2B.

LEADING CAUSES OF DEATH

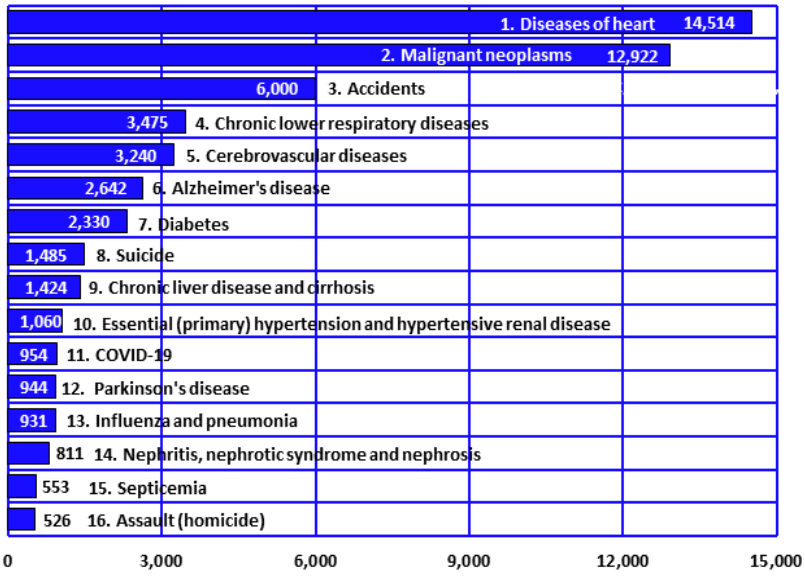
In 2010, the Office of Vital Records (OVR) of the Arizona Department of Health Services implemented the new (version 2003) Standard U.S. death certificate. The new certificate added several new questions: 1) whether tobacco use contributed to the death, and 2) whether, if the decedent was a female, the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

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

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.

Figure 2B-1A
Leading Causes of Death among Arizona Residents in 2023

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

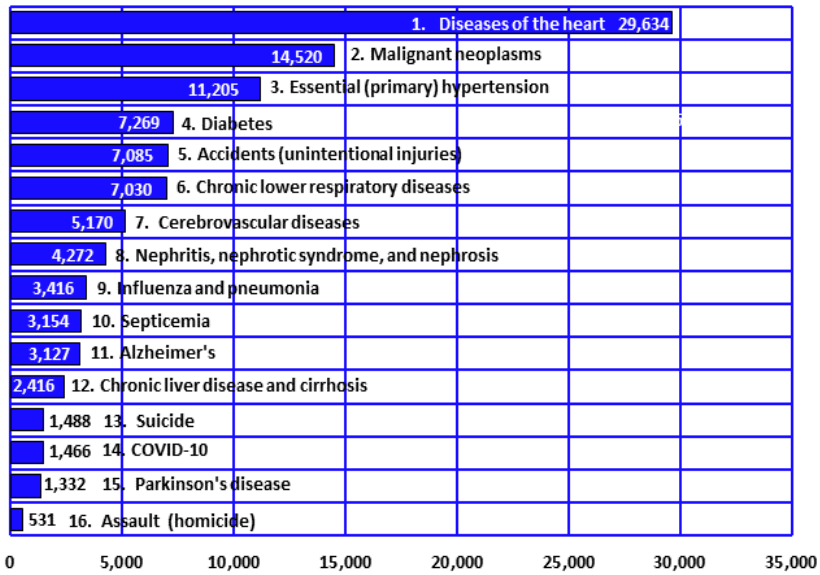


Based on the number of deaths (but not age-adjusted mortality rate), the leading underlying cause of death to Arizona residents in 2023 was *heart disease* (14,514 or 21.0 percent of all deaths), closely followed by *cancer*, which accounted for 12,922 or 18.7 percent of deaths (**Figure 2B-1A**, **Table 2B-1**, **Table 5E-14**).

The third leading cause of death, *accidents (unintentional injuries)* accounted for 6,000 or 8.7 percent of total deaths. Deaths due to *chronic lower respiratory diseases* ranked fourth in 2023, with 3,475 (5.0 percent) resident deaths reported. Deaths due to *cerebrovascular diseases* ranked fifth in 2023, with 3,240 (4.7 percent) resident deaths reported. Together, these five causes accounted for 58.2 percent of total deaths in 2023. The fifteen leading causes accounted for 77.2 percent of all deaths among Arizona residents.

Figure 2B-1B
Leading Causes of Death among Arizona Residents in 2023

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 14,514 deaths that had diseases of the heart assigned as the underlying cause, another 15,120 deaths had diseases of the heart assigned as a secondary cause of death. The sum of these two counts (29,634, **Figure 2B-1B**) is the total number of deaths that had any mention of diseases of the heart on the 2023 death certificates. The ranking based on any mention of the 15 diagnostic categories is different from ranking of the leading causes of death based on the underlying cause. In particular, *Essential (primary) hypertension* ranked 10th as the underlying cause but ranked 3rd when any mention of it was counted.

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 2023, diseases of the heart were the leading cause of death for White non-Hispanics, and Blacks. Cancer ranked 1st leading cause of death for Hispanics and Asians. Unintentional injury ranked 1st as the leading cause for American Indians. (**Figure 2B-2, Table 2B-4**). Chronic lower respiratory diseases were the 4th leading cause of death for only White non-Hispanics.

Cerebrovascular diseases ranked as the 4th leading cause of death for Hispanics, Black or African Americans, and Asians and 5th for White non-Hispanics, while Diabetes came in as the 5th leading cause of death specific to Hispanics, Blacks, American Indians, and Asians, while chronic liver disease and cirrhosis was unique to American Indians as the 4th highest ranking. (**Table 2B-4**).

Figure 2B-2
Age-adjusted Mortality Rates[a] for the Five Leading Causes of Death for Both Genders by Race/Ethnicity, Arizona, 2023

Rank	White non-Hispanic	Hispanic or Latino	Black or African American	American Indian or Alaska Native	Asian or Pacific Islander
1	Diseases of heart 148.9	Cancer 120.2	Diseases of heart 195.9	Unintentional injury 203.3	Cancer 88.3
2	Cancer 129.6	Diseases of heart 117.7	Cancer 166.9	Diseases of heart 157.0	Diseases of heart 79.6
3	Unintentional injury 71.1	Unintentional injury 63.7	Unintentional injury 98.7	Cancer 125.2	Unintentional injury 27.8
4	Chronic lower respiratory diseases 38.5	Cerebro-vascular diseases 38.5	Cerebro-vascular diseases 51.4	Chronic liver disease and cirrhosis 91.8	Cerebro-vascular diseases 25.9
5	Cerebro-vascular diseases 30.6	Diabetes 33.2	Diabetes 43.2	Diabetes 83.7	Diabetes 22.5

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

Based on age-adjusted mortality rates, cancer was the leading cause of death for Hispanic and Asian females. Diseases of the heart ranked 1st leading cause of death for White non-Hispanic, Black, and American Indian females. Unintentional injury ranked as the 2nd leading cause of death for American Indian females. Alzheimer's disease ranked as the 4th leading cause of death for Hispanic females and 5th for Black females. (**Figure 2B-3**, **Table 2B-4**).

Chronic lower respiratory diseases were the 4th leading cause of death specific to White non-Hispanic females. Chronic liver disease and cirrhosis also ranked 4th among the leading cause of death unique to American Indian women.

Cerebrovascular diseases ranked third among Hispanic and Asian females, 4th for Black or African American, while ranking fifth among White non-Hispanic women. Diabetes ranked 4th among Asian and 5th for American Indian females.

Figure 2B-3
Age-adjusted Mortality Rates[a] for the Five Leading Causes of Death by Race/Ethnicity among Females, Arizona, 2023

Rank	White non-Hispanic	Hispanic or Latino	Black or African American	American Indian or Alaska Native	Asian or Pacific Islander
1	Diseases of heart 115.0	Cancer 107.1	Diseases of heart 158.9	Diseases of heart 118.2	Cancer 81.6
2	Cancer 114.3	Diseases of heart 89.5	Cancer 142.6	Unintentional injury 115.4	Diseases of heart 64.3
3	Unintentional injury 42.3	Cerebro-vascular diseases 37.2	Unintentional injury 52.4	Cancer 103.2	Cerebro-vascular diseases 25.6
4	Chronic lower respiratory diseases 39.8	Alzheimer's disease 33.6	Cerebro-vascular diseases 44.6	Chronic liver disease and cirrhosis 82.3	Diabetes 22.7
5	Cerebro-vascular diseases 31.0	Unintentional injury 31.7	Alzheimer's disease 40.0	Diabetes 66.9	Unintentional injury 15.4

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

Figure 2B-4
Age-adjusted Mortality Rates[a] for the Five Leading Causes of Death by Race/Ethnicity among Males, Arizona, 2023

Rank	White non-Hispanic	Hispanic or Latino	Black or African American	American Indian or Alaska Native	Asian or Pacific Islander
1	Diseases of heart 186.7	Diseases of heart 152.2	Diseases of heart 237.7	Unintentional injury 299.8	Diseases of heart 102.2
2	Cancer 147.7	Cancer 138.2	Cancer 199.1	Diseases of heart 209.0	Cancer 96.7
3	Unintentional injury 99.9	Unintentional injury 96.5	Unintentional injury 143.3	Cancer 158.3	Unintentional injury 43.2
4	Chronic lower respiratory diseases 36.9	Cerebro-vascular diseases 39.8	Cerebro-vascular diseases 60.5	Diabetes 103.6	Cerebro-vascular diseases 25.9
5	Intentional Self-harm Suicide 35.1	Diabetes 39.3	Diabetes 55.3	Chronic liver disease and cirrhosis 102.4	Diabetes 21.6

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

Based on age-adjusted mortality rates for Arizona males, diseases of the heart ranked first as the leading cause of death for all racial/ethnic groups except for American Indians who ranked second. Cancer was the second leading cause for White non-Hispanic, Hispanic, Black or African American, and Asian males, and third for American Indian males. (**Figure 2B-4**; **Table 2B-4**).

Unintentional injury ranked as first leading cause of death for American Indian males.

In 2023, based on the age-adjusted mortality rates, chronic lower respiratory diseases were the 4th leading cause of death specific to White non-Hispanic males, while cerebrovascular diseases also ranked fourth among Hispanic, Black or African American, and Asian males. Suicide specific to White non-Hispanic males and chronic liver disease and cirrhosis unique among American Indian males, ranked 5th. Diabetes ranked 4th leading cause of death among American Indian males and 5th to Hispanic, Black and Asian 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, 2023

Rank	Urban male	Urban female	Rural male	Rural female
1	Diseases of heart 178.1	Diseases of heart 111.0	Diseases of heart 206.7	Cancer 124.8
2	Cancer 142.4	Cancer 110.4	Cancer 165.4	Diseases of heart 117.6
3	Unintentional injury 100.8	Unintentional injury 40.6	Unintentional injury 137.4	Unintentional injury 53.0
4	Cerebrovascular diseases 31.9	Cerebrovascular diseases 32.6	Intentional Self-harm (suicide) 52.5	Chronic lower respiratory diseases 47.8
5	Diabetes 30.8	Chronic lower respiratory diseases 31.2	Chronic lower respiratory diseases 47.8	Cerebrovascular diseases 30.0

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.

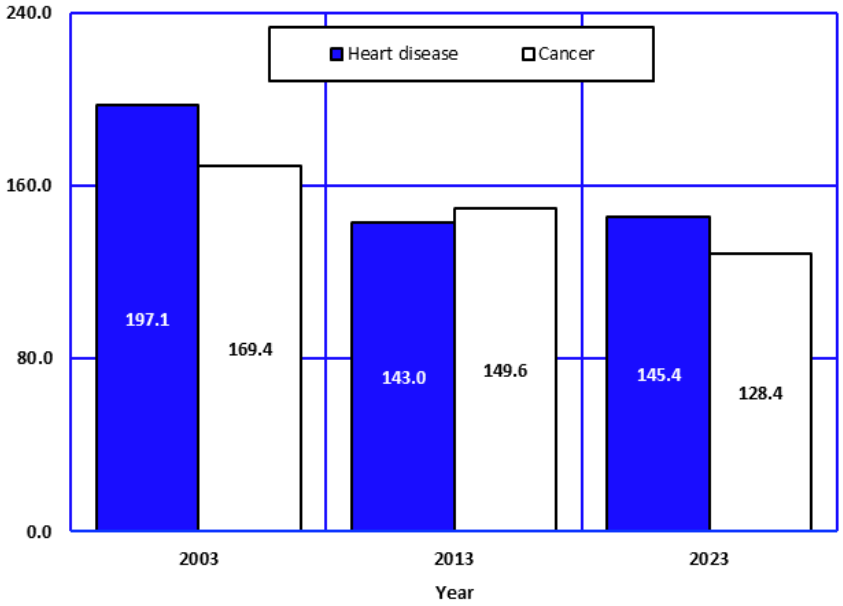
In 2023, diseases of the heart exceeded cancer as the leading causes of death among urban and rural males, and urban females, but came in 2nd for rural females. Cancer ranked first among rural females. Unintentional injury placed third among the leading causes for males and females regardless of area of residence. Cerebrovascular diseases ranked as the 4th leading cause among urban males and females while coming in 5th for rural females.

Chronic lower respiratory diseases ranked fourth among rural females and placed fifth among urban females and rural males. Intentional self-harm (suicide) ranked 4th and was specific to rural males, while diabetes specific to urban males ranked 5th leading cause of death (**Figure 2B-5**, **Table 2B-5**).

The age-adjusted mortality rate for diseases of the heart decreased by 26.2 percent from 197.1 deaths per 100,000 population in 2003 to 145.4/100,000 in 2023 (**Figure 2B-6**). The age-adjusted mortality rate for cancer declined less, by 24.2 percent, from 2003-2023. In Arizona, the relative risk of death from heart disease versus cancer declined from 16.4 percent greater in 2003 to 13.2 percent in 2023.

In 2013, 696 less Arizonans died from diseases of the heart than cancer (**Table 2B-1**). In 2023, the number of deaths due to diseases of the heart exceeded cancer by 1,592 cases (**Table 2B-4**).

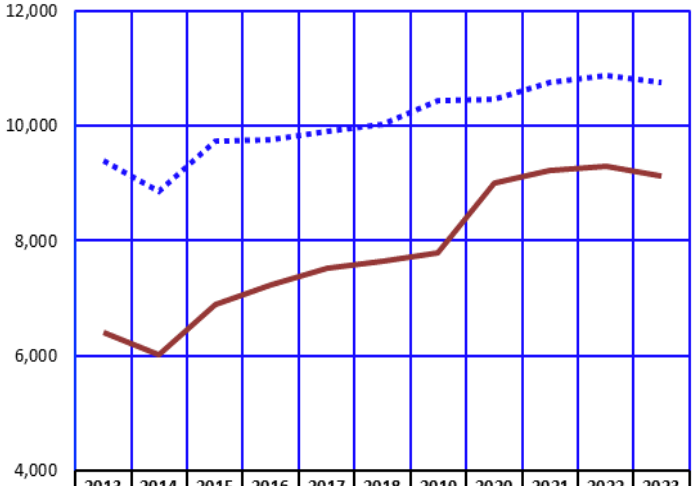
Figure 2B-6
Comparison of Age-adjusted Mortality Rates[a] for Heart Disease and Cancer (Malignant Neoplasm), Arizona, 2003, 2013, and 2023



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

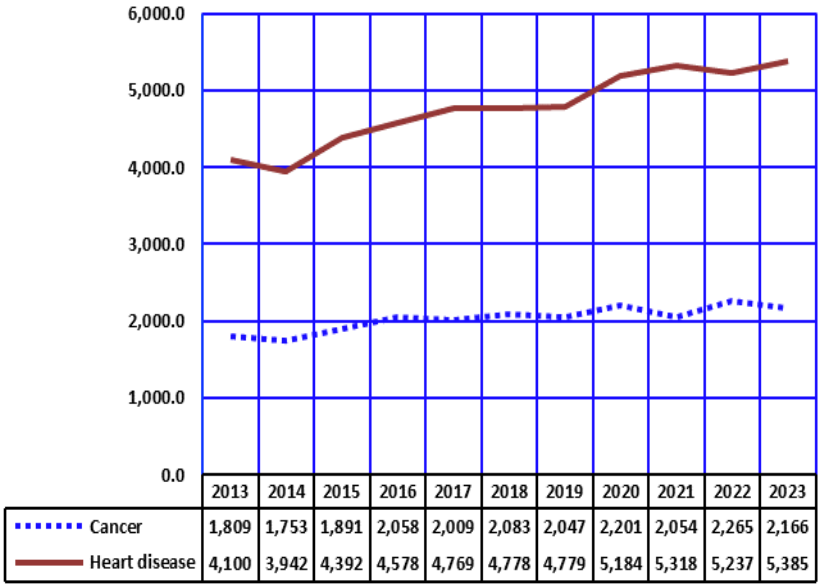
For the past several years, cancer has been the number one cause of death among Arizonans aged 0-84 years (**Figure 2B-7**). Beginning in 1996, the annual number of cancer deaths exceeded the number of deaths from heart disease in this age group. In 2023, 1,627 more Arizonans 0-84 years old died from cancer (10,756) than heart disease (9,129).

Figure 2B-7
Number of Deaths from Heart Disease and Cancer among Arizonans 0-84 Years, 2013-2023



	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Cancer	9,384	8,847	9,733	9,743	9,908	10,014	10,438	10,470	10,756	10,870	10,756
Heart disease	6,396	6,011	6,882	7,241	7,516	7,632	7,781	9,001	9,218	9,293	9,129

Figure 2B-8
Deaths from Heart Disease and Cancer among Arizonans 85+, 2013-2023

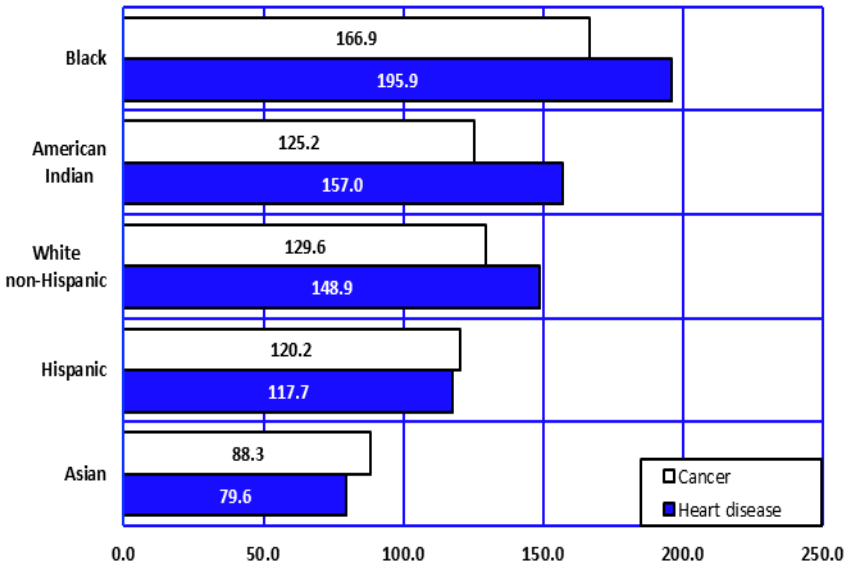


	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Cancer	1,809	1,753	1,891	2,058	2,009	2,083	2,047	2,201	2,054	2,265	2,166
Heart disease	4,100	3,942	4,392	4,578	4,769	4,778	4,779	5,184	5,318	5,237	5,385

Among Arizonans age 85 and over, heart disease is the number one leading cause of death by a wide margin. In 2023, adults aged 85 and over accounted for 16.8 percent of all deaths from cancer but 37.1 percent of all deaths from heart disease. In 2023, the median age at death for heart disease was 80 years (**Table 2D-3**); and a minority of deaths (43.7 percent, **Table 2D-4**) were premature, i.e., before reaching the expected years of life at birth for all U.S. residents (78.4 years).

However, from 2013 to 2023, the number of deaths from cancer increased by 19.7 percent among Arizonans 85 years or older, less than the increase observed in diseases of the heart (31.3 percent increase).

Figure 2B-9
Age-adjusted Mortality Rates[a] for Heart Disease and Cancer by Race/Ethnicity, Arizona, 2023



In Arizona, Black or African Americans were 2.5 times more likely to die from diseases of the heart and 1.9 times more likely to die from malignant neoplasms in 2023 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 1.9 times more likely to die of heart disease and 1.5 times more likely to die of cancer.

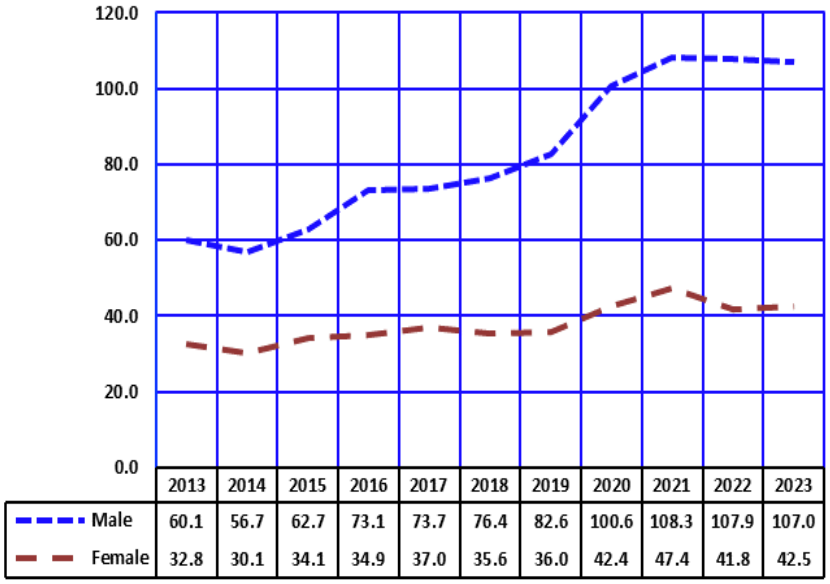
In 2023, the age-adjusted relative risk of death from heart disease exceeded cancer mortality risk (**Table 2B-3**) for most racial/ethnic groups except Hispanic and Asian.

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

The number of deaths from unintentional injuries increased by 2.2 percent from 5,868 in 2022 to 6,000 in 2023 (**Table 2B-1**). In 2023, based on age-adjusted mortality rates, accidents ranked third as a leading cause of death for males and fourth for females (**Table 2B-4**). From 2022 to 2023, the age-adjusted mortality rate for accidents decreased (0.8 percent) for males but increased (1.7 percent) for females **Figure 2B-10**).

In 2023, 1,299 deaths were caused by motor vehicle accidents, a decrease of 3.3 percent from 2022. Heat induced mortality has seen an increase of 44.9 percent between 2022 and 2023. Deaths due to accidental drowning and submersion decreased by 4.8 percent from 2022 (n=126) to 2023 (n=120). Additionally, Arizonans experienced a 0.8 percent decrease in the number of accidental poisonings due to drugs and/or medicaments from 2,388 fatalities in 2022 to 2,370 in 2023 (**Table 2B-9**).

Figure 2B-10
Age-adjusted Mortality Rates[a] for Accidents (Unintentional Injuries) by Gender and Year, Arizona, 2013-2023



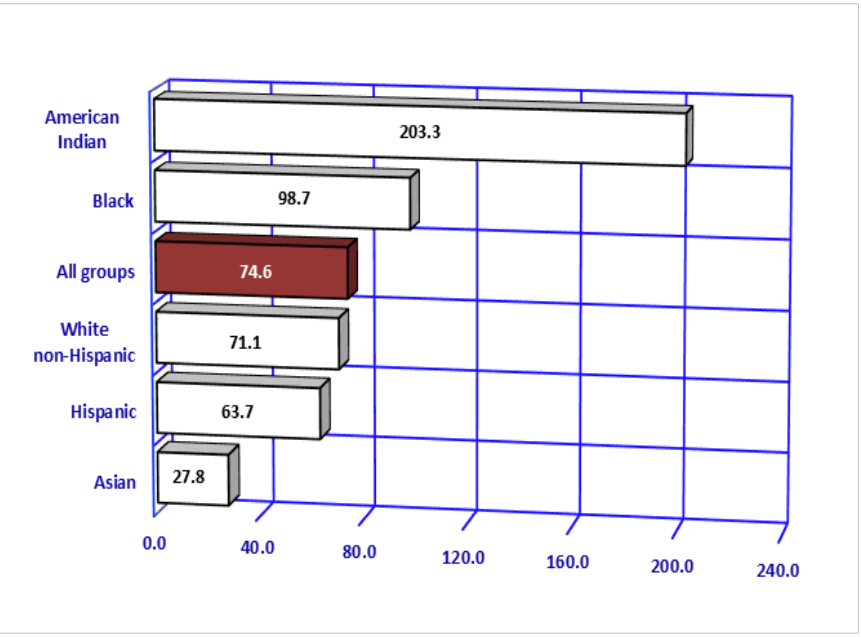
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Male	60.1	56.7	62.7	73.1	73.7	76.4	82.6	100.6	108.3	107.9	107.0
Female	32.8	30.1	34.1	34.9	37.0	35.6	36.0	42.4	47.4	41.8	42.5

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

The American Indian death rate for unintentional injuries (203.3/100,000) was 7.3 times greater than the rate for Asians 27.8/100,000), the group with the lowest risk of unintentional injury death among racial/ethnic groups in the state (**Figure 2B-11**, **Table 2B-4**).

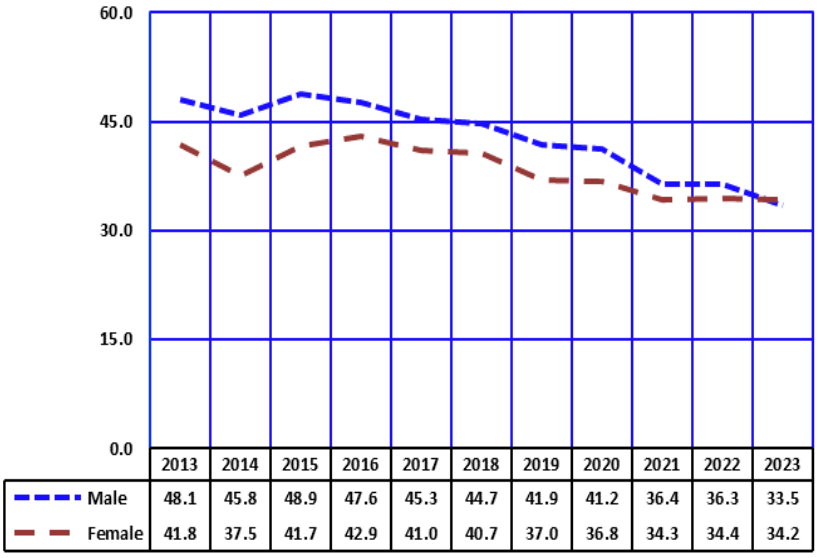
In 2023, Apache (233.8/100,000) and Navajo (155.7/100,000) counties had the two highest age-adjusted mortality rates for unintentional injuries (**Table 5E-11**).

Figure 2B-11
Age-adjusted Mortality Rates[a] for Accidents (Unintentional Injuries) by Race/Ethnicity, Arizona, 2023



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

Figure 2B-12
Age-adjusted Mortality Rates[a] for Chronic Lower Respiratory Diseases[b] by Gender and Year, Arizona, 2013-2023



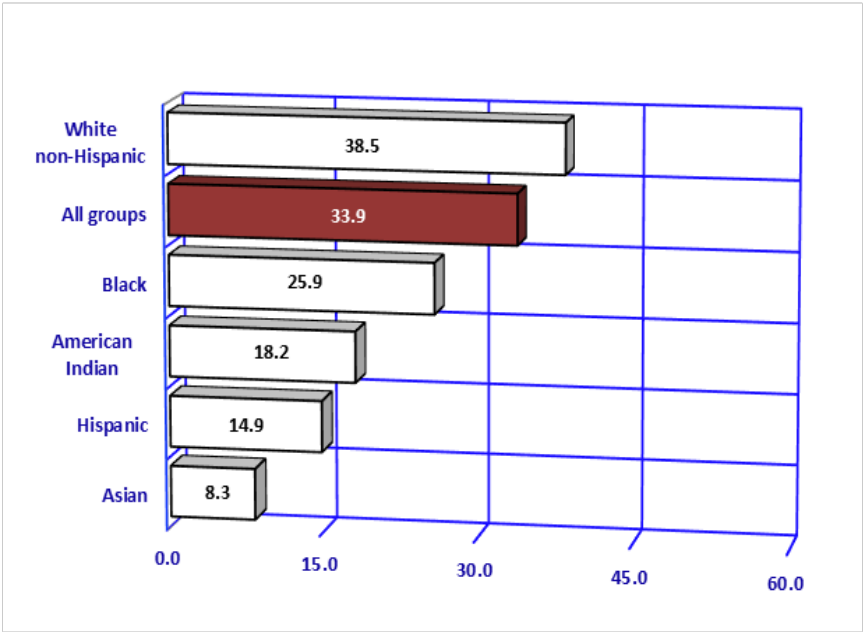
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Male	48.1	45.8	48.9	47.6	45.3	44.7	41.9	41.2	36.4	36.3	33.5
Female	41.8	37.5	41.7	42.9	41.0	40.7	37.0	36.8	34.3	34.4	34.2

In 2023, chronic lower respiratory diseases (bronchitis, emphysema, asthma) was the 4th leading cause of death among Arizona residents (**Table 2B-1**). The mortality rate for chronic lower respiratory diseases decreased for both males (7.7 percent) and females (0.6 percent) between 2023 and 2022 **Figure 2B-12**, **Table 2B-2**).

Among genders and regional groups, rural males and females experienced the highest mortality due to chronic lower respiratory diseases with rates of 47.8/100,000 respectively) (**Table 2B-5**).

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, 2023



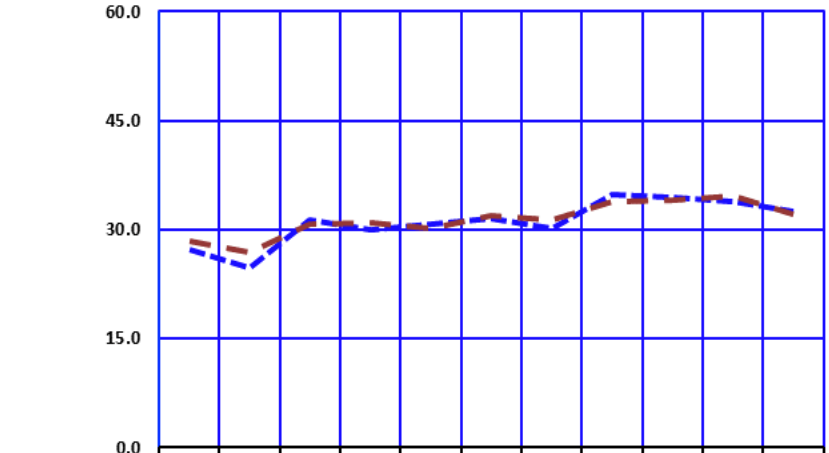
Mortality rates for emphysema, chronic bronchitis, asthma, and other lower respiratory disorders were highest among White non-Hispanics (38.5 deaths per 100,000) when compared to any other racial/ethnic groups in 2023. Asians recorded the lowest rate at 8.3 deaths per 100,000 population **(Figure 2B-13**, **Table 2B-4**).

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

Cerebrovascular disease and diseases of the heart are two of the leading causes of death that share many risk factors such as hypertension, smoking, obesity, and high levels of cholesterol. The age-adjusted mortality rate for cerebrovascular diseases decreased by 5.8 percent from 34.5/100,000 in 2022 to 32.5 deaths per 100,000 population in 2023 (**Table 2B-2**).

With some exceptions, the risk of dying from cerebrovascular diseases was slightly higher among females than males for the period 2013-2023 (6 of the last 11 years), but the rates were very similar. (**Figure 2B-14**, **Table 2B-2**).

Figure 2B-14
Age-adjusted Mortality Rates[a] for Cerebrovascular Disease by Gender and Year, Arizona, 2013-2023

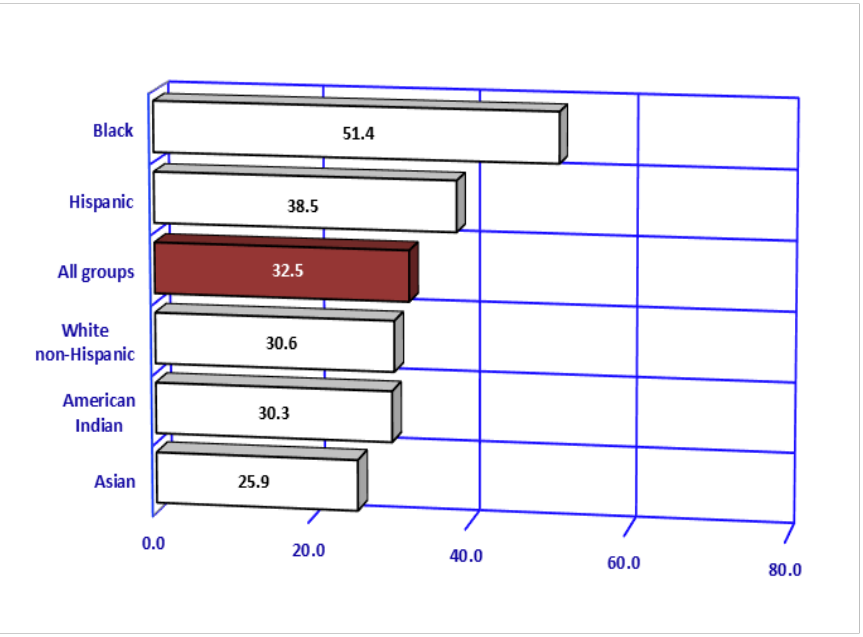


	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Male	27.2	24.8	31.3	29.9	30.7	31.6	30.2	34.8	34.4	33.9	32.5
Female	28.5	26.8	30.7	30.9	30.2	32.0	31.4	33.8	34.0	34.6	32.2

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

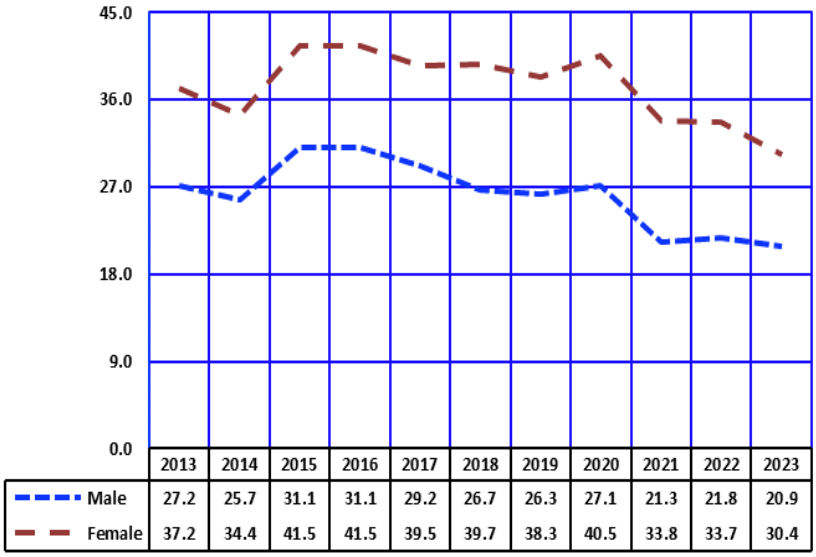
Compared to Arizona's overall rate, Black or African Americans were 1.6 times more likely to die from cerebrovascular disease in 2023 (**Figure 2B-15**, **Table 2B-4**). The 2023 mortality rate for cerebrovascular disease among Asians (25.9/100,000) was the lowest among racial/ethnic groups.

Figure 2B-15
Age-adjusted Mortality Rates[a] for Cerebrovascular Disease by Race/Ethnicity, Arizona, 2023



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

Figure 2B-16
Age-adjusted Mortality Rates[a] for Alzheimer's Disease by Gender and Year, Arizona, 2013-2023



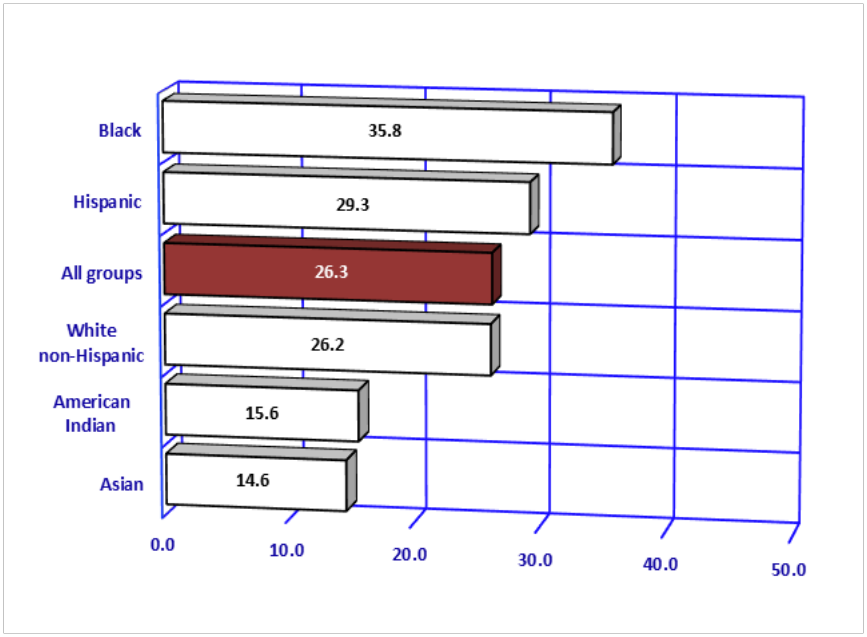
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Male	27.2	25.7	31.1	31.1	29.2	26.7	26.3	27.1	21.3	21.8	20.9
Female	37.2	34.4	41.5	41.5	39.5	39.7	38.3	40.5	33.8	33.7	30.4

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

Based on the number of deaths in 2023, Alzheimer's disease was the 6th leading cause of death for females and 8th leading cause for males (**Table 2B-4**)

From 2022 to 2023, the age-adjusted mortality rate for Alzheimer's disease decreased slightly for males (4.1 percent) and decreased for females (9.8 percent) (**Figure 2B-16**).

Figure 2B-17
Age-adjusted Mortality Rates[a] for Alzheimer's Disease by Race/Ethnicity, Arizona, 2023



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

The age-adjusted mortality rates for Alzheimer's disease in 2023 were higher among Black or African Americans (35.8/100,000) and Hispanic or Latinos (29.3/100,000) than the other racial/ethnic groups. Rates lower than the state average (26.3/100,000) were recorded among White -non-Hispanics (26.2/100,000), American Indians (15.6/100,000), and Asians (14.6/100,000) **Figure 2B-17**, **Table 2B-4**).

White non-Hispanic residents of Arizona disproportionately contributed to mortality from Alzheimer's disease. In 2023, White non-Hispanics accounted for 55.0 percent (**Table 10C-1**) of the state's population, but 81.5 percent of all deaths from Alzheimer's disease (2,154 out of 2,642; **Table 2B-4**).

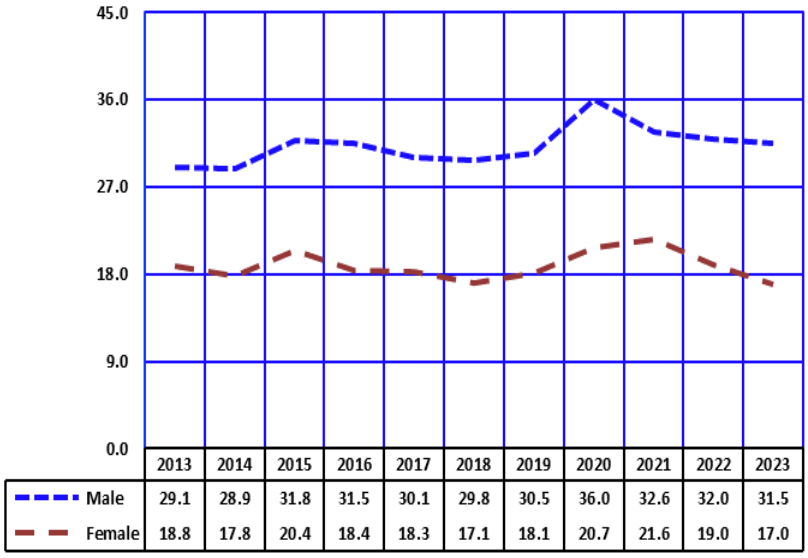
In 2023, the overall median age at death from Alzheimer's disease was 85.5, specifically 84 years for males and 87 years for females (**Table 2D-3**).

From 2013-2023, mortality rates for diabetes increased for males (8.2 percent) and decreased for females (9.6 percent; **Figure 2B-18**).

In addition to 2,330 deaths that had diabetes assigned as the underlying cause in 2023, another 4,939 deaths had diabetes assigned as a contributing factor. The diabetes-related death rate of 73.3/100,000 (**Table 6A-6**) was 3.1 times greater than the rate for diabetes as an underlying cause (23.9/100,000; **Table 2B-2**).

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

Figure 2B-18
Age-adjusted Mortality Rates[a] for Diabetes by Gender and Year, Arizona, 2013-2023



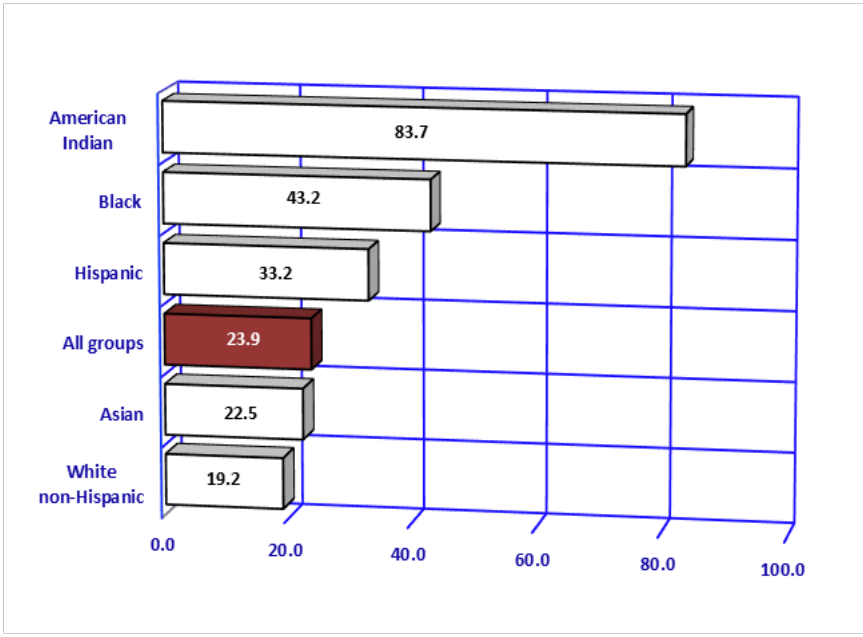
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Male	29.1	28.9	31.8	31.5	30.1	29.8	30.5	36.0	32.6	32.0	31.5
Female	18.8	17.8	20.4	18.4	18.3	17.1	18.1	20.7	21.6	19.0	17.0

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

In 2023, compared to Arizona's rate, American Indians were 3.5 times more likely to die from diabetes (83.7 deaths per 100,000; **Figure 2B-19**, **Table 2B-4**). The rate of 19.2 deaths per 100,000 among White non-Hispanics was the lowest rate among all racial/ethnic groups in the state.

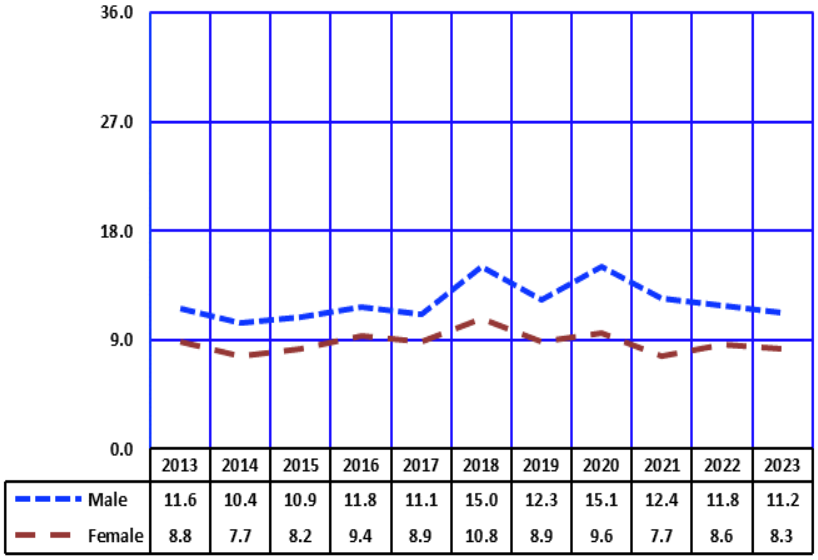
Among the 15 Arizona counties, Apache (48.8/100,000) and Gila (40.3/100,000) counties had the highest mortality rates for diabetes recorded in 2023 (**Table 5E-11**).

Figure 2B-19
Age-adjusted Mortality Rates[a] for Diabetes by Race/Ethnicity, Arizona, 2023



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

Figure 2B-20
Age-adjusted Mortality Rates[a] for Influenza and Pneumonia by Gender and Year, Arizona, 2013-2023



	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Male	11.6	10.4	10.9	11.8	11.1	15.0	12.3	15.1	12.4	11.8	11.2
Female	8.8	7.7	8.2	9.4	8.9	10.8	8.9	9.6	7.7	8.6	8.3

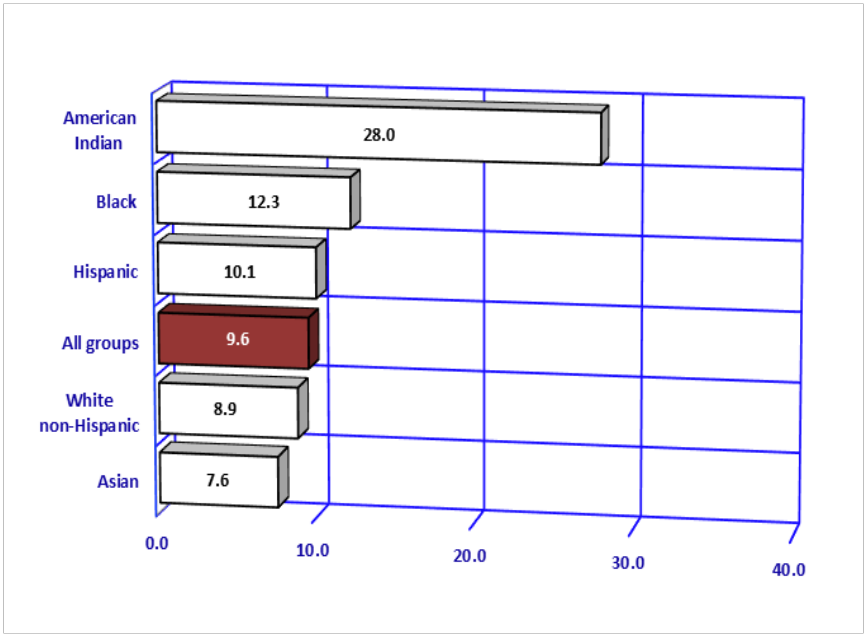
The number of deaths from influenza and pneumonia increased by 28.6 percent from 724 in 2013 to 931 in 2023. (**Table 2B-1**). Among the 931 deaths, influenza was identified as the underlying cause for 71 of them, while pneumonia was listed as the underlying cause on 860 death certificates (**Table 2B-6**).

The mortality rate for influenza and pneumonia decreased for females from 8.6 deaths per 100,000 in 2022 to 8.3 deaths in 2023 (**Figure 2B-20, Table 2B-2**). For males, they decreased from 11.8 per 100,000 in 2022 to 11.2 deaths in 2023.

In 2023, the age-adjusted mortality rate for Arizona males was 34.9 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, 2023



In 2023, American Indian residents of Arizona had the highest mortality rate for influenza and pneumonia (28.0 deaths per 100,000) among the racial/ethnic groups. Mortality due to influenza and pneumonia for White non-Hispanics (8.9/100,000) and Asians (7.6/100,000) were lower than the state rate. (**Figure 2B-21**, **Table 2B-4**).

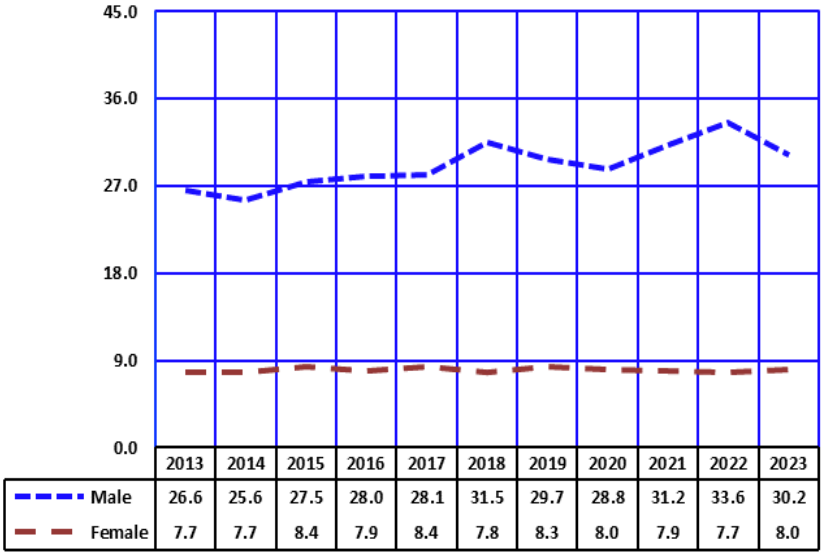
County comparisons show that in 2023 influenza and pneumonia mortality rates were highest in Apache (27.0/100,000), Navajo (20.5/100,000), and Gila (18.7/100,000) counties compared to the remaining counties (**Table 5E-11**).

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

In 2023, based on age-adjusted mortality rates, suicide was the 7th leading cause of death among males. It ranked as the 14th cause of mortality for females. The overall age-adjusted suicide rate decreased from 20.5 suicides per 100,000 in 2022 to 18.9 in 2023 (**Table 2B-3**).

From 2022 to 2023, suicide mortality decreased by 10.1 percent among males and increased 3.9 percent among females (**Figure 2B-22**, **Table 2B-4**). In 2023, suicide posed a 3.8 times greater mortality risk for males (30.2/100,000) than for females (8.0/100,000).

Figure 2B-22
Age-adjusted Mortality Rates[a] for Suicide by Gender and Year, Arizona, 2013-2023



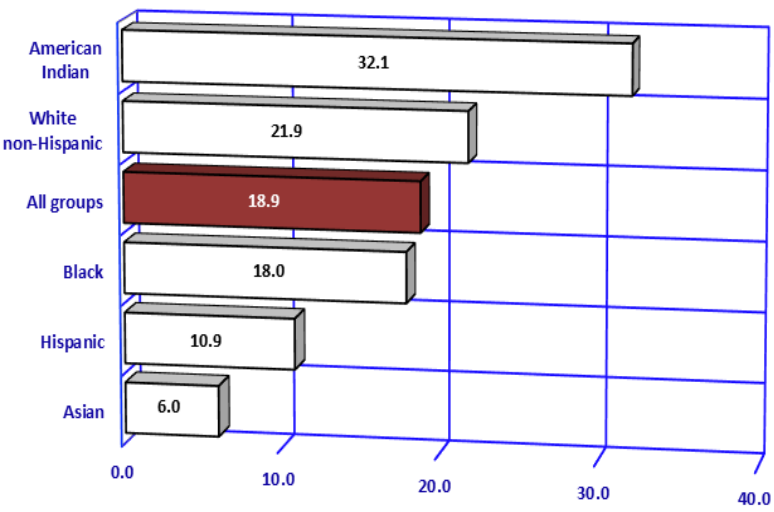
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Male	26.6	25.6	27.5	28.0	28.1	31.5	29.7	28.8	31.2	33.6	30.2
Female	7.7	7.7	8.4	7.9	8.4	7.8	8.3	8.0	7.9	7.7	8.0

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

In 2023, American Indians had the highest age-adjusted suicide rate (32.1 suicides per 100,000) among racial/ethnic groups, followed by White non-Hispanics (21.9/100,000), while Asians recorded the lowest age-adjusted suicide rate (6.0/100,000; **Figure 2B-23**, **Table 2B-4**).

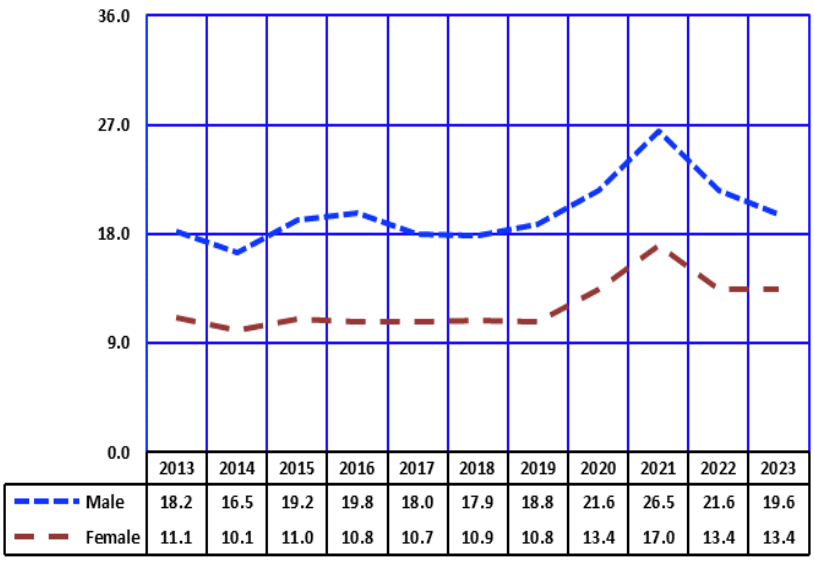
The 2023 age-adjusted mortality rates for suicide varied across the state, from a low rate of 11.3 suicides per 100,000 residents in Greenlee County to a high of 47.6 suicides per 100,000 residents in Navajo County (**Table 5E-11**).

Figure 2B-23
Age-adjusted Mortality Rates[a] for Suicide by Race/Ethnicity, Arizona, 2023



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

Figure 2B-24
Age-adjusted Mortality Rates[a] for Chronic Liver Disease and Cirrhosis by Gender and Year, Arizona, 2013-2023



	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Male	18.2	16.5	19.2	19.8	18.0	17.9	18.8	21.6	26.5	21.6	19.6
Female	11.1	10.1	11.0	10.8	10.7	10.9	10.8	13.4	17.0	13.4	13.4

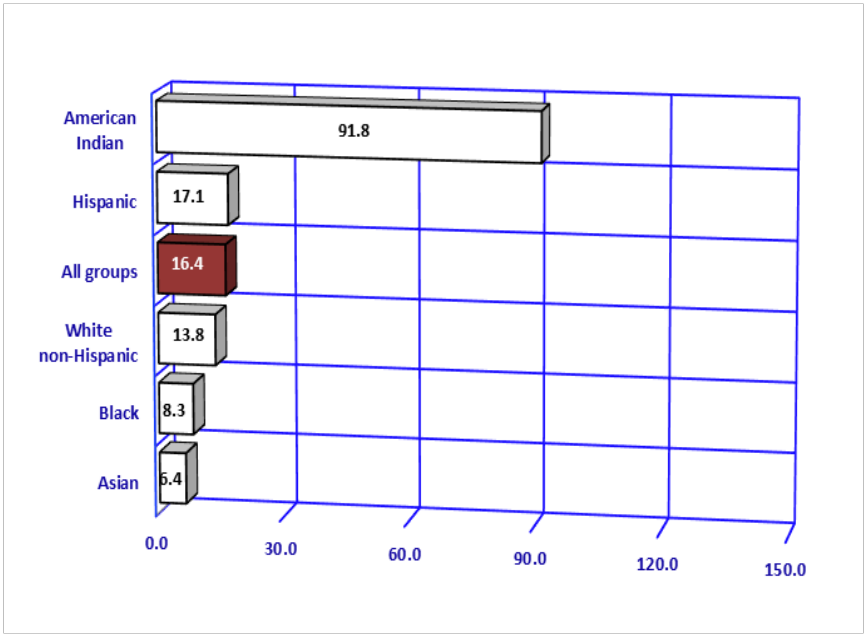
Note: [a] Number of deaths per 100,000 population age-adjusted to the 2000 U.S. standard.

Chronic liver disease and cirrhosis was the 9th leading cause of death in Arizona in 2023 (**Figure 2B-1, Table 2B-1**). Among the 1,424 deaths due to chronic liver disease and cirrhosis, 832 (58.4 percent) were males (**Table 2B-4**).

Among females, the age-adjusted mortality rate for chronic liver disease and cirrhosis remained the same from 2022 to 2023 (13.4 percent). Among males, the mortality rate decreased (9.3 percent) from 21.6/100,000 in 2022 to 19.6/100,000 in 2023 (**Figure 2B-24**, **Table 2B-3**).

In 2023, Apache, Navajo, La Paz, and Gila counties had the highest mortality rates for chronic liver disease and cirrhosis (**Table 5E-11**).

Figure 2B-25
Age-adjusted Mortality Rates[a] for Chronic Liver Disease and Cirrhosis by Race/Ethnicity, Arizona, 2023



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

In 2023, chronic liver disease and cirrhosis mortality rate was exceedingly high among American Indians (91.8 deaths per 100,000 population) compared to other racial/ethnic groups in the state (**Figure 2B-25, Table 2B-4**). The death rate for chronic liver disease and cirrhosis among Asians, Blacks, and White non-Hispanics, were all below the state average (16.4 deaths per 100,000 population).

Compared to the median age at death from all causes (76 years), those who died from chronic liver disease and cirrhosis were on average 15 years younger (61 years, **Table 2D-3**). In 2023, the median age at death of American Indians who died from chronic liver disease and cirrhosis was 49 years, which was at least 12 years younger than all the other race/ethnic groups (**Table 2D-3**).