	1.4	1.5	1.3	1.8	0.8	1.6	-25.1
Malignant neoplasms	3.2	2.3	2.5	2.0	2.0	2.6	2.3	2.3	1.1	1.4	2.4	-26.2
Intentional self-harm (suicide)	0.4	0.6	0.3	0.7	0.9	0.6	0.6	0.9	0.9	0.7	1.3	214.7
Congenital malformations	1.0	1.7	1.4	1.6	1.3	2.0	1.6	1.1	1.5	0.9	1.0	2.3
Assault (homicide)	1.4	1.1	1.3	1.2	1.1	1.0	1.5	1.1	1.3	1.1	0.8	-43.8
ALL CAUSES	19.5	19.7	20.2	18.9	17.5	19.4	19.8	17.9	15.4	18.3	18.2	-6.8
(Number of all deaths)	(256)	(262)	(271)	(240)	(224)	(247)	(252)	(227)	(196)	(231)	(231)	(-9.8)

Notes: ^a Number of deaths per 100,000 children 1-14 years old; ^b The five causes with the greatest number of deaths over the 2007-2017 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 2007-2017 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^a FOR THE SELECTED FIVE LEADING CAUSES^b OF DEATH AMONG CHILDREN (1-14 YEARS)
IN URBAN AND RURAL AREAS^c, ARIZONA, 2007-2017**

Area/Cause	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	% change from 2007
URBAN												
Accidents (unintentional injuries)	6.5	5.4	6.4	6.0	5.7	4.7	5.5	4.5	4.3	5.0	5.8	-11.5
Motor vehicle accidents	3.2	2.0	3.2	2.5	1.7	1.9	2.6	2.0	1.7	2.6	2.1	-34.3
Drowning	1.3	1.8	1.8	1.8	2.2	1.5	1.8	1.4	1.2	1.8	2.1	61.6
Other	2.0	1.7	1.5	1.7	1.7	1.3	1.1	1.1	1.4	0.6	1.6	-22.3
Malignant neoplasms	3.4	2.6	2.6	2.3	2.1	2.6	2.4	2.3	1.1	1.4	2.5	-27.5
Congenital malformations	0.8	1.7	1.3	1.8	1.3	2.1	1.8	1.0	1.5	0.9	1.0	-54.3
Assault (homicide)	1.4	1.1	1.3	1.3	1.2	0.9	1.5	1.0	1.2	1.1	0.6	25.6
Diseases of heart	0.4	0.4	0.3	0.3	0.4	0.6	0.3	0.3	0.3	0.5	0.2	-54.3
ALL CAUSES	18.6	18.5	19.4	18.1	16.6	17.7	18.3	16.5	14.5	17.1	17.5	-5.7
(Number of all deaths)	(206)	(210)	(221)	(197)	(182)	(192)	(200)	(180)	(158)	(186)	(192)	(-6.8)
RURAL												
Accidents (unintentional injuries)	12.0	10.3	8.8	10.8	11.3	10.9	12.6	8.9	9.5	10.8	6.8	-43.3
Motor vehicle accidents	9.0	6.4	5.8	4.3	7.5	7.1	8.7	5.5	3.3	8.5	5.1	-43.3
Other	2.5	1.5	1.9	4.3	3.2	2.2	3.8	2.2	4.5	2.3	1.7	-31.9
Drowning	0.5	2.5	1.0	2.2	0.5	1.6	0.0	1.1	1.7	0.0	0.0	-100.0
Intentional self-harm (suicide)	0.5	1.5	0.5	1.1	0.5	1.1	1.6	2.2	2.8	1.7	4.0	694.0
Malignant neoplasms	2.0	0.5	1.9	0.5	1.6	2.2	1.6	2.2	1.1	1.7	1.7	-14.9
Assault (homicide)	1.0	1.0	1.5	0.5	0.5	1.6	1.6	1.7	1.7	1.1	1.7	70.1
Congenital malformations	2.0	1.5	1.9	0.5	1.6	1.6	0.5	1.7	1.7	0.6	1.1	-43.3
ALL CAUSES	24.9	25.5	23.8	23.2	22.6	28.9	27.9	26.0	21.2	24.9	21.6	-13.5
(Number of all deaths)	(50)	(52)	(49)	(43)	(42)	(53)	(51)	(47)	(38)	(44)	(38)	(-24.0)
TOTAL												
Accidents (unintentional injuries)	7.3	6.2	6.8	6.7	6.5	5.6	6.6	5.1	5.0	5.8	6.0	-18.1
Motor vehicle accidents	4.1	2.6	3.6	2.8	2.6	2.7	3.5	2.5	2.0	3.4	2.6	-36.7
Drowning	1.1	2.0	1.6	1.9	2.0	1.5	1.6	1.3	1.3	1.6	1.8	64.5
Other	2.1	1.6	1.6	2.0	2.0	1.4	1.5	1.3	1.8	0.8	1.6	-25.1
Malignant neoplasms	3.2	2.3	2.5	2.0	2.0	2.6	2.3	2.3	1.1	1.4	2.4	-26.2
Intentional self-harm (suicide)	0.4	0.6	0.3	0.7	0.9	0.6	0.6	0.9	0.9	0.7	1.3	214.7
Congenital malformations	1.0	1.7	1.4	1.6	1.3	2.0	1.6	1.1	1.5	0.9	1.0	2.3
Assault (homicide)	1.4	1.1	1.3	1.2	1.1	1.0	1.5	1.1	1.3	1.1	0.8	-43.8
ALL CAUSES	19.5	19.7	20.2	18.9	17.5	19.4	19.8	17.9	15.4	18.3	18.2	-6.8
(Number of all deaths)	(256)	(262)	(271)	(240)	(224)	(247)	(252)	(227)	(196)	(231)	(231)	(-9.8)

Notes: ^a Number of deaths per 100,000 children 1-14 years old; ^b The five causes with the greatest number of deaths over the 2007-2017 period; ^c 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 2007-2017 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^a FOR THE SELECTED FIVE LEADING CAUSES OF DEATH AMONG CHILDREN (1-14 YEARS) BY GENDER
IN URBAN AND RURAL AREAS^b, ARIZONA, 2007-2017**

Area/Gender	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	% change from 2007
URBAN												
Male	19.2	21.1	20.6	20.0	20.8	20.0	21.3	16.2	16.2	19.9	18.4	-3.9
Female	18.0	15.9	18.2	16.2	12.3	15.2	15.2	16.8	12.7	14.3	16.6	-7.8
TOTAL	18.6	18.5	19.4	18.1	16.6	17.7	18.3	16.5	14.5	17.1	17.5	-5.7
RURAL												
Male	24.4	27.9	25.7	33.9	26.4	32.1	29.0	30.5	23.1	33.5	27.9	14.5
Female	25.4	23.0	21.8	12.1	18.7	25.5	26.6	21.3	19.3	16.1	15.0	-41.1
TOTAL	24.9	25.5	23.8	23.2	22.6	28.9	27.9	26.0	21.2	24.9	21.6	-13.5
TOTAL												
Male	20.0	22.3	21.5	22.1	21.6	22.0	22.4	18.2	17.2	21.8	19.9	-0.5
Female	19.1	17.0	18.8	15.6	13.2	16.7	17.0	17.5	13.7	14.7	16.4	-14.3
TOTAL	19.5	19.7	20.2	18.9	17.5	19.4	19.8	17.9	15.4	18.3	18.2	-6.8

Notes: ^a Rates are presented per 100,000 children 1-14 years old; ^b 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.

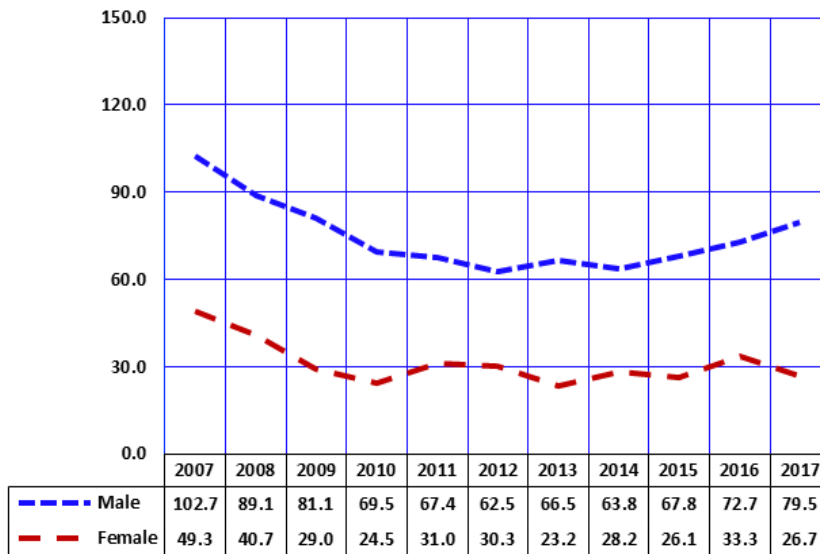
**TABLE 2C-10
LEADING CAUSES OF DEATH AMONG CHILDREN (1-14 YEARS) BY GENDER, AREA, AND RACE/ETHNICITY, ARIZONA, 2017**

Cause of death	Total		Gender		Area ^a			Race/ethnicity				
	Male	Female	Urban	Rural	Unknown	White non-Hispanic	Hispanic or Latino	Black or African American	American Indian or Alaska Native	Asian or other Pacific Islander	Refused/Unknown	
Accidents (unintentional injury)	44	32	63	12	*	32	28	6	10	0	0	
Motor vehicle accidents	19	14	23	9	*	10	13	*	6	0	0	
Accidental drowning and submersion	15	8	23	0	0	11	9	*	*	0	0	
Malignant neoplasms	15	15	27	*	0	14	13	*	*	0	0	
Leukemia	*	*	*	0	0	*	*	0	0	0	0	
Intentional self-harm (suicide)	11	*	9	7	0	9	*	0	*	*	0	
Congenital malformations	6	7	11	*	0	6	*	0	*	0	0	
Assault (homicide)	*	6	7	*	0	*	*	0	*	*	0	
By other means	*	*	*	*	0	*	*	0	*	0	0	
By discharge of firearms	*	*	*	0	0	*	0	0	0	*	0	
Influenza and pneumonia	*	*	*	0	0	*	0	*	0	0	0	
Chronic lower respiratory diseases	*	*	*	0	0	0	*	0	0	0	0	
Asthma	*	0	*	0	0	0	*	0	0	0	0	
Total, all causes	129	102	192	38	1	97	82	18	27	4	0	

Notes: * Cell suppressed due to count less than 6; † Sum rounded to nearest tens unit due to addend less than 6; ^a 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^a by Gender and Year among Adolescents 15-19 Years,
Arizona, 2007-2017

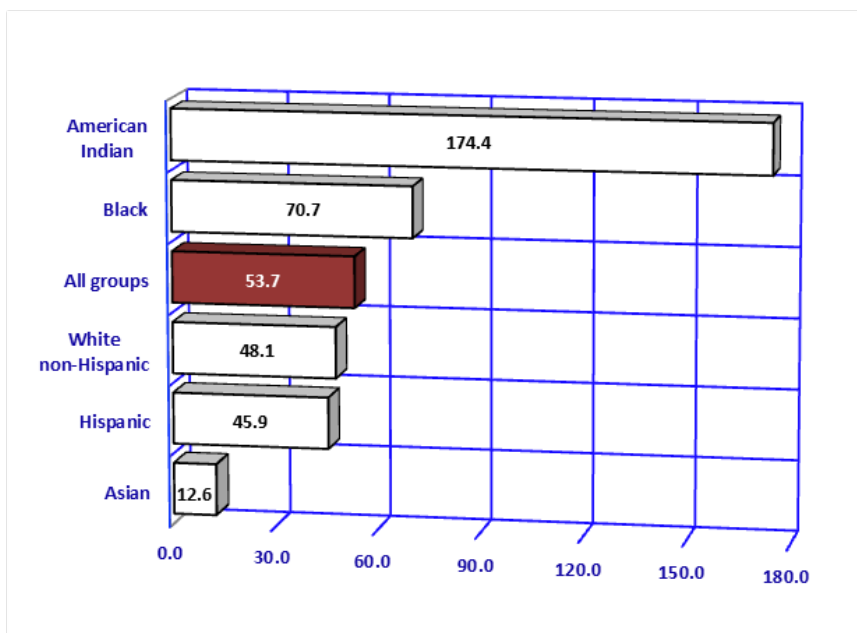


Adolescence refers to individuals between the ages of 15 and 19, an important developmental period marking the transition from childhood to adulthood. In 2017, an estimated 468,889 adolescents resided in Arizona, comprising 6.7 percent of the State's population (**Table 10A-1**). The lives of 252 resident adolescents prematurely ended in 2017, resulting in a total mortality rate of 53.7 deaths per 100,000 adolescents. This mortality rate was 30.1 percent lower than the 2007 rate (**Table 2C-11**).

The likelihood of dying was three-fold greater for adolescent boys than for adolescent girls in 2017 (**Figure 2C-9, Table 2C-11**).

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

Figure 2C-10
Mortality Rates^a by Race/Ethnicity among Adolescents 15-19 Years,
Arizona, 2017



The five causes with the greatest number of deaths over the 2007-2017 period were *unintentional injuries in accidents, suicide, homicide, malignant neoplasms, and diseases of heart* (**Table 2C-14**).

In 2017, adolescents who were Asian, Hispanic, or White had greater survival chances than the state average for all adolescents, while American Indian and Black adolescents had lower survival chances than average (**Figure 2C-10**). If the 2017 mortality risk of Asian adolescents (i.e., their mortality rate) was applied to all adolescents, only 193 would have died: 59 less than the 252 who actually did.

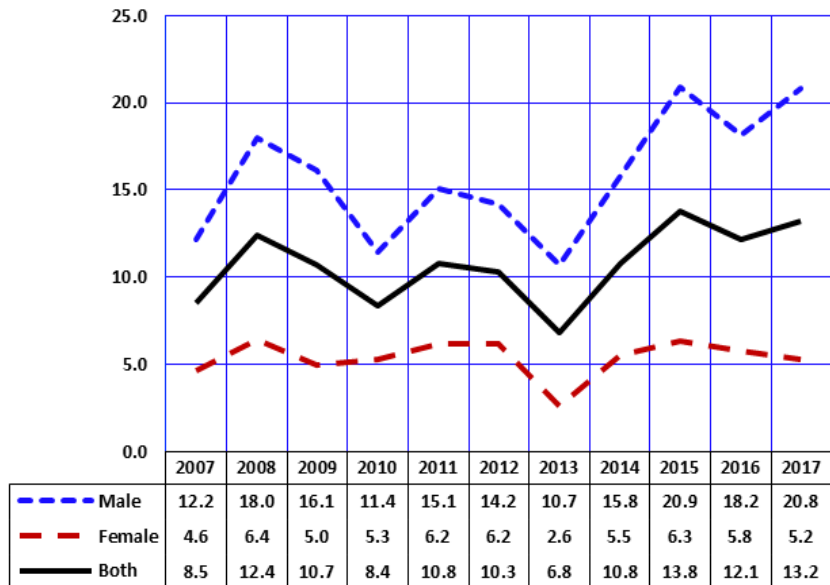
Note: ^a Number of deaths per 100,000 persons, 15 - 19 years old in specified group.

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

Figure 2C-11
Suicide Rates^a by Gender and Year among Adolescents 15-19 Years, Arizona, 2007-2017

In 2017, sixty-two suicide deaths were recorded among Arizonans age 15-19 years, an increase from 56 in 2016 (Table 2C-14). In 2017, as in prior years, male adolescents accounted for the absolute majority (80.6 percent) of completed suicides.

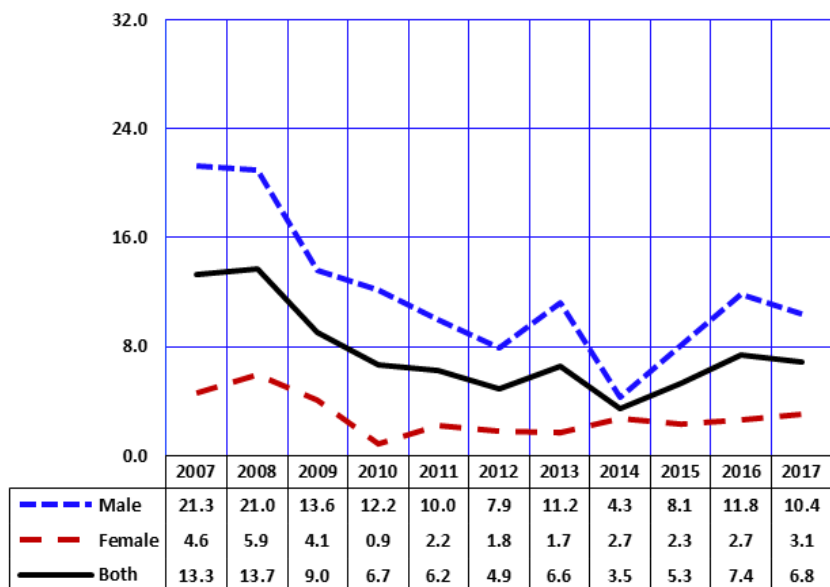
The suicide rate in 2013 was the lowest recorded since at least 1990 (Figure 2C-11, Table 2C-11). In 2017, the adolescent male suicide rate (20.8) and adolescent female suicide rate (5.2) was 70.5 percent and 14.1 percent higher than in 2007, respectively. The male to female ratio in suicide mortality rates decreased from 2.7:1 in 2007 to 4.0:1 in 2017. In other words, male adolescents were 4 times more likely to kill themselves in 2017 than female adolescents, compared to 2.7 times more likely in 2007.



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

Figure 2C-12
Homicide Rates^a by Gender and Year among Adolescents 15-19 Years, Arizona, 2007-2017

From 2007 to 2017, homicide rates decreased for both adolescent males and females (Figure 2C-12, Table 2C-11). From 2008 to 2012, the homicide rate decreased by 62.4 percent for adolescent males, and by 69.5 percent for adolescent females. A shift occurred in 2013, as the adolescent homicide mortality rate increased for males while still declining for females. From 2016 to 2017, the rate of adolescent homicide deaths increased 14.9 percent for females but decreased 12.1 for males.



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

**TABLE 2C-11
MORTALITY RATES^a FOR THE SELECTED FIVE LEADING CAUSES^b OF DEATH AMONG ADOLESCENTS (15-19 YEARS) BY GENDER,
ARIZONA, 2007-2017**

Gender/Cause	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	% change from 2007
MALE												
Accidents (unintentional injuries)	48.3	33.0	34.4	27.0	29.3	28.8	28.1	22.3	20.9	27.9	33.3	-31.1
Other	13.0	11.1	19.1	11.8	0.8	10.4	12.8	7.3	8.1	14.8	17.9	37.6
Motor vehicle accidents	35.3	21.9	15.3	15.2	18.8	18.3	15.3	15.0	12.8	13.1	15.4	-56.4
Intentional self-harm (suicide)	12.2	18.0	16.1	11.4	15.1	14.2	10.7	15.8	20.9	18.2	20.8	70.5
Assault (homicide)	21.3	21.0	13.6	12.2	10.0	7.9	11.2	4.3	8.1	11.8	10.4	-51.2
Malignant neoplasms	3.5	5.1	3.4	2.5	2.1	2.9	2.5	2.6	3.8	2.5	2.1	-40.6
Diseases of heart	2.2	0.4	1.3	2.1	1.3	0.0	0.4	1.3	0.4	0.0	0.8	-62.2
ALL CAUSES	102.7	89.1	81.1	69.5	67.4	62.5	66.5	63.8	67.8	72.7	79.5	-22.6
(Number of all deaths)	(236)	(208)	(191)	(165)	(161)	(150)	(161)	(149)	(159)	(172)	(191)	(-19.1)
FEMALE												
Accidents (unintentional injuries)	23.7	18.3	9.1	9.4	9.7	15.8	7.9	7.7	9.0	15.5	11.8	-50.2
Motor vehicle accidents	17.7	12.4	6.3	4.5	5.8	13.2	6.1	5.0	6.3	11.5	8.3	-53.0
Other	6.0	5.9	2.7	4.9	0.9	2.6	1.7	2.7	2.7	4.0	3.5	-41.7
Intentional self-harm (suicide)	4.6	6.4	5.0	5.3	6.2	6.2	2.6	5.5	6.3	5.8	5.2	14.1
Assault (homicide)	4.6	5.9	4.1	0.9	2.2	1.8	1.7	2.7	2.3	2.7	3.1	-33.4
Malignant neoplasms	4.2	4.1	3.2	2.7	4.4	1.8	3.5	4.1	2.7	2.2	1.3	-68.8
Diseases of heart	1.4	0.9	1.4	0.9	0.9	0.0	0.9	0.9	0.9	1.8	0.9	-37.5
ALL CAUSES	49.3	40.7	29.0	24.5	31.0	30.3	23.2	28.2	26.1	33.3	26.7	-45.9
(Number of all deaths)	(106)	(89)	(64)	(55)	(70)	(69)	(53)	(62)	(58)	(75)	(61)	(-42.5)
TOTAL												
Accidents (unintentional injuries)	36.4	25.9	22.1	18.4	19.8	22.5	18.3	15.2	15.1	21.9	22.8	-37.3
Motor vehicle accidents	26.8	17.3	11.0	10.0	12.5	15.8	10.8	10.1	9.6	12.3	11.9	-55.4
Other	9.6	8.6	11.2	8.4	0.9	6.6	7.4	5.1	5.5	9.5	10.9	13.3
Intentional self-harm (suicide)	8.5	12.4	10.7	8.4	10.8	10.3	6.8	10.8	13.8	12.1	13.2	55.6
Assault (homicide)	13.3	13.7	9.0	6.7	6.2	4.9	6.6	3.5	5.3	7.4	6.8	-48.7
Malignant neoplasms	3.8	4.6	3.3	2.6	3.2	2.4	3.0	3.3	3.3	2.4	1.7	-55.1
Diseases of heart	1.8	0.9	1.3	1.5	1.1	0.0	0.6	1.1	0.7	0.9	0.9	-52.6
ALL CAUSES	76.9	65.7	55.9	47.7	49.7	47.1	45.5	46.5	47.5	53.5	53.7	-30.1
(Number of all deaths)	(342)	(297)	(255)	(220)	(231)	(220)	(214)	(211)	(217)	(247)	(252)	(-26.3)

Notes: ^a Number of deaths per 100,000 adolescents 15-19 years old; ^b The five causes with the greatest number of deaths over the 2007-2017 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 2007-2017 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^a FOR THE SELECTED FIVE LEADING CAUSES^b OF DEATH AMONG ADOLESCENTS (15-19 YEARS)
IN URBAN AND RURAL AREAS^c, ARIZONA, 2007-2017**

Area/Cause	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	% change from 2007
URBAN												
Accidents (unintentional injuries)	30.9	23.7	18.7	17.0	18.4	17.0	15.8	12.5	13.4	20.4	19.6	-36.7
Other	9.0	8.9	9.1	7.7	1.0	5.1	6.5	3.7	4.9	8.2	10.3	14.3
Motor vehicle accidents	21.9	14.8	9.6	9.3	10.8	11.9	9.3	8.9	8.5	12.2	9.3	-57.6
Intentional self-harm (suicide)	8.2	9.4	9.6	7.2	8.5	8.1	5.0	9.6	12.7	11.2	11.5	40.7
Assault (homicide)	14.8	15.3	9.6	6.7	6.4	4.8	6.8	3.7	5.9	7.9	7.8	-47.5
Malignant neoplasms	3.8	4.6	3.2	2.3	2.8	2.8	3.5	3.7	2.8	2.8	1.8	-53.8
Diseases of heart	1.6	1.1	1.3	1.5	1.3	0.0	0.5	1.3	0.5	0.8	1.0	-37.3
ALL CAUSES	72.5	61.4	51.5	43.6	45.3	38.8	42.4	42.5	44.2	50.7	49.9	-31.2
(Number of all deaths)	(265)	(230)	(194)	(169)	(177)	(153)	(169)	(163)	(171)	(199)	(199)	(-24.9)
RURAL												
Accidents (unintentional injuries)	61.9	36.0	36.9	25.5	26.9	52.1	31.8	29.9	24.5	30.3	39.9	-35.6
Motor vehicle accidents	49.2	28.6	17.2	13.4	21.5	37.0	19.3	17.1	15.8	13.0	25.6	-47.9
Other	12.7	7.4	19.7	12.1	0.0	15.1	12.4	12.8	8.6	17.3	14.2	12.1
Intentional self-harm (suicide)	10.1	26.1	16.0	14.8	22.9	21.9	16.6	17.1	20.2	17.3	22.8	125.6
Assault (homicide)	6.3	7.5	6.1	6.7	5.4	5.5	5.5	2.9	1.4	2.9	1.4	-77.4
Malignant neoplasms	3.8	6.2	3.7	4.0	5.4	0.0	0.0	1.4	5.8	0.0	1.4	-62.5
Diseases of heart	2.5	0.0	1.2	1.3	0.0	0.0	0.0	0.0	1.4	1.4	0.0	-100.0
ALL CAUSES	97.2	83.3	75.0	68.6	72.7	90.5	62.1	68.4	66.2	66.4	74.1	-23.8
(Number of all deaths)	(77)	(67)	(61)	(51)	(54)	(66)	(45)	(48)	(46)	(46)	(52)	(-32.5)
TOTAL												
Accidents (unintentional injuries)	36.4	25.9	22.1	18.4	19.8	22.5	18.3	15.2	15.1	21.9	22.8	-37.3
Motor vehicle accidents	26.8	17.3	11.0	10.0	12.5	15.8	10.8	10.1	9.6	12.3	11.9	-55.4
Other	9.6	8.6	11.2	8.4	0.9	6.6	7.4	5.1	5.5	9.5	10.9	13.3
Intentional self-harm (suicide)	8.5	12.4	10.7	8.4	10.8	10.3	6.8	10.8	13.8	12.1	13.2	55.6
Assault (homicide)	13.3	13.7	9.0	6.7	6.2	4.9	6.6	3.5	5.3	7.4	6.8	-48.7
Malignant neoplasms	3.8	4.6	3.3	2.6	3.2	2.4	3.0	3.3	3.3	2.4	1.7	-55.1
Diseases of heart	1.8	0.9	1.3	1.5	1.1	0.0	0.6	1.1	0.7	0.9	0.9	-52.6
ALL CAUSES	76.9	65.7	55.9	47.7	49.7	47.1	45.5	46.5	47.5	53.5	53.7	-30.1
(Number of all deaths)	(342)	(297)	(255)	(220)	(231)	(220)	(214)	(211)	(217)	(247)	(252)	(-26.3)

Notes: ^a Number of deaths per 100,000 adolescents 15-19 years old; ^b The five causes with the greatest number of deaths over the 2007-2017 period; ^c 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 2007-2017 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-13
MORTALITY RATES^a FOR THE SELECTED FIVE LEADING CAUSES OF DEATH AMONG ADOLESCENTS (15-19 YEARS)
BY GENDER IN URBAN AND RURAL AREAS^b, ARIZONA, 2007-2017**

Area/Gender	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	% change from 2007
URBAN												
Male	97.9	84.3	73.8	62.8	62.2	50.8	62.0	59.8	60.8	69.6	73.9	-24.6
Female	45.3	36.8	27.6	23.4	27.4	26.1	21.7	24.2	26.6	30.9	24.7	-45.4
TOTAL	72.5	61.4	51.5	43.6	45.3	38.8	42.4	42.5	44.2	50.7	49.9	-31.2
RURAL												
Male	125.2	109.0	112.6	104.9	94.6	123.3	91.4	85.8	106.8	84.9	111.6	-10.9
Female	57.6	56.2	35.4	30.3	49.6	53.3	31.2	50.0	23.6	47.1	34.9	-39.4
TOTAL	97.2	83.3	75.0	68.6	72.7	90.5	62.1	68.4	66.2	66.4	74.1	-23.8
TOTAL												
Male	102.7	89.1	81.1	69.5	67.4	62.5	66.5	63.8	67.8	72.7	79.5	-22.6
Female	49.3	40.7	29.0	24.5	31.0	30.3	23.2	28.2	26.1	33.3	26.7	-45.9
TOTAL	76.9	65.7	55.9	47.7	49.7	47.1	45.5	46.5	47.5	53.5	53.7	-30.1

Notes: ^a Rates are presented per 100,000 children 15-19 years old; ^b 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.

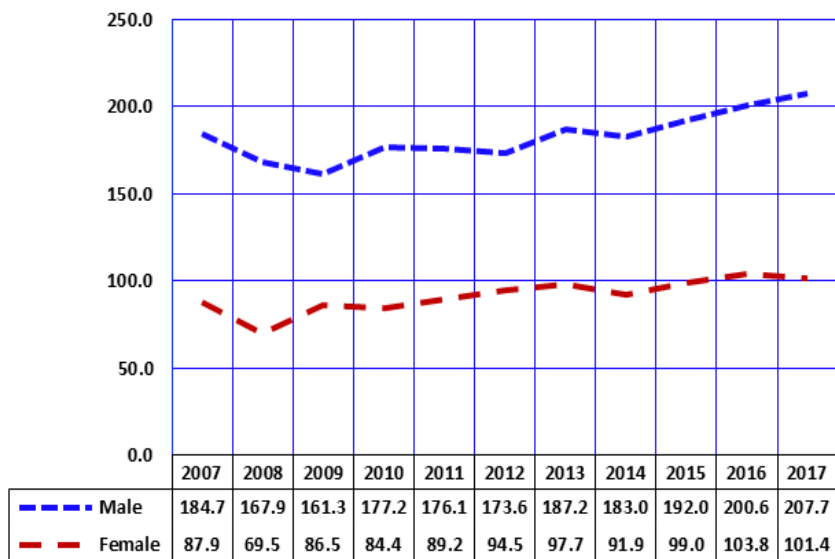
**TABLE 2C-14
LEADING CAUSES OF DEATH AMONG ADOLESCENTS (15-19 YEARS) BY GENDER, AREA, AND RACE/ETHNICITY,
ARIZONA, 2017**

Cause of death	Total		Gender		Area ^a			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)	80	27	78	28	*	40	41	7	19	0		
Motor vehicle accidents	37	19	37	18	*	17	26	*	10	0		
Accidental poisoning	27	*	31	*	0	16	9	*	*	0		
Accidental drowning and submersion	*	*	*	*	0	*	*	*	0	0		
Intentional self-harm (suicide)	50	12	46	16	0	33	16	*	11	0		
By other means	28	10	27	11	0	17	11	*	9	0		
By discharge of firearms	22	*	19	*	0	16	*	*	*	0		
Assault (homicide)	25	7	31	*	0	*	15	9	*	0		
By discharge of firearms	23	7	30	0	0	*	15	9	*	0		
By other means	*	0	*	*	0	0	0	0	*	0		
Malignant neoplasms	*	*	7	*	0	*	*	0	*	0		
Diseases of the heart	*	*	*	0	0	*	0	0	0	0		
Symptoms, signs, abnormal findings	*	0	*	0	0	*	*	0	0	0		
Total, all causes^b	191	61	199	52	1	98	91	19	42	2		

Notes: * Cell suppressed due to count less than 6; † Sum rounded to nearest tens unit due to addend less than 6; ^a 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; ^b 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^a by Gender and Year among Young Adults 20-44 Years, Arizona, 2007-2017

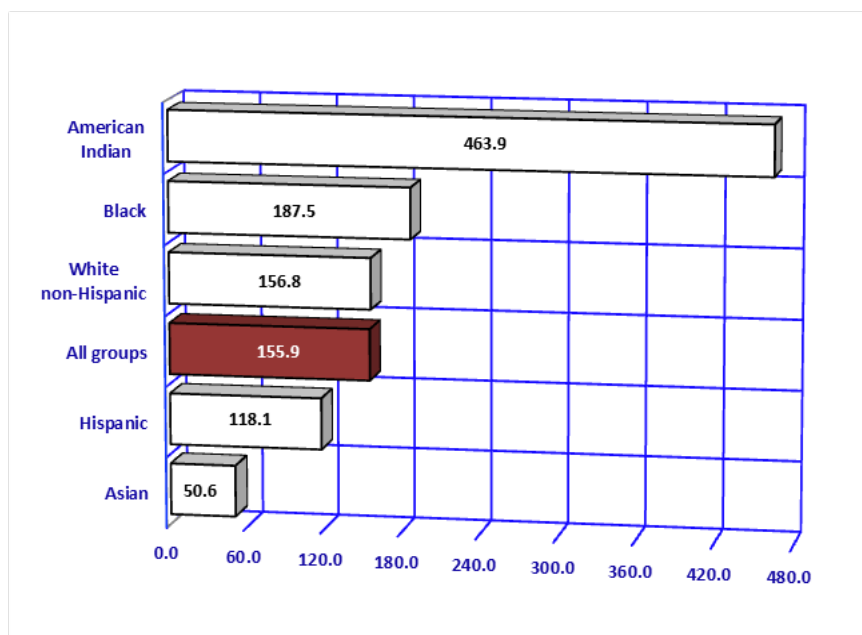


In 2017, 32.6 percent of Arizona residents were between 20 and 44 years of age. Among the six developmental periods examined in the life span, young adulthood, with an estimated 2.3 million individuals, easily represented the largest segment of the population. However, only 6.2 percent of all deaths occurred during young adulthood.

The number of deaths among young adults rose 13.6 percent from 2007 to 2017. Compared to 2016, the young adult mortality rate increased 3.5 percent for males and decreased 2.3 percent for females (Figure 2C-13, Table 2C-15).

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

Figure 2C-14
Mortality Rates^a by Race/Ethnicity among Young Adults 20-44 Years, Arizona, 2017



The rank order of survival chances of young adults from best to worse by race/ethnicity in 2017 was Asian, Hispanic or Latino, White non-Hispanic, Black or African American, and American Indian.

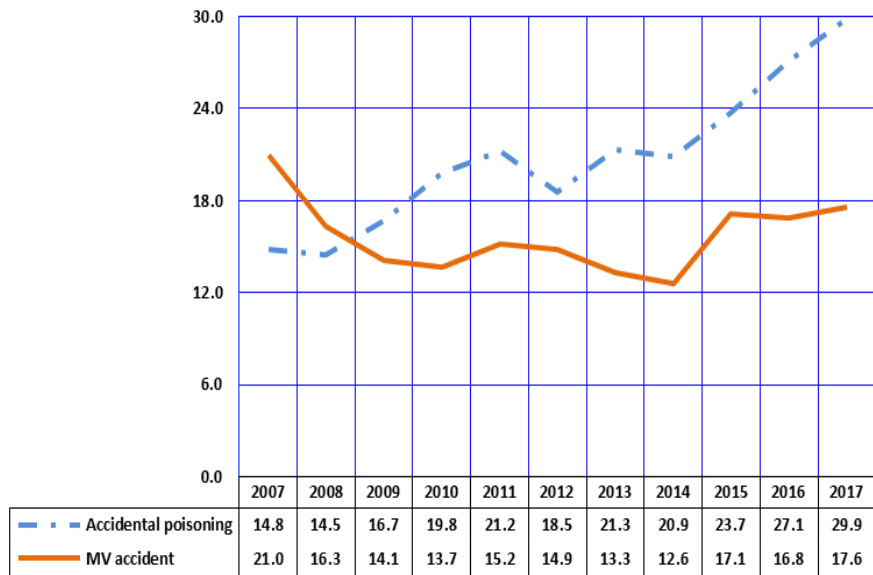
American Indian young adults had a mortality rate 2.5 times greater than Black or African American adults, the racial/ethnic group with the second highest young adult mortality rate. The American Indian young adult mortality rate was 3.0 times higher than the state average for young adults and 9.2 times greater than Asian young adults.

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

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

Figure 2C-15
Mortality Rates^a for Motor Vehicle-Related Injuries and Accidental Poisoning
by Year among Young Adults 20-44 Years, Arizona, 2007-2017

In 2017, 679 deaths of young adults were attributed to accidental poisoning (**Table 2C-18**), an increase of 11.5 percent from 2016. The mortality rate for accidental poisoning among young adults (29.9/100,000) exceeded the mortality rate for motor vehicle-related injuries. In the past decade, excess of mortality due to accidental poisoning has been consistently recorded for each since 2009 (**Figure 2C-15**). Among the young adults 20-44 years, 641 accidental poisoning deaths were due to drug overdose (ICD-10 X40-44) and 32 deaths were due to alcohol poisoning (ICD-10 X45).

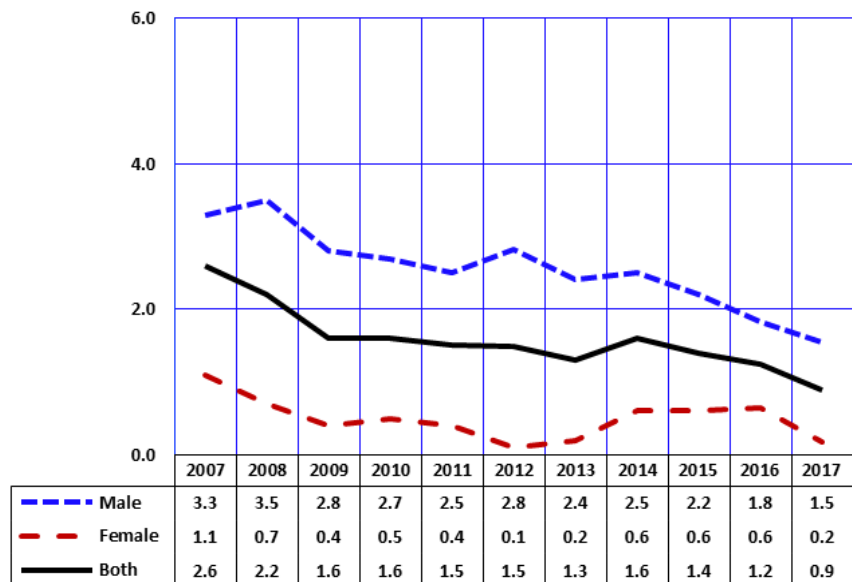


Note: ^a Number of motor vehicle and accidental poisoning deaths per 100,000 persons, 20-44 years old in specified group.

Figure 2C-16
Mortality Rates^a for HIV Disease by Gender and Year among
Young Adults 20-44 Years, Arizona, 2007-2017

In 2017, of the 88 deaths from *HIV disease* about 23 percent occurred among Arizonans 20-44 years old (**Table 2C-27**), a decrease from 29 percent in 2016. Males accounted for 90.0 percent of young adult deaths from *HIV disease* in 2017 (**Table 2C-18**).

The mortality rate for HIV disease among young male adults decreased 15.5 percent from 1.8/100,000 adults 20-44 years in 2016 to 1.5/100,000 in 2017.



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

**TABLE 2C-15
MORTALITY RATES^a FOR THE SELECTED FIVE LEADING CAUSES^b OF DEATH AMONG YOUNG ADULTS (20-44 YEARS) BY GENDER
ARIZONA, 2007-2017**

Gender/Cause	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	% change from 2007
MALE												
Accidents (unintentional injuries)	60.6	54.4	53.7	52.6	57.9	52.8	56.7	54.3	63.3	71.2	76.7	26.5
Other	31.4	30.6	33.4	27.5	8.7	31.2	38.0	35.9	38.6	46.9	52.6	67.5
Motor vehicle accidents	29.2	23.8	20.2	19.8	20.6	21.6	18.7	18.4	24.7	24.3	24.1	-17.5
Intentional self-harm (suicide)	30.3	23.5	25.1	31.5	32.4	29.0	30.8	28.7	30.8	30.9	33.5	10.4
Assault (homicide)	22.8	19.2	13.4	20.1	18.2	16.1	16.1	13.3	16.6	17.8	19.4	-15.0
Diseases of heart	14.3	13.3	14.0	11.7	14.7	13.5	14.2	14.0	13.6	12.0	14.7	2.6
Malignant neoplasms	11.3	12.6	12.0	12.8	11.0	12.3	13.4	11.2	13.0	11.3	12.0	6.3
ALL CAUSES	184.7	167.9	161.3	177.2	176.1	173.6	187.2	183.0	192.0	200.6	207.7	12.4
(Number of all deaths)	(2,166)	(2,001)	(1,944)	(1,920)	(1,923)	(1,910)	(2,082)	(2,071)	(2,191)	(2,304)	(2,421)	11.8
FEMALE												
Accidents (unintentional injuries)	25.2	20.4	20.8	22.4	25.2	22.8	24.5	21.3	28.2	26.6	29.3	16.5
Other	13.0	12.1	13.3	15.0	2.1	15.1	16.9	14.7	19.1	17.5	18.6	43.1
Motor vehicle accidents	12.2	8.3	7.5	7.4	9.7	7.7	7.6	6.6	9.1	9.0	10.7	-11.9
Malignant neoplasms	15.5	13.7	15.9	14.0	15.7	17.6	17.4	14.0	13.5	16.7	14.5	-6.2
Intentional self-harm (suicide)	7.1	6.0	9.4	6.8	8.9	8.7	9.6	9.0	10.5	9.9	11.2	57.7
Diseases of heart	6.7	5.8	6.7	4.6	6.4	7.0	5.6	6.6	7.2	5.1	7.0	3.8
Assault (homicide)	4.7	3.2	4.0	3.5	2.4	4.3	3.4	2.9	3.2	3.7	3.8	-19.3
ALL CAUSES	87.9	69.5	86.5	84.4	89.2	94.5	97.7	91.9	99.0	103.8	101.4	15.4
(Number of all deaths)	(954)	(828)	(973)	(876)	(933)	(990)	(1,033)	(991)	(1,080)	(1,137)	(1,123)	17.7
TOTAL												
Accidents (unintentional injuries)	43.6	38.0	37.8	37.8	41.9	38.2	41.0	38.2	46.1	49.4	53.6	23.0
Other	22.6	21.7	23.7	24.1	5.5	23.3	27.7	25.6	29.0	32.6	36.0	59.4
Motor vehicle accidents	21.0	16.3	14.1	13.7	15.2	14.9	13.3	12.6	17.1	16.8	17.6	-16.2
Intentional self-harm (suicide)	19.1	15.0	17.5	19.4	20.9	19.1	20.5	19.1	20.9	20.6	22.6	18.4
Malignant neoplasms	13.3	9.7	13.9	13.4	13.3	14.9	15.3	12.6	13.2	13.9	13.2	-0.4
Assault (homicide)	14.1	13.1	8.8	12.0	10.5	10.3	9.9	8.2	10.0	11.0	11.8	-16.4
Diseases of heart	10.7	11.5	10.5	8.2	10.6	10.3	10.0	10.4	10.5	8.6	10.9	2.0
ALL CAUSES	138.2	123.0	125.2	131.8	133.6	135.0	143.5	138.6	146.6	153.3	155.9	12.8
(Number of all deaths)	(3,120)	(2,829)	(2,917)	(2,796)	(2,856)	(2,900)	(3,115)	(3,062)	(3,271)	(3,441)	(3,544)	13.6

Notes: ^a Rates are presented per 100,000 persons 20-44 years old; ^b The five causes with the greatest number of deaths over the 2007-2017 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 2007-2017 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^a FOR THE SELECTED FIVE LEADING CAUSES^b OF DEATH AMONG YOUNG ADULTS (20-44 YEARS)
IN URBAN AND RURAL AREAS^c, ARIZONA, 2007-2017**

Area/Cause	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	% change from 2007
URBAN												
Accidents (unintentional injuries)	38.7	34.4	32.7	33.5	36.6	32.3	35.4	33.8	40.1	43.9	49.0	26.7
Other	21.0	20.2	21.5	22.0	4.3	20.2	23.9	22.7	25.4	28.9	34.3	63.2
Motor vehicle accidents	17.7	14.2	11.2	11.5	12.4	12.1	11.5	11.1	14.7	15.1	14.8	-16.6
Intentional self-harm (suicide)	18.0	16.4	13.6	17.7	18.1	17.0	18.3	16.8	19.0	18.4	19.7	9.2
Malignant neoplasms	12.9	14.2	15.6	13.3	13.5	14.1	15.3	12.7	13.1	13.5	13.0	1.1
Assault (homicide)	14.3	13.2	9.7	11.0	10.0	9.5	9.4	8.1	9.6	10.7	11.3	-20.8
Diseases of heart	9.9	8.9	8.7	8.0	9.6	9.5	9.3	9.7	10.1	8.3	10.3	3.6
ALL CAUSES	129.8	113.6	113.0	119.7	120.3	118.8	130.1	126.2	131.9	137.1	140.7	8.4
(Number of all deaths)	(2,511)	(2,239)	(2,203)	(2,203)	(2,232)	(2,215)	(2,451)	(2,422)	(2,557)	(2,676)	(2,783)	10.8
RURAL												
Accidents (unintentional injuries)	73.2	57.1	64.7	63.9	71.9	74.4	74.9	61.2	78.6	77.9	75.3	2.9
Other	32.7	29.2	35.4	36.9	10.3	42.7	50.8	39.6	47.9	51.3	39.4	20.4
Motor vehicle accidents	40.5	28.0	29.4	27.0	33.0	31.7	24.2	21.7	30.8	26.7	36.0	-11.2
Intentional self-harm (suicide)	25.6	20.4	29.1	30.2	37.6	32.4	33.6	32.3	32.1	33.5	40.1	56.4
Diseases of heart	15.1	9.4	15.0	9.6	16.7	14.5	14.0	14.4	13.0	10.3	14.3	-5.6
Malignant neoplasms	16.1	12.5	15.9	13.8	12.0	19.0	15.4	11.4	13.3	16.7	13.6	-15.7
Assault (homicide)	12.7	14.6	7.8	16.0	12.8	14.8	13.0	7.2	10.6	10.6	10.9	-14.5
ALL CAUSES	188.1	174.2	191.6	203.7	210.2	233.4	226.5	207.1	224.7	240.9	236.6	25.8
(Number of all deaths)	(609)	(590)	(662)	(574)	(593)	(662)	(647)	(602)	(657)	(705)	(697)	14.4
TOTAL												
Accidents (unintentional injuries)	43.6	38.0	37.8	37.8	41.9	38.2	41.0	38.2	46.1	49.4	53.6	23.0
Other	22.6	21.7	23.7	24.1	5.5	23.3	27.7	25.6	29.0	32.6	36.0	59.4
Motor vehicle accidents	21.0	16.3	14.1	13.7	15.2	14.9	13.3	12.6	17.1	16.8	17.6	-16.2
Intentional self-harm (suicide)	19.1	15.0	17.5	19.4	20.9	19.1	20.5	19.1	20.9	20.6	22.6	18.4
Malignant neoplasms	13.3	9.7	13.9	13.4	13.3	14.9	15.3	12.6	13.2	13.9	13.2	-0.4
Assault (homicide)	14.1	13.1	10.5	12.0	10.5	10.3	9.9	8.2	10.0	11.0	11.8	-16.4
Diseases of heart	10.7	11.5	8.8	8.2	10.6	10.3	10.0	10.4	10.5	8.6	10.9	2.0
ALL CAUSES	138.2	123.0	125.2	131.8	133.6	135.0	143.5	138.6	146.6	153.3	155.9	12.8
(Number of all deaths)	(3,120)	(2,829)	(2,917)	(2,796)	(2,856)	(2,900)	(3,115)	(3,062)	(3,271)	(3,441)	(3,544)	13.6

Notes: ^a Rates are presented per 100,000 young adults 20-44 years old; ^b The five causes with the greatest number of deaths statewide over the 2007-2017 period; ^c 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 2007-2017 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^a FOR THE SELECTED FIVE LEADING CAUSES OF DEATH AMONG YOUNG ADULTS (20-44 YEARS)
BY GENDER IN URBAN AND RURAL AREAS^b, ARIZONA, 2007-2017

Area/Gender	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	% change from 2007
URBAN												
Male	172.2	154.2	143.9	159.4	158.7	154.0	169.0	165.6	171.9	178.4	187.7	9.0
Female	83.6	69.4	79.5	78.4	80.3	81.9	89.2	85.1	90.1	94.0	91.4	9.3
TOTAL	129.8	113.6	113.0	119.7	120.3	118.8	130.1	126.2	131.9	137.1	140.7	8.4
RURAL												
Male	261.2	244.4	258.9	281.0	271.6	288.4	296.4	278.8	294.2	315.6	307.7	17.8
Female	112.7	102.9	123.5	121.6	144.8	174.6	151.6	130.0	149.8	160.1	159.3	41.4
TOTAL	188.1	174.2	191.6	203.7	210.2	233.4	226.5	207.1	224.7	240.9	236.6	25.8
TOTAL												
Male	184.7	167.9	161.3	177.2	176.1	173.6	187.2	183.0	192.0	200.6	207.7	12.4
Female	87.9	69.5	86.5	84.4	89.2	94.5	97.7	91.9	99.0	103.8	101.4	15.4
TOTAL	138.2	123.0	125.2	131.8	133.6	135.0	143.5	138.6	146.6	153.3	155.9	12.8

Notes: ^a Rates are presented per 100,000 persons 20-44 years old; ^b 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.

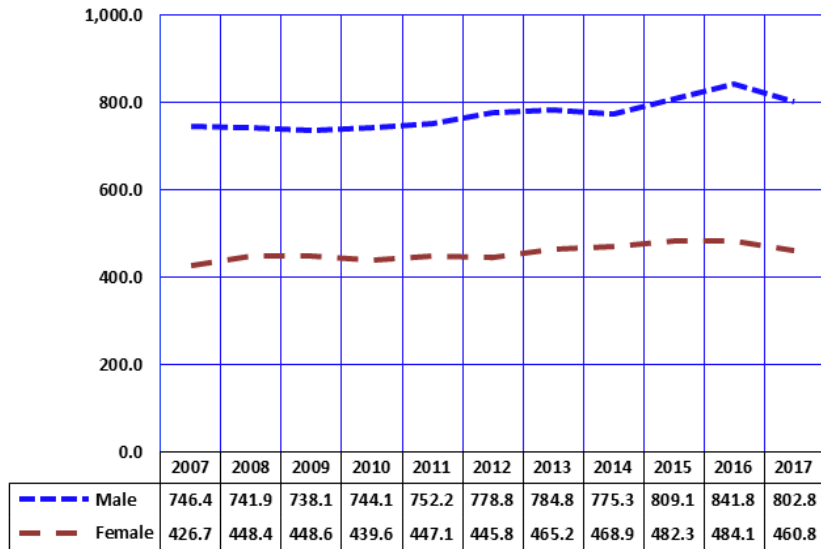
**TABLE 2C-18
LEADING CAUSES OF DEATH AMONG YOUNG ADULTS (20-44 YEARS) BY GENDER, AREA, AND RACE/ETHNICITY,
ARIZONA, 2017**

Cause of death	Total		Gender		Area ^a			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
Accidents (unintentional injury)	1,219	894	325	970	222	27	606	359	67	161	12	14
Accidental poisoning	680 [†]	504	175	573	83	23	369	209	38	50	*	10
Motor vehicle accidents	400 [†]	281	119	292	106	*	178	113	19	80	7	*
Intentional self-harm (suicide)	514	390	124	389	118	7	303	113	21	57	12	8
By discharge of firearms	280 [†]	227	48	216	56	*	178	58	13	18	*	*
By other means	240 [†]	163	76	173	62	*	125	55	8	39	9	*
Malignant neoplasms	300 [†]	140	161	258	40	*	160	95	16	17	12	*
Malignant neoplasm of breast	40 [†]	0	42	36	*	*	26	11	*	*	*	0
Malignant neoplasm of lymphoid, hematopoietic and related tissue	40 [†]	22	16	33	*	*	14	19	*	*	*	0
Malignant neoplasm of meninges, brain and other parts of central nervous system	20 [†]	8	7	12	*	0	12	*	0	*	0	0
Assault (homicide)	270 [†]	226	42	224	32	12	73	119	39	35	0	*
By discharge of firearms	200 [†]	177	27	174	23	7	52	101	32	18	0	*
By other means	60 [†]	49	15	50	9	*	21	18	7	17	0	*
Diseases of heart	250 [†]	171	77	203	42	*	137	46	30	24	8	*
Chronic liver disease and cirrhosis	150 [†]	88	61	94	53	*	58	24	*	62	*	*
Diabetes	80 [†]	43	34	67	9	*	26	27	7	16	0	*
Obesity	50 [†]	34	11	37	8	0	21	12	*	9	*	0
Cerebrovascular diseases	40 [†]	31	13	33	8	*	16	17	*	*	*	*
Human immunodeficiency virus (HIV) disease	20 [†]	18	*	17	*	0	7	8	*	*	0	0
Total, all causes	3,544	2,421	1,123	2,783	697	64	1,744	971	235	505	53	36

Notes: * Cell suppressed due to count less than 6; [†] Sum rounded to nearest tens unit due to addend less than 6; ^a 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^a by Gender and Year among Middle-Aged Adults 45-64 Years, Arizona, 2007-2017



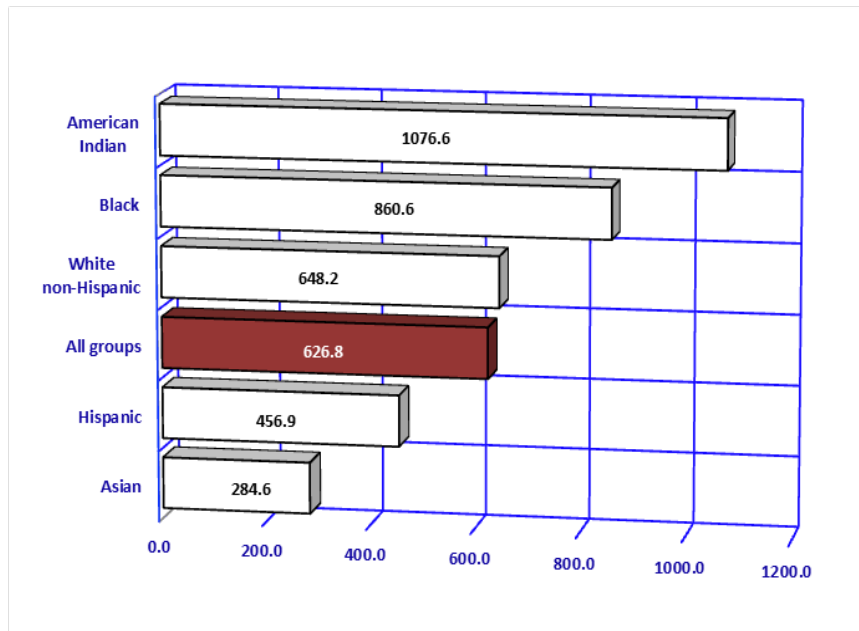
In 2017, the 1,685,830 middle-aged adult residents aged 45 to 64 experienced 10,567 deaths, or an average of 29 deaths, per day. The total number of deaths among 45-64 year old Arizona residents in 2016 (10,911) was the highest number recorded since 1980, and is likely the greatest number of deaths among this age group in Arizona's history (**Table 2C-19**).

The 2017 total mortality rate among middle-age females was 8.0 percent higher, and among middle-aged males 7.6 percent higher than their respective rates in 2007 (**Figure 2C-17, Table 2C-19**). In 2017, 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 2007-2017 were *malignant neoplasms, diseases of heart, accidents, chronic liver disease and cirrhosis, and chronic lower respiratory diseases* (**Table 2C-19**).

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

Figure 2C-18
Mortality Rates^a by Race/Ethnicity among Middle-Aged Adults 45-64 Years, Arizona, 2017



Note: ^a 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 (1076.6/100,000, 860.6/100,000, and 648.2/100,000, respectively) among the racial/ethnic groups.

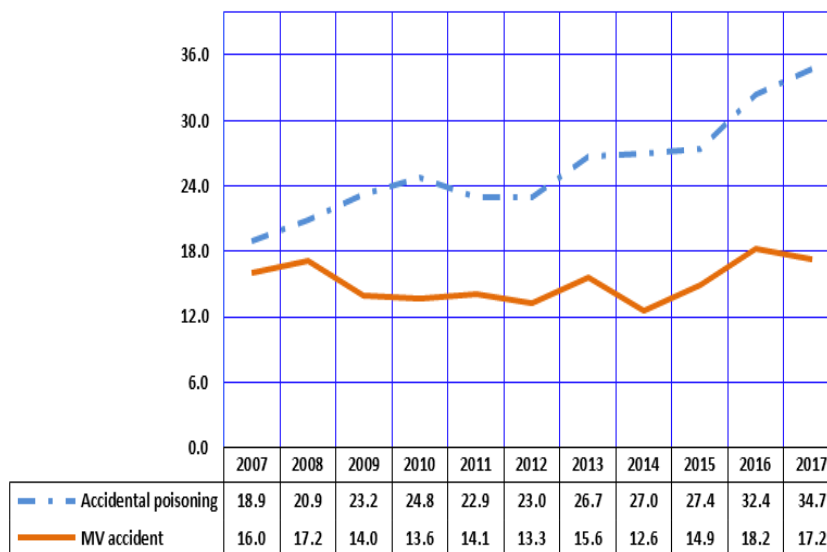
If the 2017 total mortality rate for Asian middle-aged adults applied to all Arizona residents 45-64 years old, 4,797 middle-aged adults would have died rather than the 10,567 who actually did.

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

In recent years, middle-aged adults experienced an unprecedented increase in mortality from accidental poisoning. The 2017 mortality rates due to accidental poisoning was 34.7 per 100,000 adults aged 45-64 years, an increase of 7.0 percent from 2016. In 2017, about 585 deaths were attributed to accidental poisoning (**Table 2C-22**). Of the accidental poisoning deaths in this age group, 532 were drug overdoses (ICD-10 X40-X44) and 49 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 2017, accidental poisoning mortality rate of 34.7 per 100,000 middle-aged adults was 2.0 times higher than the mortality rate of 17.2 per 100,000 for motor vehicle accidents. White non-Hispanics accounted for about 66.5 percent of all accidental poisoning deaths (**Table 2C-22**).

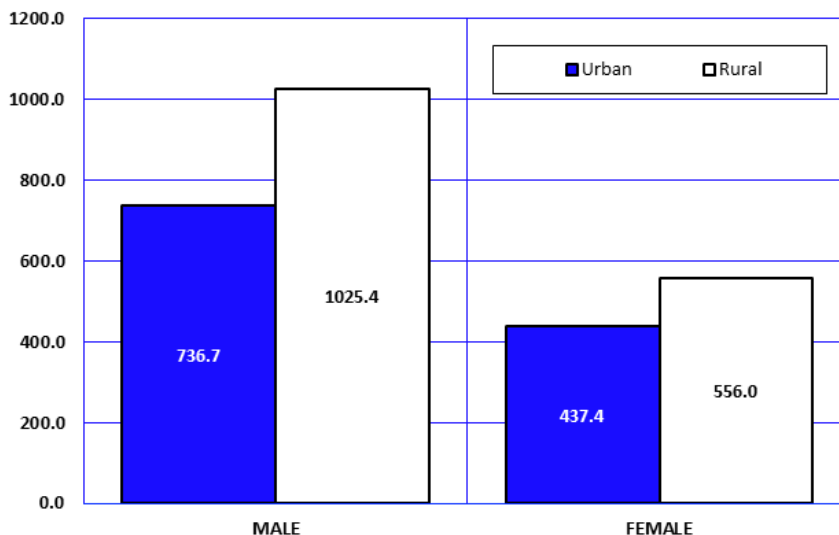
Figure 2C-19
Mortality Rates^a for Accidental Poisoning and Motor Vehicle-related Injuries by Year among Middle-Aged Adults 45-64 Years, Arizona, 2007-2017



Note: ^a 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^a and Rural Areas among Middle-Aged Adults 45-64 Years, Arizona, 2017

In 2017, as in the past, rural middle-aged males had the poorest survival chances (**Figure 2C-20, Table 2C-21**). The mortality rate for rural middle-aged males in 2017 was 1.4 times greater than for urban males, 1.8 fold greater than rural females, and 2.3 fold greater than urban females.



Note: ^a Urban counties include Maricopa, Pima, Pinal, and Yuma counties.

**TABLE 2C-19
MORTALITY RATES^a FOR THE SELECTED FIVE LEADING CAUSES^b OF DEATH AMONG MIDDLE-AGED ADULTS (45-64 YEARS)
BY GENDER, ARIZONA, 2007-2017**

Gender/Cause	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	% change from 2007
MALE												
Malignant neoplasms	192.1	184.5	182.2	188.3	186.3	196.6	191.4	171.5	186.4	184.1	180.7	-5.9
Diseases of heart	170.8	175.5	169.0	160.7	165.3	155.1	159.3	143.2	166.6	170.1	164.7	-3.6
Accidents (unintentional injuries)	73.2	76.5	71.9	69.2	68.9	68.0	77.9	73.5	76.8	100.4	98.8	35.0
Other	50.1	51.9	51.1	54.6	19.8	47.9	54.5	54.0	54.5	71.5	72.1	43.9
Motor vehicle accidents	23.1	24.6	20.8	19.9	21.4	20.1	23.3	19.4	22.3	28.9	26.8	15.8
Chronic liver disease and cirrhosis	35.5	39.2	38.0	42.1	49.6	50.2	46.7	43.1	48.1	47.8	45.5	28.0
Suicide	35.0	35.1	37.0	40.9	41.3	41.8	38.3	37.7	40.3	41.2	37.4	6.8
ALL CAUSES	746.4	741.9	738.1	744.1	752.2	778.8	784.8	775.3	809.1	841.8	802.8	7.6
(Number of all deaths)	(5,397)	(5,450)	(5,472)	(5,659)	(5,760)	(5,999)	(6,088)	(6,111)	(6,444)	(6,781)	(6,570)	21.7
FEMALE												
Malignant neoplasms	154.7	151.4	154.2	153.9	156.9	155.1	160.7	145.0	155.6	150.9	143.9	-7.0
Diseases of heart	65.0	63.4	59.4	55.9	61.8	60.5	54.6	54.0	60.8	66.7	58.2	-10.4
Accidents (unintentional injuries)	30.2	34.2	36.1	36.6	32.8	33.0	38.0	33.7	35.8	38.4	42.2	39.7
Other	21.0	24.2	28.5	29.0	7.4	26.1	29.8	27.4	27.9	30.4	18.6	-11.6
Motor vehicle accidents	9.2	10.0	7.6	7.7	7.1	6.9	8.2	6.2	7.9	8.1	8.2	-11.0
Chronic lower respiratory diseases	23.6	24.3	19.2	19.3	21.6	24.2	24.8	24.8	23.0	25.8	26.4	11.9
Diabetes	14.0	16.0	14.2	17.0	21.3	22.3	23.6	22.8	27.4	24.6	22.6	61.4
ALL CAUSES	426.7	448.4	448.6	439.6	447.1	445.8	465.2	468.9	482.3	484.1	460.8	8.0
(Number of all deaths)	(3,232)	(3,449)	(3,483)	(3,553)	(3,638)	(3,631)	(3,810)	(3,914)	(4,066)	(4,130)	(3,997)	23.7
TOTAL												
Malignant neoplasms	173.0	167.6	167.9	170.6	171.2	175.2	175.6	157.9	170.6	167.0	161.8	-6.5
Diseases of heart	116.6	118.2	112.9	106.7	112.0	106.5	105.5	97.4	112.2	116.9	109.9	-5.7
Accidents (unintentional injuries)	51.2	54.9	53.6	52.4	50.3	50.0	57.4	53.0	55.7	68.5	69.7	36.1
Other	35.2	37.7	39.5	38.8	13.4	36.7	41.8	40.4	40.8	50.3	52.5	49.1
Motor vehicle accidents	16.0	17.2	14.0	13.6	14.1	13.3	15.6	12.6	14.9	18.2	17.2	7.5
Chronic liver disease and cirrhosis	25.3	29.7	29.1	30.2	34.3	35.0	34.7	33.6	37.7	36.3	35.1	38.6
Chronic lower respiratory diseases	21.8	24.7	21.5	20.0	23.6	25.1	24.7	25.4	26.6	28.2	27.3	25.2
ALL CAUSES	582.8	591.8	590.0	587.2	595.0	607.6	620.7	617.7	641.0	657.8	626.8	7.6
(Number of all deaths)	(8,629)	(8,899)	(8,855)	(9,212)	(9,398)	(9,630)	(9,898)	(10,025)	(10,510)	(10,911)	(10,567)	22.5

Notes: ^a Rates are presented per 100,000 middle-aged adults 45-64 years old; ^b The five causes with the greatest number of deaths over the 2007-2017 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 2007-2017 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^a FOR THE SELECTED FIVE LEADING CAUSES^b OF DEATH AMONG MIDDLE-AGED ADULTS (45-64 YEARS)
IN URBAN AND RURAL AREAS^c, ARIZONA, 2007-2017**

Area/Cause	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	% change from 2007
URBAN												
Malignant neoplasms	169.6	162.8	165.4	164.6	166.5	171.8	169.1	153.8	164.8	162.1	156.3	-7.8
Diseases of heart	109.4	109.8	101.3	98.6	103.9	95.9	96.5	89.5	100.3	106.3	101.7	-7.1
Accidents (unintentional injuries)	47.8	51.6	48.8	47.5	45.4	47.6	51.5	47.3	50.2	61.3	61.3	28.2
Other	34.1	36.8	37.3	36.5	12.4	35.7	38.5	36.7	37.8	45.3	46.6	36.6
Motor vehicle accidents	13.7	14.8	11.5	11.1	11.9	11.9	13.0	10.6	12.4	16.0	14.7	7.1
Chronic liver disease and cirrhosis	23.0	27.4	25.7	27.2	30.8	31.5	29.9	31.5	32.6	30.3	30.1	30.7
Chronic lower respiratory diseases	20.5	23.6	20.2	19.2	20.6	22.9	22.6	23.4	25.0	25.9	24.0	16.9
ALL CAUSES	559.7	559.5	559.4	552.4	561.5	575.8	579.8	584.2	596.5	613.0	583.1	4.2
(Number of all deaths)	(6,812)	(6,918)	(6,979)	(7,098)	(7,274)	(7,513)	(7,631)	(7,855)	(8,128)	(8,485)	(8,223)	20.7
RURAL												
Malignant neoplasms	188.3	188.1	176.9	193.1	186.3	187.8	204.7	175.4	196.4	184.3	182.9	-2.8
Diseases of heart	149.6	156.0	164.3	137.4	143.7	152.5	142.2	133.3	163.5	159.6	140.1	-6.3
Accidents (unintentional injuries)	65.3	68.1	71.4	66.2	67.6	55.3	75.8	73.3	72.6	83.8	91.5	40.1
Other	38.7	40.8	46.6	42.6	16.5	36.4	51.7	52.8	46.6	58.3	64.2	66.0
Motor vehicle accidents	26.6	27.3	24.8	23.6	22.5	18.9	24.1	20.5	26.0	25.5	27.2	2.3
Chronic liver disease and cirrhosis	36.1	39.6	43.3	41.9	49.3	47.5	57.1	41.7	59.2	61.9	56.6	56.9
Chronic lower respiratory diseases	28.1	29.5	27.4	22.2	36.3	33.2	32.3	34.1	33.9	37.9	41.7	48.6
ALL CAUSES	687.3	727.8	713.2	708.3	716.6	720.2	786.8	751.4	821.2	808.3	781.1	13.7
(Number of all deaths)	(1,810)	(1,946)	(1,927)	(2,010)	(2,035)	(2,017)	(2,191)	(2,091)	(2,275)	(2,219)	(2,152)	18.9
TOTAL												
Malignant neoplasms	173.0	167.6	167.9	170.6	171.2	175.2	175.6	157.9	170.6	167.0	161.8	-6.5
Diseases of heart	116.6	118.2	112.9	106.7	112.0	106.5	105.5	97.4	112.2	116.9	109.9	-5.7
Accidents (unintentional injuries)	51.2	54.9	53.6	52.4	50.3	50.0	57.4	53.0	55.7	68.5	69.7	36.1
Other	35.2	37.7	39.5	38.8	13.4	36.7	41.8	40.4	40.8	50.3	52.5	49.1
Motor vehicle accidents	16.0	17.2	14.0	13.6	14.1	13.3	15.6	12.6	14.9	18.2	17.2	7.5
Chronic liver disease and cirrhosis	25.3	29.7	29.1	30.2	34.3	35.0	34.7	33.6	37.7	36.3	35.1	38.6
Chronic lower respiratory diseases	21.8	24.7	21.5	20.0	23.6	25.1	24.7	25.4	26.6	28.2	27.3	25.2
ALL CAUSES	582.8	591.8	590.0	587.2	595.0	607.6	620.7	617.7	641.0	657.8	626.8	7.6
(Number of all deaths)	(8,629)	(8,899)	(8,855)	(9,212)	(9,398)	(9,630)	(9,898)	(10,025)	(10,510)	(10,911)	(10,567)	22.5

Notes: ^a Rates are presented per 100,000 middle-aged adults 45-64 years old; ^b The five causes with the greatest number of deaths over the 2007-2017 period; ^c 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 2007-2017 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^a FOR THE SELETED FIVE LEADING CAUSES OF DEATH AMONG MIDDLE-AGED ADULTS (45-64 YEARS)
BY GENDER IN URBAN AND RURAL AREAS^b, ARIZONA, 2007-2017**

Area/Gender	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	% change from 2007
URBAN												
Male	714.7	693.2	697.6	690.0	703.5	724.9	726.0	728.1	746.1	769.7	736.7	3.1
Female	410.8	431.1	426.5	423.0	427.8	434.7	441.0	448.0	454.8	464.5	437.4	6.5
TOTAL	559.7	559.5	559.4	552.4	561.5	575.8	579.8	584.2	596.5	613.0	583.1	4.2
RURAL												
Male	891.7	953.6	896.8	924.9	918.6	968.7	1,018.5	953.9	1,054.9	1,079.2	1,025.4	15.0
Female	497.7	518.4	543.0	504.0	526.1	486.1	568.8	561.6	603.7	557.3	556.0	11.7
TOTAL	687.3	727.8	713.2	708.3	716.6	720.2	786.8	751.4	821.2	808.3	781.1	13.7
TOTAL												
Male	746.4	741.9	738.1	744.1	752.2	778.8	784.8	775.3	809.1	841.8	802.8	7.6
Female	426.7	448.4	448.6	439.6	447.1	445.8	465.2	468.9	482.3	484.1	460.8	8.0
TOTAL	582.8	591.8	590.0	587.2	595.0	607.6	620.7	617.7	641.0	657.8	626.8	7.6

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

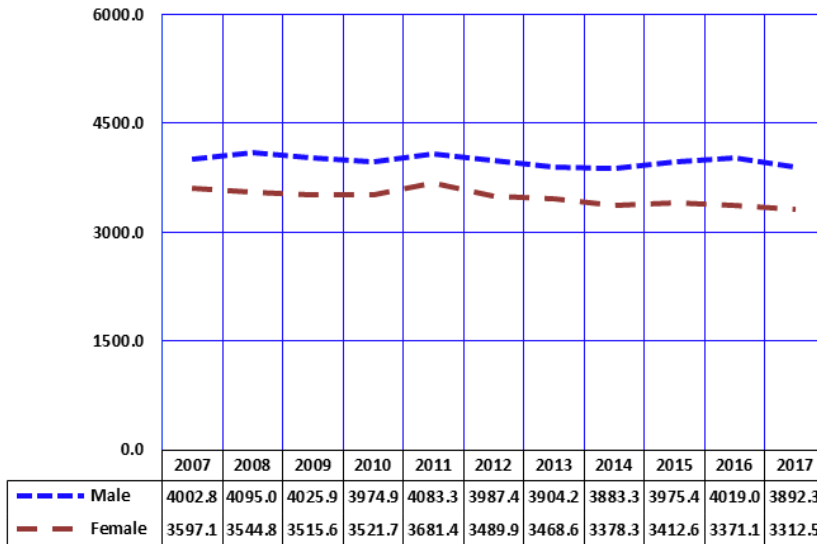
**TABLE 2C-22
LEADING CAUSES OF DEATH AMONG MIDDLE-AGED ADULTS (45-64 YEARS) BY GENDER, AREA, AND RACE/ETHNICITY,
ARIZONA, 2017**

Cause of death	Total		Gender		Area ^a			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	
													2,727
Malignant neoplasms	2,727	1,479	1,248	2,205	504	18	1,934	461	159	85	62	26	
Malignant neoplasm of trachea, bronchus and lung	540	305	235	425	108	7	436	39	35	8	15	7	
Malignant neoplasm of colon, rectum, and anus	320†	208	115	261	60	*	216	71	14	12	7	*	
Malignant neoplasm of breast	280†	*	274	237	39	0	179	50	29	6	11	*	
Malignant neoplasm of pancreas	210†	117	89	166	40	0	144	38	14	*	*	*	
Diseases of heart	1,853	1,348	505	1,434	386	33	1,317	265	130	81	23	37	
Accidents (unintentional injury)	1,175	809	366	864	252	59	746	192	61	120	11	45	
Accidental poisoning	590†	377	208	452	99	34	389	82	36	44	*	30	
Motor vehicle accidents	290†	219	71	207	75	8	165	59	19	39	*	*	
Falls	110†	71	34	80	22	*	78	15	*	9	0	*	
Chronic liver disease and cirrhosis	591	372	219	424	156	11	326	133	8	106	7	11	
Diabetes	545	349	196	442	97	6	270	160	38	58	11	8	
Chronic lower respiratory diseases	460†	231	229	338	115	7	390	26	19	6	*	15	
Intentional self-harm (suicide)	413	306	107	302	105	6	350	32	7	9	8	7	
By discharge of firearms	250†	205	45	187	62	*	221	15	*	*	*	*	
By other means	160†	101	62	115	43	*	129	17	*	8	*	*	
Cerebrovascular diseases	300†	169	135	247	55	*	181	81	21	11	8	*	
Essential (primary) hypertension and hypertensive renal disease	150†	93	56	134	13	*	77	32	25	11	*	*	
Influenza and pneumonia	130†	70	55	92	30	*	79	23	*	14	*	*	
Viral hepatitis	120†	84	39	93	25	*	72	38	*	*	0	*	
Septicemia	100†	55	44	79	20	0	64	21	*	10	*	0	
Assault (homicide)	90†	58	27	66	14	*	48	16	12	7	*	0	
By discharge of firearms	50†	33	14	38	8	*	24	8	10	*	*	0	
By other means	40†	25	13	28	6	*	24	8	*	*	0	0	
Nephritis, nephrotic syndrome and nephrosis	80†	51	27	52	26	0	33	22	9	13	*	0	
Human immunodeficiency virus (HIV) disease	50†	46	8	42	9	*	28	14	7	*	*	*	
Total, all causes^b	10,567	6,570	3,997	8,223	2,152	192	7,122	1,814	599	673	165	194	

Note: * Cell suppressed due to count less than 6; † Sum rounded to nearest tens unit due to addend less than 6; ^a Urban = Maricopa, Pima, Pinal, and Yuma counties; the remaining counties comprise Arizona's rural areas; ^b 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^a by Gender and Year among Elderly 65 Years and Older, Arizona, 2007-2017



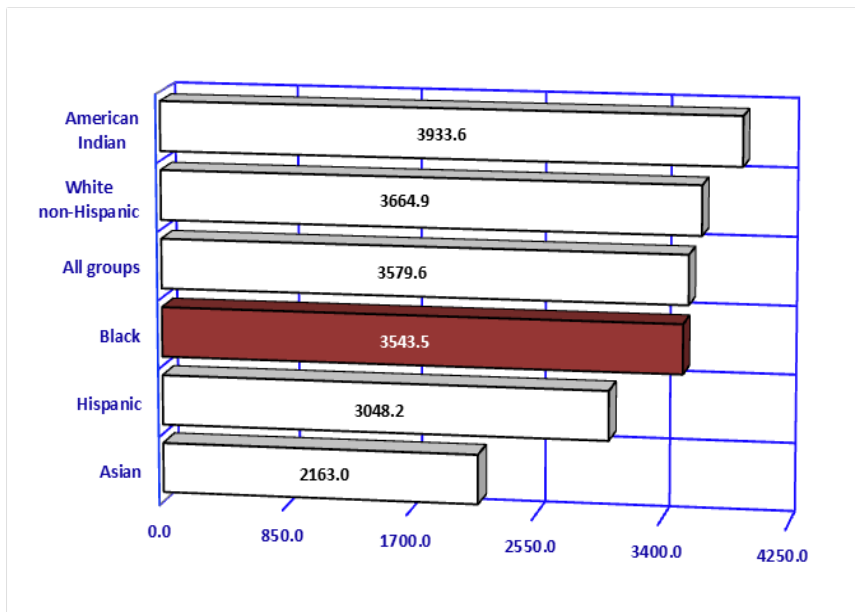
In 2017, an estimated 1,178,859 residents age 65 years and older resided in the state (Table 10A-1). No other age group has as great of a disproportionate gender distribution as the elderly. As a result of the higher total mortality rates for males at earlier ages, 17.5 percent more elderly women than men were alive in 2017.

The 2017 elderly mortality rate of 3,579.6 per 100,000 was 5.3 percent lower than the 2007 rate of 3,778.8 (Table 2C-23).

The 2017 total mortality rate among elderly females was 7.9 percent lower than their rate in 2007. The mortality rate among elderly males decreased 2.8 percent during the same period (Figure 2C-21, Table 2C-23).

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

Figure 2C-22
Mortality Rates^a by Race/Ethnicity among Elderly 65 Years and Older, Arizona, 2017



In 2017 the mortality rate for Arizona's American Indian elderly residents was 1.8 times that of the Asian elderly population. The mortality rate of 2,163.0 /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 2017 at 3,048.2/100,000.

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

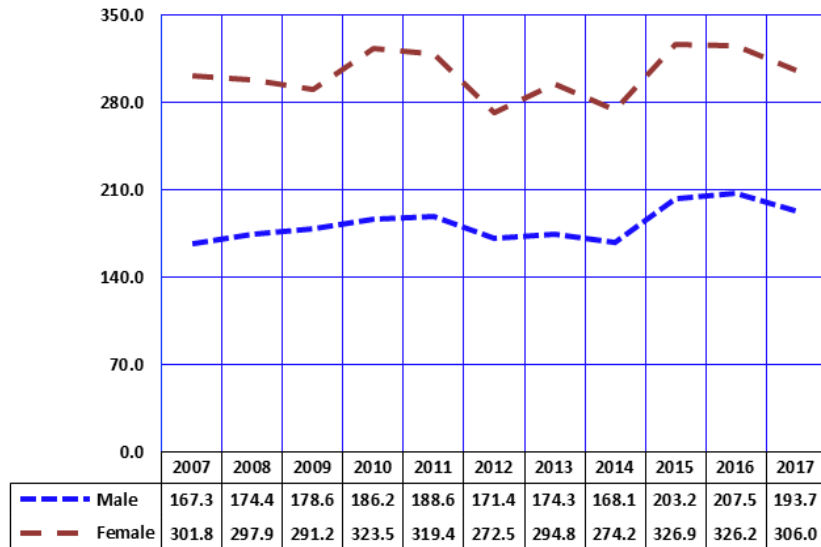
2C.AGE-SPECIFIC MORTALITY
Elderly mortality (ages 65 years and older)

Figure 2C-23
Trends in Mortality Rates for Alzheimer's Disease^a by Gender and Year among Elderly 65 Years and Older, Arizona, 2007-2017

Tables, 2C-23 and 2C-24 provide mortality rates for the five causes with the greatest number of deaths over the 2007-2017 period.

In 2017, Alzheimer's disease (2,997 deaths; **Table 2C-26**) accounted for 7.1 percent of elderly mortality. From 2016 to 2017, mortality due to Alzheimer's disease decreased for both genders (**Figure 2C-23**).

There were 1,945 deaths from Alzheimer's disease among elderly females in 2017, almost twice the number of deaths from this cause among males (1,052; **Table 2C-26**). White non-Hispanic elderly accounted for 85.6 percent of the 2017 deaths from Alzheimer's disease (based on data in **Table 2C-26**).

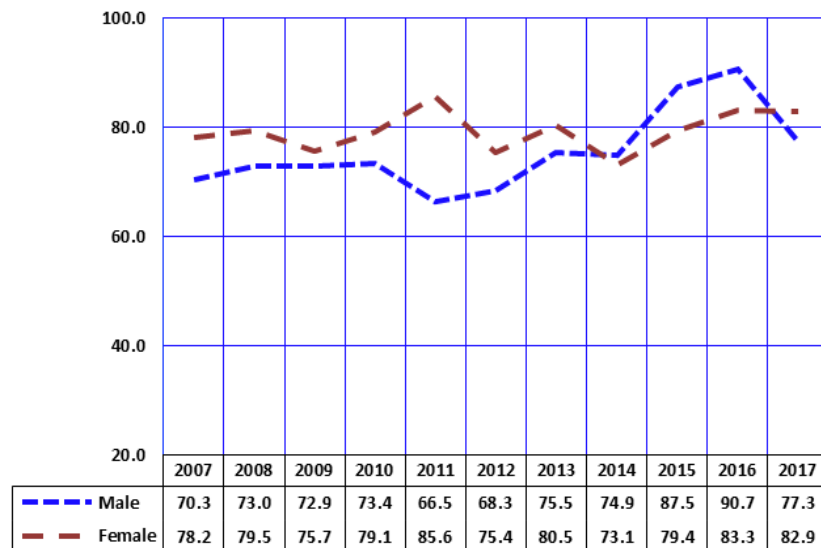


Note: ^a Number of deaths due to Alzheimer's disease per 100,000 persons, 65+ years old in specified group.

Figure 2C-24
Trends in Mortality Rates for Falls and Fall-related Injuries^a by Gender and Year among Elderly 65 Years and Older, Arizona, 2007-2017

Among unintentional injury deaths unrelated to motor vehicles, Arizona's elderly experienced high mortality from *fall-related injuries* (**Figure 2C-24**). In 2017, 947 elderly Arizonans 65 years or older died from *fall-related injuries*, compared to 973 in 2016, a 2.7 percent decrease (**Table 2C-26**).

In 2017, Arizonans aged 85 years old or older experienced the largest number of *fall-related deaths* (528), followed by Arizonans 75-84 years old (274), and those aged 65-74 years old (145).



Note: ^a 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^a FOR THE SELECTED FIVE LEADING CAUSES^b OF DEATH AMONG ELDERLY (65 YEARS AND OLDER) BY GENDER,
ARIZONA, 2007-2017**

Gender/Cause	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	% change from 2007
MALE												
Diseases of heart	1,079.2	1,114.1	1,073.3	992.8	1,065.5	1,022.2	1,007.0	908.6	970.0	1,003.2	1,002.5	-7.1
Malignant neoplasms	1,020.4	1,006.6	1,017.3	1,007.7	1,007.4	992.6	958.6	899.1	931.7	927.9	893.5	-12.4
Chronic lower respiratory diseases	300.9	316.8	303.6	310.9	318.4	319.9	302.7	290.2	308.7	298.2	288.3	-4.2
Alzheimer's disease	167.3	174.4	178.6	186.2	188.6	171.4	174.3	168.1	203.2	207.5	193.7	15.8
Cerebrovascular diseases	168.6	188.9	182.8	169.3	164.4	165.5	151.8	144.4	183.0	176.8	178.6	5.9
ALL CAUSES	4,002.8	4,095.0	4,025.9	3,974.9	4,083.3	3,987.4	3,904.2	3,883.3	3,975.4	4,019.0	3,892.3	-2.8
(Number of all deaths)	(14,981)	(15,589)	(15,462)	(15,967)	(16,517)	(17,101)	(17,489)	(18,292)	(19,665)	(20,781)	(21,144)	41.1
FEMALE												
Diseases of heart	891.9	860.8	855.9	804.8	847.2	794.5	763.7	694.9	756.2	741.0	743.4	-16.7
Malignant neoplasms	696.4	691.1	701.6	702.5	710.9	678.6	697.9	628.1	670.5	642.2	628.7	-9.7
Alzheimer's disease	301.8	297.9	291.2	323.5	319.4	272.5	294.8	274.2	326.9	326.2	306.0	1.4
Chronic lower respiratory diseases	255.0	279.3	273.5	272.6	301.4	268.6	283.6	248.3	286.8	288.1	271.7	6.5
Cerebrovascular diseases	246.8	229.2	218.5	229.9	231.0	208.0	198.1	191.1	210.5	218.4	208.0	-15.7
ALL CAUSES	3,597.1	3,544.8	3,515.6	3,521.7	3,681.4	3,489.9	3,468.6	3,378.3	3,412.6	3,371.1	3,312.5	-7.9
(Number of all deaths)	(16,601)	(16,625)	(16,636)	(16,909)	(17,798)	(17,855)	(18,494)	(18,718)	(19,815)	(20,408)	(21,055)	26.8
TOTAL												
Diseases of heart	975.7	974.3	953.3	890.4	946.8	898.3	874.8	793.1	854.5	861.8	862.8	-11.6
Malignant neoplasms	841.5	832.4	843.0	841.5	846.1	821.8	816.9	752.6	790.7	773.8	750.7	-10.8
Chronic lower respiratory diseases	275.6	296.1	287.0	290.1	309.1	292.0	292.3	267.6	296.8	292.8	279.3	1.4
Alzheimer's disease	241.6	242.6	240.8	260.9	259.8	226.4	239.8	225.4	270.0	271.5	254.2	5.2
Cerebrovascular diseases	211.8	211.1	202.5	202.3	200.7	188.6	176.9	169.6	197.8	199.2	194.4	-8.2
ALL CAUSES	3,778.8	3,791.3	3,744.2	3,728.2	3,864.8	3,716.9	3,667.5	3,610.4	3,671.5	3,669.5	3,579.6	-5.3
(Number of all deaths)	(31,852)	(32,214)	(32,098)	(32,876)	(34,318)	(34,958)	(35,983)	(37,010)	(39,480)	(41,189)	(42,199)	32.5

Notes: ^a Rates are presented per 100,000 elderly persons 65 years and older; ^b The five causes with the greatest number of deaths over the 2007-2017 period; ^c 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 2007-2017 are classified by ICD-10, replacing the Ninth Revision (ICD-9).

**TABLE 2C-24
MORTALITY RATES^a FOR THE SELECTED FIVE LEADING CAUSES^b OF DEATH AMONG ELDERLY (65 YEARS AND OLDER)
IN URBAN AND RURAL AREAS^c, ARIZONA, 2007-2017**

Area/Cause	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	% change from 2007
URBAN												
Diseases of heart	983.1	971.9	952.2	888.5	932.0	891.8	862.3	781.0	830.2	835.5	839.1	-14.6
Malignant neoplasms	834.1	817.9	835.0	834.0	846.2	825.5	807.6	748.7	783.6	756.6	737.1	-11.6
Chronic lower respiratory diseases	271.8	289.2	282.2	288.7	311.3	288.9	286.3	267.8	292.0	285.8	265.3	-2.4
Alzheimer's disease	262.4	261.3	263.2	284.9	288.9	251.5	272.0	252.6	291.9	286.0	262.6	0.1
Cerebrovascular diseases	211.3	206.4	206.1	201.5	202.0	192.8	180.1	172.6	198.1	197.5	193.8	-8.3
ALL CAUSES	3,792.4	3,765.0	3,765.4	3,738.3	3,886.0	3,740.3	3,663.4	3,615.6	3,650.2	3,624.7	3,531.0	-6.9
(Number of all deaths)	(25,143)	(25,374)	(25,596)	(26,043)	(27,302)	(27,824)	(28,442)	(29,416)	(31,179)	(32,370)	(33,146)	31.8
RURAL												
Diseases of heart	946.3	979.3	950.4	889.9	990.4	912.5	919.1	834.0	935.2	947.2	940.3	-0.6
Malignant neoplasms	868.7	883.7	865.3	864.6	840.5	802.6	847.8	764.5	810.8	828.2	792.5	-8.8
Chronic lower respiratory diseases	290.0	322.1	302.5	291.6	298.9	299.6	314.0	264.3	311.1	311.2	328.6	13.3
Alzheimer's disease	161.5	166.7	152.1	169.6	145.1	130.2	117.2	118.7	184.1	211.9	218.2	35.1
Cerebrovascular diseases	213.6	228.2	187.0	204.1	193.1	171.9	164.1	157.9	195.8	204.0	193.6	-9.3
ALL CAUSES	3,723.8	3,863.1	3,628.5	3,657.5	3,741.1	3,590.0	3,665.4	3,558.1	3,706.3	3,771.9	3,708.2	-0.4
(Number of all deaths)	(6,434)	(6,789)	(6,441)	(6,773)	(6,935)	(7,058)	(7,505)	(7,526)	(8,196)	(8,653)	(8,905)	38.4
TOTAL												
Diseases of heart	975.7	974.3	953.3	890.4	946.8	898.3	874.8	793.1	854.5	861.8	862.8	-11.6
Malignant neoplasms	841.5	832.4	843.0	841.5	846.1	821.8	816.9	752.6	790.7	773.8	750.7	-10.8
Chronic lower respiratory diseases	275.6	296.1	287.0	290.1	309.1	292.0	292.3	267.6	296.8	292.8	279.3	1.4
Alzheimer's disease	241.6	242.6	240.8	260.9	259.8	226.4	239.8	225.4	270.0	271.5	254.2	5.2
Cerebrovascular diseases	211.8	211.1	202.5	202.3	200.7	188.6	176.9	169.6	197.8	199.2	194.4	-8.2
ALL CAUSES	3,778.8	3,791.3	3,744.2	3,728.2	3,864.8	3,716.9	3,667.5	3,610.4	3,671.5	3,669.5	3,579.6	-5.3
(Number of all deaths)	(31,852)	(32,214)	(32,098)	(32,876)	(34,318)	(34,958)	(35,983)	(37,010)	(39,480)	(41,189)	(42,199)	32.5

Notes: ^a Rates are presented per 100,000 elderly persons 65 years and older; ^b The five causes with the greatest number of deaths over the 2007-2017 period; ^c 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 2007-2017 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^a FOR THE FIVE LEADING CAUSES OF DEATH AMONG ELDERLY (65 YEARS AND OLDER)
BY GENDER IN URBAN AND RURAL AREAS^b, ARIZONA, 2007-2017**

Area/Gender	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	% change from 2007
URBAN												
Male	3,986.1	4,053.2	4,013.8	3,976.9	4,107.6	3,980.1	3,898.2	3,888.6	3,944.3	3,960.2	3,799.2	-4.7
Female	3,638.1	3,534.9	3,567.5	3,543.8	3,705.0	3,543.8	3,470.8	3,388.5	3,405.1	3,344.3	3,306.7	-9.1
TOTAL	3,792.4	3,765.0	3,765.4	3,738.3	3,886.0	3,740.3	3,663.4	3,615.6	3,650.2	3,624.7	3,531.0	-6.9
RURAL												
Male	4,058.9	4,216.1	4,021.7	3,917.1	3,948.9	3,952.6	3,895.3	3,826.7	4,027.0	4,133.9	4,142.9	2.1
Female	3,432.7	3,555.8	3,286.5	3,418.2	3,547.4	3,256.0	3,454.5	3,309.8	3,409.1	3,435.2	3,304.1	-3.7
TOTAL	3,723.8	3,863.1	3,628.5	3,657.5	3,741.1	3,590.0	3,665.4	3,558.1	3,706.3	3,771.9	3,708.2	-0.4
TOTAL												
Male	4,002.8	4,095.0	4,025.9	3,974.9	4,083.3	3,987.4	3,904.2	3,883.3	3,975.4	4,019.0	3,892.3	-2.8
Female	3,597.1	3,544.8	3,515.6	3,521.7	3,681.4	3,489.9	3,468.6	3,378.3	3,412.6	3,371.1	3,312.5	-7.9
TOTAL	3,778.8	3,791.3	3,744.2	3,728.2	3,864.8	3,716.9	3,667.5	3,610.4	3,671.5	3,669.5	3,579.6	-5.3

Notes: ^a Rates are presented per 100,000 persons 65 years and older; ^b 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, 2017**

Cause of death	Gender		Area ^a		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	
Diseases of heart	10,171	5,446	4,725	7,877	2,258	36	8,585	956	220	214	127	69
Malignant neoplasms	8,850	4,854	3,996	6,919	1,903	28	7,455	847	216	160	128	44
Malignant neoplasm of trachea, bronchus and lung	2,196	1,172	1,024	1,696	494	6	1,964	134	36	11	41	10
Malignant neoplasm of lymphoid, hematopoietic and related tissue	945	549	396	769	176	0	800	87	26	13	19	0
Malignant neoplasm of colon, rectum, and anus	770 [†]	412	354	609	155	*	634	90	21	13	6	*
Malignant neoplasm of pancreas	700 [†]	359	339	568	128	*	572	80	23	14	6	*
Malignant neoplasm of prostate	610 [†]	606	0	453	150	*	500	61	23	13	*	*
Malignant neoplasm of breast	520 [†]	6	510	413	102	*	435	44	18	10	7	*
Chronic lower respiratory diseases	3,293	1,566	1,727	2,490	789	14	2,982	178	42	37	31	23
Alzheimer's disease	2,997	1,052	1,945	2,465	524	8	2,565	312	61	22	25	12
Cerebrovascular diseases	2,292	970	1,322	1,819	465	8	1,840	289	73	50	33	7
Accidents (unintentional injury)	1,485	766	719	1,135	340	10	1,176	169	32	64	28	16
Falls	950 [†]	420	527	766	179	*	810	87	10	25	12	*
Motor vehicle accidents	200 [†]	135	63	140	57	*	132	33	9	16	6	*
Diabetes	1,411	795	616	1,120	286	*	898	302	61	113	31	6
Essential (primary) hypertension and hypertensive disease	850 [†]	377	473	740	110	0	650	122	37	21	17	*
Parkinson's disease	740 [†]	470	267	606	130	*	637	57	7	17	15	*
Influenza and pneumonia	700 [†]	339	358	530	163	*	544	96	13	34	8	*
Nephritis, nephrotic syndrome and nephrosis	445	236	209	314	131	0	338	60	13	24	10	0
Septicemia	330 [†]	151	183	260	73	*	241	54	13	18	6	*
Total, all causes^b	42,199	21,144	21,055	33,146	8,905	148	34,964	4,407	975	1,062	557	234

Notes: * Cell suppressed due to count less than 6; [†] Sum rounded to nearest tens unit due to addend less than 6; ^a Urban = Maricopa, Pima, Pinal, and Yuma counties; the remaining counties comprise Arizona's rural areas; ^b 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, 2017

	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	57,261	461	231	252	3,544	10,567	42,199	7
Salmonella infections	0†	0	0	0	0	*	*	0
Shigellosis and amebiasis	0	0	0	0	0	0	0	0
Certain other intestinal infections	210†	*	*	0	*	33	167	0
Enterocolitis due to Clostridium difficile	140†	0	0	0	*	20	121	0
Tuberculosis	10†	0	0	0	0	*	7	0
Respiratory tuberculosis	10†	0	0	0	0	*	*	0
Other tuberculosis	0†	0	0	0	0	*	*	0
Whooping cough	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	0
Septicemia	460†	*	*	0	24	99	334	0
Syphilis	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	200†	0	0	0	*	123	70	0
Human immunodeficiency virus (HIV) disease	88	0	0	0	20	54	14	0
Malaria	0	0	0	0	0	0	0	0
Other and unspecified infectious and parasitic diseases	190†	9	*	*	10	45	123	0
Malignant neoplasms	11,920†	*	30	8	301	2,727	8,850	0
Malignant neoplasm of lip, oral cavity and pharynx	180†	0	*	0	7	59	113	0
Malignant neoplasm of esophagus	330†	0	0	0	*	100	229	0
Malignant neoplasm of stomach	203	0	0	0	14	60	129	0
Malignant neoplasm of colon, rectum, and anus	1,118	0	0	0	29	323	766	0
Malignant neoplasm of liver and intrahepatic bile ducts	576	0	0	0	7	195	374	0
Malignant neoplasm of pancreas	914	0	0	0	10	206	698	0
Malignant neoplasm of larynx	69	0	0	0	0	18	51	0
Malignant neoplasm of trachea, bronchus and lung	2,754	0	0	0	18	540	2,196	0
Malignant melanoma of skin	190	0	0	0	9	48	133	0
Malignant neoplasm of breast	834	0	0	0	42	276	516	0
Malignant neoplasm of cervix uteri	78	0	0	0	21	30	27	0
Malignant neoplasm of corpus uteri and uterus, part unspecified	200	0	0	0	8	49	143	0
Malignant neoplasm of ovary	310	0	0	0	12	82	216	0
Malignant neoplasm of prostate	660†	0	0	0	*	52	606	0
Malignant neoplasm of kidney and renal pelvis	320†	0	*	0	8	84	230	0
Malignant neoplasm of bladder	360†	0	0	0	*	48	313	0

**TABLE 2C-27 (continued)
COMPARISON OF CAUSES OF MORTALITY BY AGE GROUP, ARIZONA, 2017**

	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	340†	*	13	*	15	119	189	0
Malignant neoplasm of lymphoid, hematopoietic and related tissue	1,170†	0	*	*	38	180	945	0
Hodgkin's disease	30†	0	0	0	*	*	26	0
Non-Hodgkin's lymphoma	390†	0	0	*	6	56	324	0
Leukemia	480†	0	*	*	31	76	371	0
Multiple myeloma and immunoproliferative neoplasms	270	0	0	0	0	46	224	0
Other and unspecified malignant neoplasms of lymphoid tissue	0	0	0	0	0	0	0	0
All other and unspecified malignant neoplasm	1,300†	0	10	*	57	258	976	0
In situ neoplasms	360†	*	*	0	9	35	313	0
Anemias	60†	0	*	0	*	7	46	0
Diabetes	2,040†	0	*	*	77	545	1,411	0
Nutritional deficiencies	220†	0	0	0	*	16	203	0
Malnutrition	206	0	0	0	0	15	191	0
Other nutritional deficiencies	10†	0	0	0	*	*	12	0
Obesity	205	0	0	0	45	80	80	0
Meningitis	20†	*	*	0	*	8	9	0
Parkinson's disease	749	0	0	0	0	12	737	0
Alzheimer's disease	3,050	0	0	0	0	53	2,997	0
Major cardiovascular diseases	16,429	6	8	6	325	2,384	13,700	0
Diseases of heart	12,290†	6	*	*	248	1,853	10,171	0
Acute rheumatic fever and chronic rheumatic heart disease	80†	0	*	0	*	10	64	0
Hypertensive heart disease	1,122	0	0	0	42	187	893	0
Hypertensive heart and renal disease	147	0	0	0	0	15	132	0
Ischemic heart disease	7,810†	*	0	0	106	1,285	6,422	0
Acute myocardial infarction	1,687	0	0	0	22	282	1,383	0
Other acute ischemic heart disease	40†	*	0	0	0	9	31	0
Other forms of chronic ischemic heart disease	6,086	0	0	0	84	994	5,008	0
Atherosclerotic cardiovascular disease	1,950	0	0	0	51	591	1,308	0
All other forms of chronic ischemic heart disease	4,136	0	0	0	33	403	3,700	0
Other heart diseases	3,120†	*	*	*	96	356	2,660	0
Acute and subacute endocarditis	30†	0	0	0	8	*	12	0
Diseases of pericardium and acute myocarditis	10†	0	0	0	*	*	*	0
Heart failure	790†	0	*	0	*	42	750	0
All other forms of heart disease	2,290†	*	*	*	85	304	1,893	0
Essential (primary) hypertension and hypertensive renal disease	1,018	0	0	0	19	149	850	0
Cerebrovascular diseases	2,650†	0	*	*	44	304	2,292	0
Atherosclerosis	90	0	0	0	0	8	82	0

TABLE 2C-27 (continued)
COMPARISON OF CAUSES OF MORTALITY BY AGE GROUP, ARIZONA, 2017

	All ages	Infants <1	Children 1-14	Adoles- cents 15-19	Young adults 20-44	Middle- aged adults 45-64	Elderly 65+	Un- known
Other diseases of circulatory system	389	0	0	0	14	70	305	0
Aortic aneurysm and dissection	202	0	0	0	9	35	158	0
Other disease of arteries, arterioles and capillaries	190†	0	0	0	*	35	147	0
Other disorders of circulatory system	110†	0	*	0	10	48	50	0
Influenza and pneumonia	850†	*	*	*	20	125	697	0
Influenza	120†	*	*	*	*	18	90	0
Pneumonia	730†	*	0	*	15	107	607	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	3,780†	0	*	0	24	460	3,293	0
Bronchitis, chronic and unspecified	10†	0	*	0	*	*	7	0
Emphysema	150†	0	0	0	*	17	130	0
Asthma	90†	0	*	0	18	23	49	0
Other chronic lower respiratory diseases	3,530†	0	0	0	*	419	3,107	0
Pneumoconioses and chemical effects	20†	0	0	0	0	*	15	0
Pneumonitis due to solids and liquids	290†	*	0	0	7	29	250	0
Other disease of respiratory system	710†	*	*	*	18	80	599	0
Peptic ulcer	80†	0	0	0	*	20	55	0
Diseases of appendix	10†	0	0	0	*	0	6	0
Hernia	40†	0	*	0	*	9	27	0
Chronic liver disease and cirrhosis	1,122	0	0	0	149	591	382	0
Alcoholic liver disease	763	0	0	0	136	455	172	0
Other chronic liver disease and cirrhosis	359	0	0	0	13	136	210	0
Cholelithiasis and other disorders of gallbladder	72	0	0	0	6	8	58	0
Nephritis, nephrotic syndrome and nephrosis	540†	*	0	0	11	78	445	0
Acute and rapidly progressive nephritic and nephrotic syndrome	10†	*	0	0	0	*	*	0
Chronic glomerulonephritis	10†	0	0	0	0	*	7	0
Renal failure	518	0	0	0	11	75	432	0
Others disorders of kidney	0†	0	0	0	0	0	*	0
Infections of kidney	20†	0	0	0	0	*	18	0
Hyperplasia of prostate	14	0	0	0	0	0	14	0
Inflammatory diseases of female pelvic organs	0†	0	0	0	*	0	0	0
Pregnancy, childbirth and the puerperium	20†	0	0	*	22	0	0	0
Pregnancy with abortive outcome	0	0	0	0	0	0	0	0
Other complications of pregnancy, childbirth and the puerperium	20†	0	0	*	22	0	0	0

TABLE 2C-27 (continued)
COMPARISON OF CAUSES OF MORTALITY BY AGE GROUP, ARIZONA, 2017

	All ages	Infants <1	Children 1-14	Adolescents 15-19	Young adults 20-44	Middle-aged adults 45-64	Elderly 65+	Un-known
Perinatal conditions	220†	215	*	*	0	0	0	0
Congenital anomalies, deformations and chromosomal abnormalities	200†	92	13	*	20	32	42	0
Symptoms, signs, abnormal findings	1,270†	58	15	*	90	133	962	*
Total accidents	4,085	23	76	107	1,219	1,175	1,485	0
Transport accidents	980†	*	33	56	400	290	198	0
Motor vehicle accidents	1,070†	*	36	60	424	326	220	0
Other land transport accidents	30†	0	*	*	6	13	6	0
Water, air, space	60†	0	*	*	18	23	16	0
Nontransport accidents	3,017	21	40	47	795	849	1,265	0
Falls	1,080†	0	*	*	19	105	947	0
Accidental discharge of firearms	10†	0	0	0	*	*	*	0
Accidental drowning and submersion	110†	*	23	6	31	24	20	0
Accidental exposure to smoke, fire and flames	50†	0	*	0	8	15	24	0
Accidental poisoning	1,370†	0	*	32	679	585	76	0
Other and unspecified nontransport accidents	402	19	9	6	54	117	197	0
Intentional self-harm (suicide)	1,304	0	16	62	514	413	299	0
By discharge of firearms	786	0	9	24	275	250	228	0
By other means	518	0	7	38	239	163	71	0
Assault (homicide)	430	10	10	32	268	85	25	0
By discharge of firearms	300†	*	*	30	204	47	15	0
By other means	130†	8	7	*	64	38	10	0
Legal intervention	10†	0	0	0	7	*	0	0
Events of undetermined intent	160†	10	*	7	53	58	26	*
Discharge of firearms	20†	0	*	6	7	*	0	*
Other and unspecified events of undetermined intent	140†	10	*	*	46	56	26	0
Operations of war	0	0	0	0	0	0	0	0
Complications of medical and surgical care	100†	0	*	0	8	29	63	0
Injury by firearms	1,120†	*	14	60	497	305	244	*
Drug-induced deaths	1,590†	*	*	35	755	659	140	0
Opioid-induced deaths	910†	*	*	26	487	338	60	0
Alcohol-induced deaths	1,210†	0	*	*	224	718	266	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^a BY AGE GROUP, ARIZONA, 2017**

	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	822.0	564.5	18.2	53.7	155.9	626.8	3579.6
Salmonella infections	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	3.0	**	**	0.0	**	2.0	14.2
Enterocolitis due to Clostridium difficile	2.1	0.0	0.0	0.0	**	1.2	10.3
Tuberculosis	0.1	0.0	0.0	0.0	0.0	**	0.6
Respiratory tuberculosis	0.1	0.0	0.0	0.0	0.0	**	**
Other tuberculosis	0.0	0.0	0.0	0.0	0.0	**	**
Whooping cough	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	0.0
Septicemia	6.6	**	**	0.0	1.1	5.9	28.3
Syphilis	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	2.8	0.0	0.0	0.0	**	7.3	5.9
Human immunodeficiency virus (HIV) disease	1.3	0.0	0.0	0.0	0.9	3.2	1.2
Malaria	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other and unspecified infectious and parasitic diseases	2.8	11.0	**	**	0.4	2.7	10.4
Malignant neoplasms	171.1	**	2.4	1.7	13.2	161.8	750.7
Malignant neoplasm of lip, oral cavity and pharynx	2.6	0.0	**	0.0	0.3	3.5	9.6
Malignant neoplasm of esophagus	4.8	0.0	0.0	0.0	**	5.9	19.4
Malignant neoplasm of stomach	2.9	0.0	0.0	0.0	0.6	3.6	10.9
Malignant neoplasm of colon, rectum, and anus	16.0	0.0	0.0	0.0	1.3	19.2	65.0
Malignant neoplasm of liver and intrahepatic bile ducts	8.3	0.0	0.0	0.0	0.3	11.6	31.7
Malignant neoplasm of pancreas	13.1	0.0	0.0	0.0	0.4	12.2	59.2
Malignant neoplasm of larynx	1.0	0.0	0.0	0.0	0.0	1.1	4.3
Malignant neoplasm of trachea, bronchus and lung	39.5	0.0	0.0	0.0	0.8	32.0	186.3
Malignant melanoma of skin	2.7	0.0	0.0	0.0	0.4	2.8	11.3
Malignant neoplasm of breast	12.0	0.0	0.0	0.0	1.8	16.4	43.8
Malignant neoplasm of cervix uteri	2.2	0.0	0.0	0.0	1.9	3.5	4.2
Malignant neoplasm of corpus uteri and uterus, part unspecified	5.7	0.0	0.0	0.0	0.7	5.6	22.5
Malignant neoplasm of ovary	8.8	0.0	0.0	0.0	1.1	9.5	34.0
Malignant neoplasm of prostate	19.0	0.0	0.0	0.0	**	6.4	111.6
Malignant neoplasm of kidney and renal pelvis	4.6	0.0	**	0.0	0.4	5.0	19.5
Malignant neoplasm of bladder	5.2	0.0	0.0	0.0	**	2.8	26.6

**TABLE 2C-28 (continued)
COMPARISON OF CAUSE-SPECIFIC MORTALITY RATES^a BY AGE GROUP, ARIZONA, 2017**

	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	4.9	**	1.0	**	0.7	7.1	16.0
Malignant neoplasm of lymphoid, hematopoietic and related tissue	16.8	0.0	**	**	1.7	10.7	80.2
Hodgkin's disease	0.4	0.0	0.0	0.0	**	**	2.2
Non-Hodgkin's lymphoma	5.6	0.0	0.0	**	0.3	3.3	27.5
Leukemia	6.9	0.0	**	**	1.4	4.5	31.5
Multiple myeloma and immunoproliferative neoplasms	3.9	0.0	0.0	0.0	0.0	2.7	19.0
Other and unspecified malignant neoplasms of lymphoid tissue	0.0	0.0	0.0	0.0	0.0	0.0	0.0
All other and unspecified malignant neoplasm	18.7	0.0	0.8	**	2.5	15.3	82.8
In situ neoplasms	5.2	**	**	0.0	0.4	2.1	26.6
Anemias	0.8	0.0	**	0.0	**	0.4	3.9
Diabetes	29.2	0.0	**	**	3.4	32.3	119.7
Nutritional deficiencies	3.2	0.0	0.0	0.0	**	0.9	17.2
Malnutrition	3.0	0.0	0.0	0.0	0.0	0.9	16.2
Other nutritional deficiencies	0.2	0.0	0.0	0.0	**	**	1.0
Obesity	2.9	0.0	0.0	0.0	2.0	4.7	6.8
Meningitis	0.3	**	**	0.0	**	0.5	0.8
Parkinson's disease	10.8	0.0	0.0	0.0	0.0	0.7	62.5
Alzheimer's disease	43.8	0.0	0.0	0.0	0.0	3.1	254.2
Major cardiovascular diseases	235.8	7.3	0.6	1.3	14.3	141.4	1162.1
Diseases of heart	176.4	7.3	**	**	10.9	109.9	862.8
Acute rheumatic fever and chronic rheumatic heart disease	1.1	0.0	**	0.0	**	0.6	5.4
Hypertensive heart disease	16.1	0.0	0.0	0.0	1.8	11.1	75.8
Hypertensive heart and renal disease	2.1	0.0	0.0	0.0	0.0	0.9	11.2
Ischemic heart disease	112.2	**	0.0	0.0	4.7	76.2	544.8
Acute myocardial infarction	24.2	0.0	0.0	0.0	1.0	16.7	117.3
Other acute ischemic heart disease	0.6	**	0.0	0.0	0.0	0.5	2.6
Other forms of chronic ischemic heart disease	87.4	0.0	0.0	0.0	3.7	59.0	424.8
Atherosclerotic cardiovascular disease	28.0	0.0	0.0	0.0	2.2	35.1	111.0
All other forms of chronic ischemic heart disease	59.4	0.0	0.0	0.0	1.5	23.9	313.9
Other heart diseases	44.8	**	**	**	4.2	21.1	225.6
Acute and subacute endocarditis	0.4	0.0	0.0	0.0	0.4	**	1.0
Diseases of pericardium and acute myocarditis	0.2	0.0	0.0	0.0	**	**	**
Heart failure	11.4	0.0	**	0.0	**	2.5	63.6
All other forms of heart disease	32.9	**	**	**	3.7	18.0	160.6
Essential (primary) hypertension and hypertensive renal disease	14.6	0.0	0.0	0.0	0.8	8.8	72.1
Cerebrovascular diseases	38.0	0.0	**	**	1.9	18.0	194.4
Atherosclerosis	1.3	0.0	0.0	0.0	0.0	0.5	7.0

TABLE 2C-28 (continued)
COMPARISON OF CAUSE-SPECIFIC MORTALITY RATES^a BY AGE GROUP, ARIZONA, 2017

	All ages	Infants <1	Children 1-14	Adoles- cents 15-19	Young adults 20-44	Middle- aged adults 45-64	Elderly 65+
Other diseases of circulatory system	5.6	0.0	0.0	0.0	0.0	4.2	25.9
Aortic aneurysm and dissection	2.9	0.0	0.0	0.0	0.4	2.1	13.4
Other disease of arteries, arterioles and capillaries	2.7	0.0	0.0	0.0	**	2.1	12.5
Other disorders of circulatory system	1.6	0.0	**	**	0.4	2.8	4.2
Influenza and pneumonia	12.2	**	**	**	0.9	7.4	59.1
Influenza	1.7	**	**	**	**	1.1	7.6
Pneumonia	10.5	**	0.0	**	0.7	6.3	51.5
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	54.3	0.0	**	0.0	1.1	27.3	279.3
Bronchitis, chronic and unspecified	0.1	0.0	**	0.0	**	**	0.6
Emphysema	2.1	0.0	0.0	0.0	**	1.0	11.0
Asthma	1.3	0.0	**	0.0	0.8	1.4	4.2
Other chronic lower respiratory diseases	50.7	0.0	0.0	0.0	**	24.9	263.6
Pneumoconioses and chemical effects	0.2	0.0	0.0	0.0	0.0	**	1.3
Pneumonitis due to solids and liquids	4.1	**	0.0	0.0	0.3	1.7	21.2
Other disease of respiratory system	10.2	**	**	**	0.8	4.7	50.8
Peptic ulcer	1.1	0.0	0.0	0.0	**	1.2	4.7
Diseases of appendix	0.1	0.0	0.0	0.0	**	0.0	0.5
Hernia	0.5	0.0	**	0.0	**	0.5	2.3
Chronic liver disease and cirrhosis	16.1	0.0	0.0	0.0	6.6	35.1	32.4
Alcoholic liver disease	11.0	0.0	0.0	0.0	6.0	27.0	14.6
Other chronic liver disease and cirrhosis	5.2	0.0	0.0	0.0	0.6	8.1	17.8
Cholelithiasis and other disorders of gallbladder	1.0	0.0	0.0	0.0	0.3	0.5	4.9
Nephritis, nephrotic syndrome and nephrosis	7.7	**	0.0	0.0	0.5	4.6	37.7
Acute and rapidly progressive nephritic and nephrotic syndrome	0.1	**	0.0	0.0	0.0	**	**
Chronic glomerulonephritis	0.1	0.0	0.0	0.0	0.0	**	0.6
Renal failure	7.4	0.0	0.0	0.0	0.5	4.4	36.6
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	0.0	**	1.5
Hyperplasia of prostate	0.4	0.0	0.0	0.0	0.0	0.0	2.6
Inflammatory diseases of female pelvic organs	0.0	0.0	0.0	0.0	**	0.0	0.0
Pregnancy, childbirth and the puerperium	0.7	0.0	0.0	**	2.0	0.0	0.0
Pregnancy with abortive outcome	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other complications of pregnancy, childbirth and the puerperium	0.7	0.0	0.0	**	2.0	0.0	0.0

**TABLE 2C-28 (continued)
COMPARISON OF CAUSE-SPECIFIC MORTALITY RATES^a BY AGE GROUP, ARIZONA, 2017**

	All ages	Infants <1	Children 1-14	Adoles- cents 15-19	Young adults 20-44	Middle- aged adults 45-64	Elderly 65+
Perinatal conditions	3.1	263.3	**	0.0	0.0	0.0	0.0
Congenital anomalies, deformations and chromosomal abnormalities	2.9	112.7	1.0	**	0.9	1.9	3.6
Symptoms, signs, abnormal findings	18.2	71.0	1.2	**	4.0	7.9	81.6
Total accidents	58.6	28.2	6.0	22.8	53.6	69.7	126.0
Transport accidents	15.3	**	2.8	12.8	18.7	19.3	18.7
Motor vehicle accidents	14.1	**	2.6	11.9	17.6	17.2	16.8
Other land transport accidents	0.4	0.0	**	**	0.3	0.8	0.5
Water, air, space	0.9	0.0	**	**	0.8	1.4	1.4
Nontransport accidents	43.3	25.7	3.1	10.0	35.0	50.4	107.3
Falls	15.4	0.0	**	**	0.8	6.2	80.3
Accidental discharge of firearms	0.1	0.0	0.0	0.0	**	**	**
Accidental drowning and submersion	1.5	**	1.8	1.3	1.4	1.4	1.7
Accidental exposure to smoke, fire and flames	0.7	0.0	**	0.0	0.4	0.9	2.0
Accidental poisoning	19.7	0.0	**	6.8	29.9	34.7	6.4
Other and unspecified nontransport accidents	5.8	23.3	0.7	1.3	2.4	6.9	16.7
Intentional self-harm (suicide)	18.7	0.0	1.3	13.2	22.6	24.5	25.4
By discharge of firearms	11.3	0.0	0.7	5.1	12.1	14.8	19.3
By other means	7.4	0.0	0.6	8.1	10.5	9.7	6.0
Assault (homicide)	6.2	12.2	0.8	6.8	11.8	5.0	2.1
By discharge of firearms	4.3	**	**	6.4	9.0	2.8	1.3
By other means	1.9	9.8	0.6	**	2.8	2.3	0.8
Legal intervention	0.1	0.0	0.0	0.0	0.3	**	0.0
Events of undetermined intent	2.3	12.2	**	1.5	2.3	3.4	2.2
Discharge of firearms	0.3	0.0	**	1.3	0.3	**	0.0
Other and unspecified events of undetermined intent	2.0	12.2	**	**	2.0	3.3	2.2
Operations of war	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Complications of medical and surgical care	1.4	0.0	**	0.0	0.4	1.7	5.3
Injury by firearms ^b	16.1	**	1.1	12.8	21.9	18.1	20.7
Drug-induced deaths ^b	22.9	**	**	7.5	33.2	39.1	11.9
Opioid-induced deaths	13.1	**	**	5.5	21.4	20.0	5.1
Alcohol-induced deaths ^b	17.4	0.0	**	**	9.9	42.6	22.6

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



2D.

PATTERNS OF PREMATURE MORTALITY

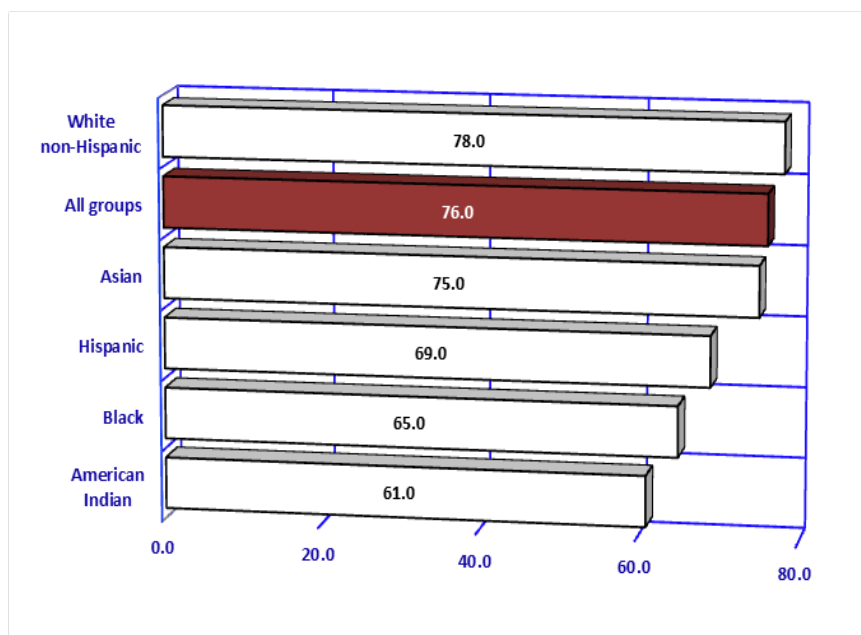
In 2017, the race /ethnic minority groups represented greater percentage of people younger than 25 years (44.0%) than White non-Hispanics (24.9%). In contrast, people aged 65 years and older accounted for 24.3 percent of White non-Hispanics, but only 7.4 percent of all ethnic minority groups combined (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 2017, of all deaths among the elderly (65 years and older), 82.9 percent were White non-Hispanics, 10.4 percent were Hispanic or Latino, with the three remaining racial/ethnic groups comprising only 6.1 percent of all deaths in this age group (**Table 2C-26**). Looking at younger ages, Native American children comprised only 5.4 percent of Arizona's population age 1–14, but accounted for 11.7 percent of all childhood deaths. Native American adolescents represented only 5.1 percent of all adolescents, but accounted for 16.7 percent of all adolescent deaths. Finally, Native American young adults (ages 20–44) represented 4.8 percent of all young adults but comprised 14.2 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

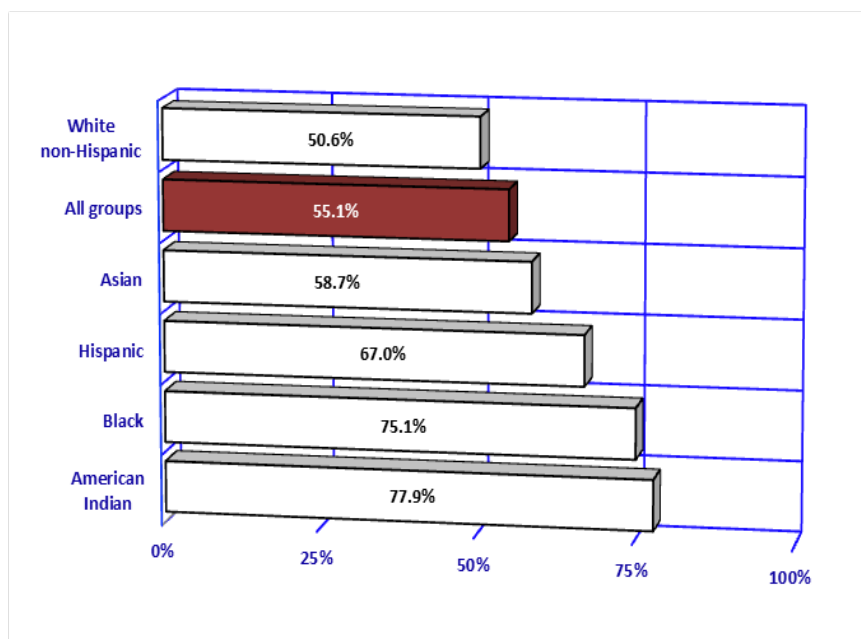
Figure 2D-1
Median Age at Death by Race/Ethnicity, Arizona, 2017



The median age at death remained at 76 years from 2014 to 2017 (**Table 2D-1**). In other words, one of every two Arizonans who died in 2017 was older than 76 years of age. Among Arizona females, 50 percent were 79 years older when they died in 2017. Among males, the median age at death was 73 years in 2017. **Table 2D-1** shows both the median age at death by race/ethnicity and gender from 2007-2017.

In 2017, compared to White non-Hispanics, on average Asians were 3 years younger at time of death, Hispanics were 9 years younger, Blacks were 13 years younger, and American Indian residents of Arizona were 17 years younger (based on the median age at death).

Figure 2D-2
Percent of Deaths before Expected^a Years of Life Reached by Race/Ethnicity, Arizona, 2017



The percent of deaths before expected years of life reached (a premature death ratio) decreased for all Arizonans from 55.3 percent in 2016 to 55.1 percent (**Figure 2D-2**).

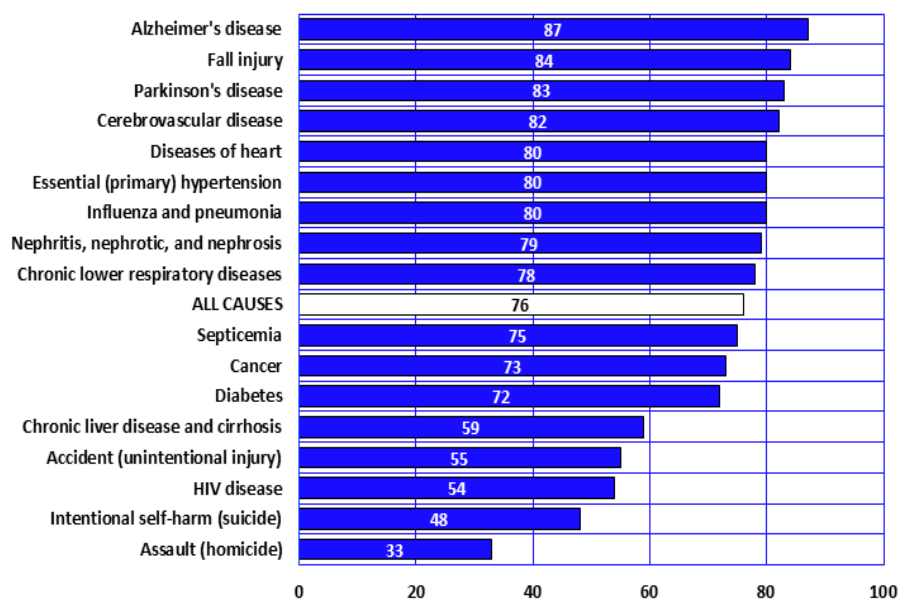
As expected, based on the findings for average and median age at death, White non-Hispanics were the only group with about 50 percent of all deaths (50.6 percent) occurring before the expected years of life were reached (**Figure 2D-2**). On average, 69.7 percent of the deaths among racial/ethnic minority groups occurred prematurely.

Among American Indians, nearly eight out of ten deaths (77.9 percent) were premature (**Table 2D-2**).

Note: ^a 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, 2017

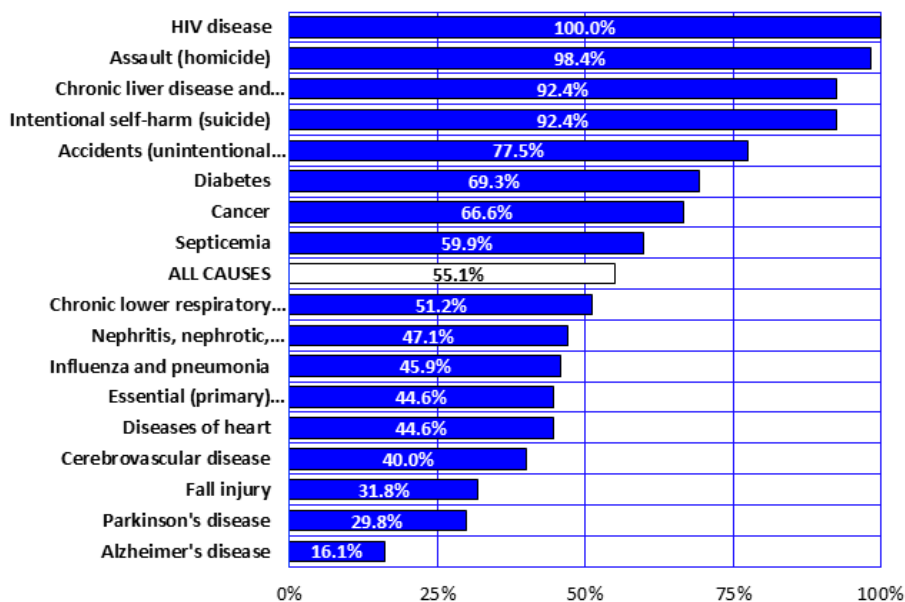


In 2017, *Alzheimer's disease* had the highest median age of death at 87 years (**Figure 2D-3**), exceeding by 11 years the median age at death for all causes (**Figure 2D-3, Table 2D-3**).

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^a Reached for Selected Leading Causes of Death, Arizona, 2017



Only 16.1 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, all deaths from *HIV disease* were premature (**Figure 2D-4, Table 2D-4**) and the median age at death from *HIV disease* increased at 54 years in 2017 (**Figure 2D-3, Table 2D-3**).

A minority of deaths from *diseases of heart* were premature (44.6 percent). In contrast 66.6 percent of deaths from *cancer* occurred before the expected years of life were reached.

Note: ^a 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, 2007-2017**

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		
2007	Total	71.2	76.0	74.2	78.0	58.4	64.0	60.1	62.0	57.2	59.0	64.9	70.0		
	Male	67.8	73.0	71.3	75.0	54.6	59.0	54.8	57.0	53.7	54.0	60.2	64.0		
	Female	74.9	80.0	77.4	81.0	63.4	71.0	66.5	70.0	61.9	67.0	69.0	73.0		
2008	Total	71.5	77.0	74.3	78.0	61.2	68.0	58.5	62.0	57.3	59.0	63.5	70.0		
	Male	68.4	73.0	71.6	76.0	57.1	62.0	55.3	59.0	53.7	54.0	61.5	67.5		
	Female	75.0	80.0	77.2	81.0	66.4	74.0	62.5	67.0	62.0	67.0	65.6	73.0		
2009	Total	71.9	76.0	74.3	78.0	61.8	67.0	60.0	64.0	57.6	59.0	66.7	74.0		
	Male	69.3	73.0	71.6	75.0	58.6	63.0	56.9	60.0	54.2	54.0	63.6	69.0		
	Female	74.8	80.0	77.2	81.0	65.7	72.0	63.4	68.0	61.8	66.0	70.1	77.0		
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		

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, 2007-2017**

Year/gender	All racial/ethnic groups	White non-Hispanic	Hispanic or Latino	Black or African American	American Indian or Alaska Native	Asian or Pacific Islander
2007 Total	52.6	47.7	71.6	73.3	75.8	64.9
Male	61.5	56.4	79.2	82.6	82.0	73.8
Female	42.9	38.5	61.3	62.1	67.5	57.4
2008 Total	52.4	48.0	67.6	74.7	76.5	66.4
Male	60.0	55.4	75.4	81.6	82.6	68.7
Female	43.9	40.0	57.6	66.4	68.6	63.9
2009 Total	52.5	48.0	68.0	73.0	76.4	60.6
Male	59.9	55.4	74.4	79.3	81.1	66.8
Female	44.5	40.1	60.1	66.1	70.6	53.9
2010 Total	54.5	49.9	68.7	73.4	79.6	65.1
Male	62.4	57.8	76.2	78.4	85.3	69.0
Female	45.8	41.5	59.5	67.4	71.9	60.7
2011 Total	53.8	49.6	67.4	74.4	77.7	66.3
Male	61.8	57.5	75.4	80.7	84.3	71.3
Female	45.1	41.2	57.3	67.1	70.0	61.5
2012 Total	55.0	50.9	68.4	74.4	78.7	62.3
Male	62.3	58.1	75.7	81.6	83.9	74.2
Female	46.7	43.0	59.1	66.1	72.2	51.9
2013 Total	54.6	50.1	67.1	72.8	76.7	58.9
Male	62.0	57.5	75.0	80.8	82.7	65.0
Female	46.2	42.1	57.7	62.4	68.9	53.2
2014^a Total	54.8	50.9	66.7	75.2	77.8	58.9
Male	62.0	58.0	74.1	79.7	84.1	68.9
Female	46.7	43.1	57.7	69.8	69.8	49.7
2015^a Total	54.9	50.9	67.4	74.1	77.4	59.9
Male	61.6	57.6	73.9	78.5	83.2	66.8
Female	47.2	43.4	59.1	68.6	70.2	53.1
2016 Total	55.3	51.4	66.7	73.5	77.1	58.5
Male	62.1	57.9	73.4	79.9	82.4	67.3
Female	47.5	44.1	57.9	64.9	69.7	50.6
2017 Total	55.1	50.6	67.0	75.1	77.9	58.7
Male	61.8	57.0	74.1	82.0	84.0	63.1
Female	47.3	43.3	58.0	66.1	69.9	54.7

Note: ^a Based on updated expected years of life at birth for all U.S. residents (78.8 years in 2017).

**TABLE 2D-3
 MEDIAN AGE AT DEATH FOR LEADING CAUSES OF MORTALITY BY GENDER, RACE/ETHNICITY, AND
 URBAN/RURAL AREAS^a, ARIZONA, 2017**

	ARIZONA				Area/gender				Race/ethnicity							
	Total	Male	Female	Total Urban	Urban		Rural		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
					Male	Female	Male	Female								
Total, all causes	76.0	73.0	79.0	76.0	74.0	80.0	76.0	74.0	80.0	78.0	69.0	65.0	61.0	75.0		
Major cardiovascular diseases	81.0	77.0	84.0	81.0	77.0	85.0	80.0	77.0	80.0	83.0	77.0	70.0	74.0	78.0		
Diseases of heart	80.0	77.0	85.0	81.0	77.0	85.0	79.0	77.0	83.0	83.0	77.0	68.0	73.0	77.0		
Coronary heart disease	79.0	76.0	84.0	80.0	76.0	85.0	78.0	75.5	82.0	82.0	76.0	69.0	75.0	78.0		
Malignant neoplasms	73.0	73.0	73.0	73.0	72.0	73.0	74.0	74.0	73.0	74.0	68.0	66.0	68.0	69.0		
Lung cancer	74.0	73.0	74.0	74.0	73.0	74.0	73.0	73.0	74.0	74.0	73.0	64.0	68.0	73.0		
Prostate cancer	80.0	80.0	NA	80.0	80.0	NA	80.0	80.0	NA	NA	80.0	78.0	69.5	81.0		
Breast cancer	69.0	69.0	69.0	69.0	68.5	69.0	70.0	73.5	70.0	70.0	61.0	60.5	67.0	61.0		
Colorectal cancer	71.0	69.0	74.0	71.0	68.0	74.5	71.0	70.0	74.0	74.0	73.0	66.5	63.0	62.0		
Malignant melanoma of skin	71.0	73.0	70.0	71.0	73.0	69.0	72.0	72.0	71.5	71.5	60.0	73.0	73.0	81.0		
Cerebrovascular diseases	82.0	79.0	84.0	82.0	79.0	85.0	82.0	79.0	83.0	83.0	78.0	75.0	75.0	78.0		
Chronic lower respiratory diseases	78.0	77.0	79.0	78.0	77.0	79.0	77.0	77.0	78.0	78.0	78.0	70.0	78.0	80.0		
Accidents (unintentional injuries)	55.0	52.0	63.5	55.0	50.0	64.0	57.0	56.0	63.0	63.0	41.0	46.0	44.0	67.0		
Motor vehicle accidents	44.0	45.0	43.0	44.0	45.5	42.0	44.0	43.0	46.0	46.0	34.0	46.0	37.0	55.0		
Falls	84.0	81.0	86.0	84.0	82.0	86.0	83.5	80.0	86.0	86.0	81.0	82.0	69.0	86.0		
Accidental poisoning	43.5	42.0	47.0	42.0	40.0	47.0	47.0	47.0	47.5	47.5	36.0	43.0	43.0	48.5		
Accidental drowning	34.5	33.0	41.5	32.5	31.5	36.0	46.0	35.5	55.0	55.0	48.5	28.0	30.0	71.0		
Influenza and pneumonia	80.0	78.0	83.0	80.0	77.0	82.0	83.0	79.0	85.0	85.0	77.0	75.0	72.0	68.0		
Alzheimer's disease	87.0	86.0	88.0	87.0	86.0	88.0	87.0	85.0	88.0	88.0	86.0	86.5	85.0	84.5		
Diabetes	72.0	71.0	73.0	71.0	71.0	72.0	73.0	71.0	75.0	75.0	70.0	68.0	68.0	73.0		
Intentional self-harm (suicide)	48.0	48.0	48.0	47.0	46.0	48.0	52.0	53.0	43.0	43.0	33.0	31.0	28.0	43.0		
Chronic liver disease and cirrhosis	59.0	60.0	59.0	59.0	60.0	59.0	59.0	60.0	57.0	57.0	61.0	60.0	51.0	56.0		
Nephritis, nephrotic syndrome and nephrosis	79.0	78.0	82.0	79.0	77.5	82.0	80.0	78.0	85.0	85.0	73.0	65.0	69.0	78.0		
Septicemia	75.0	72.5	75.0	74.0	72.0	75.0	77.0	72.5	81.0	81.0	72.0	74.0	67.0	75.0		
Assault (homicide)	33.0	33.0	36.0	32.0	31.0	33.0	39.0	36.5	49.0	49.0	43.0	33.0	32.0	57.0		
Parkinson's disease	83.0	82.0	83.0	83.0	82.0	83.0	82.0	82.0	83.5	83.5	80.0	80.0	81.5	83.5		
Essential (primary) hypertension and hypertensive renal disease	80.0	78.0	83.0	80.0	77.0	83.0	85.0	83.0	87.0	87.0	78.0	68.0	73.0	83.0		
Human immunodeficiency virus (HIV) disease	54.0	53.0	60.0	53.0	52.0	60.0	54.0	54.0	0.0	0.0	54.0	56.0	40.0	59.0		
INJURY BY FIREARMS	44.0	44.0	44.0	41.0	41.0	43.0	54.0	55.0	51.5	51.5	28.0	30.0	30.0	48.0		
DRUG-INDUCED DEATHS	45.0	42.0	48.0	44.0	42.0	48.0	46.0	42.0	49.5	49.5	47.0	43.0	38.0	48.5		
OPIOID-INDUCED DEATHS	41.0	38.0	46.5	40.0	38.0	47.0	43.5	40.0	47.0	47.0	45.0	38.0	34.0	50.0		
ALCOHOL-INDUCED DEATHS	55.0	56.0	55.0	56.0	57.0	55.0	54.0	54.5	52.0	52.0	55.0	60.0	49.0	52.5		

Notes: ^a 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^a YEARS OF LIFE REACHED FOR THE LEADING CAUSES OF MORTALITY BY
GENDER, RACE/ETHNICITY, AND URBAN/RURAL AREAS^b, ARIZONA, 2017**

	ARIZONA					Area/gender					Race/ethnicity					
	Total	Male	Female	Total	Urban	Urban	Urban	Rural	Total	Rural Male	Rural Female	White Non-Hispanic	Hispanic or Latino	Black or African American	American Indian or Alaska Native	Asian or Pacific Islander
						Male	Female									
Total, all causes	55.1%	61.8%	47.3%	54.4%	61.4%	46.6%	56.7%	62.1%	49.6%	50.6%	67.0%	75.1%	77.9%	58.7%		
Major cardiovascular diseases	44.1%	52.6%	34.1%	43.4%	52.3%	33.5%	45.8%	52.7%	36.1%	40.5%	54.2%	68.0%	62.7%	52.4%		
Diseases of heart	44.6%	53.3%	33.1%	43.5%	52.6%	33.2%	47.2%	54.2%	36.5%	41.1%	54.8%	69.5%	62.7%	55.3%		
Coronary heart disease	47.1%	55.5%	34.5%	45.9%	54.6%	33.3%	50.0%	56.8%	38.6%	44.2%	54.6%	68.5%	58.4%	53.5%		
Malignant neoplasms	66.6%	67.3%	65.8%	66.6%	67.4%	65.7%	66.4%	66.5%	66.2%	64.3%	75.7%	82.1%	73.3%	66.8%		
Lung cancer	67.8%	70.2%	65.0%	67.2%	69.5%	64.6%	69.3%	71.8%	66.0%	67.1%	68.7%	86.3%	68.4%	64.9%		
Colorectal cancer	66.1%	72.1%	58.0%	65.0%	71.0%	57.5%	70.0%	75.9%	59.5%	62.1%	81.1%	72.2%	85.2%	76.9%		
Breast cancer	75.4%	62.5%	75.5%	76.2%	66.7%	76.3%	71.2%	50.0%	71.5%	71.9%	86.7%	90.0%	88.2%	78.9%		
Prostate cancer	45.1%	45.1%	0.0%	45.7%	45.7%	0.0%	42.9%	42.9%	0.0%	41.8%	55.4%	78.6%	40.0%	57.1%		
Malignant melanoma of skin	73.7%	73.6%	73.8%	73.6%	73.2%	74.5%	73.3%	74.2%	71.4%	71.8%	100.0%	100.0%	100.0%	0.0%		
Accidents (unintentional injuries)	77.5%	84.1%	65.8%	76.8%	84.1%	64.3%	77.9%	82.3%	69.5%	70.7%	87.9%	92.5%	93.4%	70.6%		
Accidental poisoning	99.2%	99.1%	99.5%	99.5%	99.5%	99.7%	97.1%	96.3%	98.6%	99.3%	99.4%	100.0%	98.1%	100.0%		
Falls	31.8%	41.2%	23.3%	30.4%	39.5%	22.6%	36.5%	45.5%	26.5%	28.8%	42.2%	27.3%	71.8%	16.7%		
Motor vehicle accidents	92.7%	92.9%	92.4%	93.0%	92.9%	93.2%	91.7%	92.5%	89.7%	90.0%	95.5%	98.1%	96.0%	83.3%		
Accidental drowning	91.5%	94.6%	84.4%	91.7%	95.0%	83.3%	88.9%	90.0%	87.5%	86.0%	100.0%	100.0%	100.0%	60.0%		
Chronic lower respiratory diseases	51.2%	55.1%	47.6%	50.1%	54.6%	46.1%	53.9%	55.6%	52.0%	50.5%	51.4%	67.7%	53.3%	42.9%		
Alzheimer's disease	16.1%	19.1%	14.5%	16.4%	20.1%	14.5%	14.9%	14.9%	14.9%	15.7%	17.8%	18.8%	21.7%	19.2%		
Cerebrovascular diseases	40.0%	47.7%	33.8%	39.5%	47.7%	33.4%	41.0%	47.5%	34.6%	35.7%	51.5%	57.6%	64.6%	51.2%		
Diabetes	69.3%	71.6%	66.0%	69.2%	70.9%	66.9%	69.0%	73.6%	62.6%	63.8%	75.1%	76.6%	84.0%	64.3%		
Intentional self-harm (suicide)	92.4%	90.9%	97.4%	92.9%	91.6%	97.0%	90.7%	88.5%	98.6%	90.5%	98.3%	90.9%	100.0%	95.7%		
Chronic liver disease and cirrhosis	92.4%	93.6%	90.5%	91.6%	92.8%	89.7%	94.2%	95.6%	92.1%	90.1%	92.5%	100.0%	99.0%	91.7%		
Essential (primary) hypertension and hypertensive renal disease	44.6%	51.3%	38.5%	45.8%	53.2%	39.2%	35.2%	37.5%	32.8%	39.3%	52.8%	75.4%	63.6%	27.8%		
Influenza and pneumonia	45.9%	51.6%	40.1%	46.8%	52.5%	41.1%	41.7%	47.9%	36.2%	41.6%	52.8%	63.2%	60.0%	90.9%		
Parkinson's disease	29.8%	30.1%	29.2%	29.7%	29.8%	29.5%	30.5%	32.1%	28.0%	28.5%	41.4%	42.9%	27.8%	37.5%		
Nephritis, nephrotic syndrome and nephrosis	47.1%	53.0%	39.7%	48.4%	53.9%	41.8%	44.1%	51.1%	34.8%	39.0%	59.3%	78.3%	73.2%	63.6%		
Septicemia	59.9%	60.8%	59.0%	62.0%	61.0%	62.9%	52.6%	61.4%	45.3%	57.4%	64.0%	76.5%	68.8%	57.1%		
Assault (homicide)	98.4%	98.5%	97.9%	98.6%	98.9%	97.6%	96.7%	96.0%	100.0%	96.1%	99.4%	100.0%	100.0%	100.0%		
Human immunodeficiency virus (HIV) disease	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	0.0%	100.0%	100.0%	100.0%	100.0%	100.0%		
INJURY BY FIREARMS	92.1%	91.2%	96.7%	93.4%	92.7%	96.7%	87.0%	85.7%	96.7%	88.9%	99.1%	96.1%	100.0%	90.9%		
DRUG-INDUCED DEATHS	98.6%	98.7%	98.4%	98.5%	98.7%	98.2%	98.3%	97.8%	99.0%	98.0%	99.7%	100.0%	100.0%	100.0%		
OPIOID-INDUCED DEATHS	99.5%	99.5%	99.4%	99.4%	99.4%	99.2%	100.0%	100.0%	100.0%	99.3%	100.0%	100.0%	100.0%	100.0%		
ALCOHOL-INDUCED DEATHS	97.2%	96.5%	98.6%	96.7%	96.1%	98.0%	98.3%	97.5%	100.0%	96.4%	97.0%	100.0%	98.9%	100.0%		

Notes: ^a Expected years of life at birth for all U.S. residents (78.8 years in 2017); ^b Urban = Maricopa, Pima, Pinal, and Yuma counties.