

# Arizona Violent Death Reporting System

## Data-At-A-Glance: Suicide Deaths in Coconino County

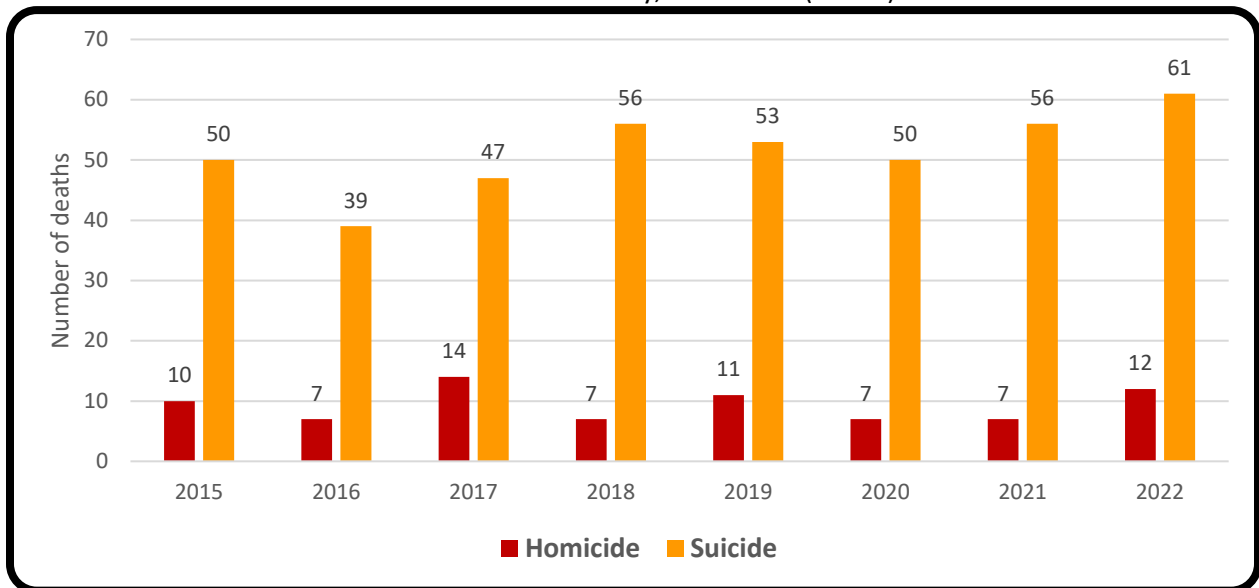


The Arizona Violent Death Reporting System (AZ-VDRS) collects violent death data from multiple sources, including death certificates issued by the Arizona Department of Health Services, police reports obtained from investigating agencies, and autopsy and toxicology reports from medical examiner offices. The purpose of the project is to assist stakeholders in strategic planning and prevention efforts aimed toward reducing the number of violent deaths occurring each year.

***Between 2015 and 2022, there were 487 known occurrent violent deaths in Coconino County, Arizona: 412 suicides and 75 homicides. These violent deaths do not include deaths of undetermined intent, unintentional deaths, or legal intervention deaths.***

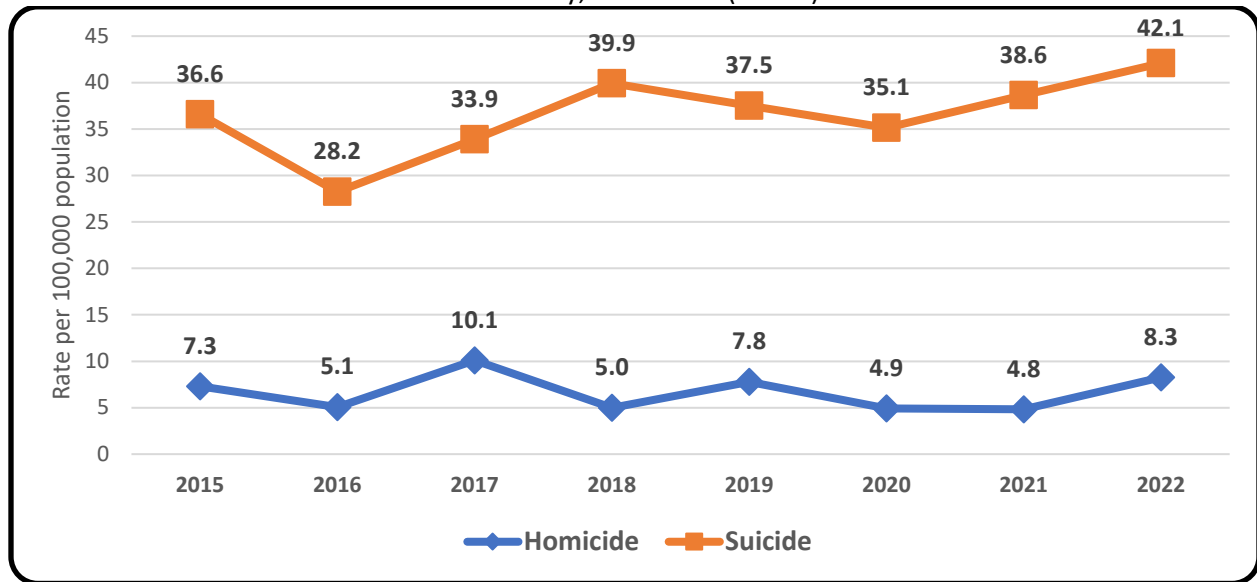
We begin our analyses of violent deaths in Coconino County by looking at overall numbers and rates of homicides and suicides. The population of the county changed very little over the time period, from a low of 136,701 in 2015 to the current total population estimate of 144,942. This represents an increase of 12.2%.

Number of homicides and suicides in Coconino County, 2015-2022 (n=487)



- 2016 has the fewest number of suicides (n=39) for the years 2015-2022. It was also tied for the fewest number of homicides (n=7).
- In stark contrast, 2022 had the highest number of suicides (n=61), and the second highest number of homicides (n=12) for the period.
- For comparison, there were an additional five homicides and five suicides in 2022 as compared to 2021 (n=7 and n=56, respectively).

Homicide and Suicide Rates in Coconino County, 2015-2022 (n=487)



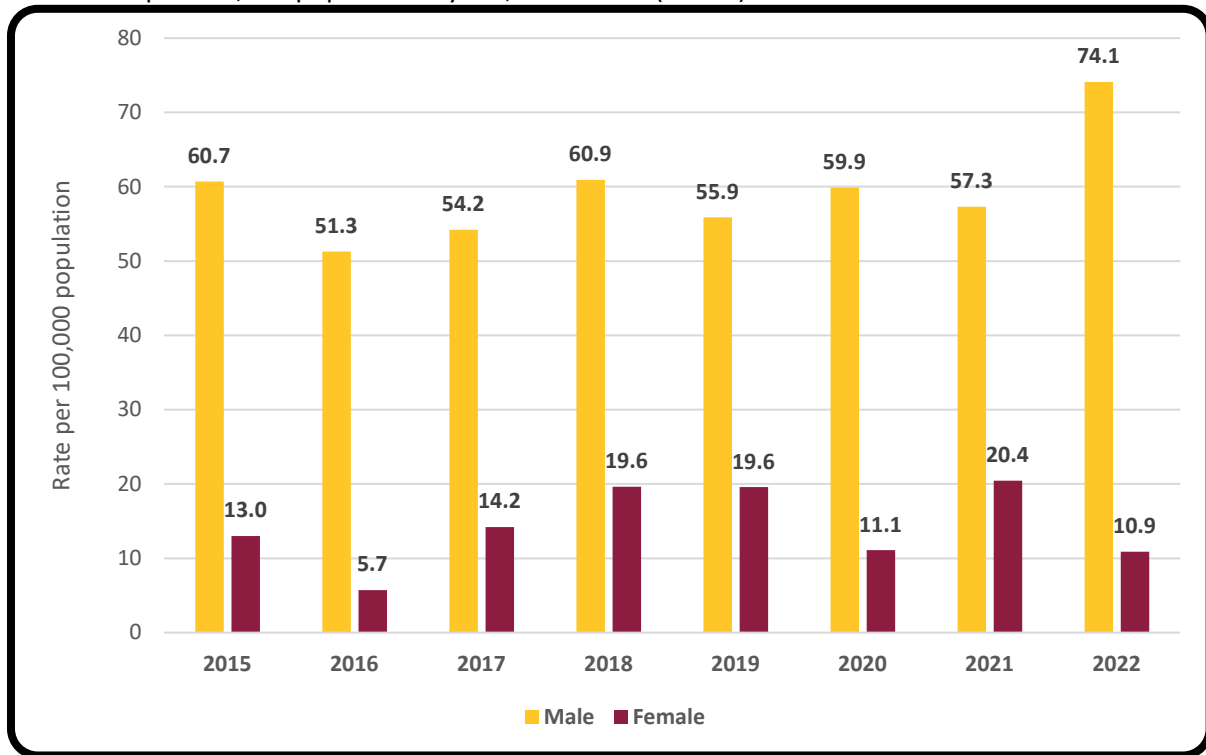
- Suicide rates per 100,000 population were notably low in 2016 (28.2).
- Generally, suicide rates ranged from 34 to 40 deaths per 100,000 population.
- There was a marked increase in suicide rates between 2020 and 2021 (35.1 to 38.6), which continued into 2022 (42.1).
- In 2022, Coconino County saw its highest rate of suicide (42.1) in the examined period, 2015-2022.
- Homicide rates peaked in 2017, at 10.1 homicides per 100,000 population.
- Homicides saw a substantial increase between 2021 and 2022, rising from 4.8 to 8.3 homicides per 100,000 population in just one year.

## Suicide

### Suicides by Sex

Examining suicide rates over the past eight years shows notable changes. First, we examined differences in suicides occurring in Coconino County between males and females. Suicide rates are typically higher among male victims than female victims, and this holds true in Coconino County. In 2022, statewide suicide rates were 36.7 per 100,000 population for males and 8.7 for females, in contrast to the 74.1 per 100,000 population for males and 10.9 for females in Coconino County.

Suicide rates per 100,000 population by sex, 2015-2022 (n=412)



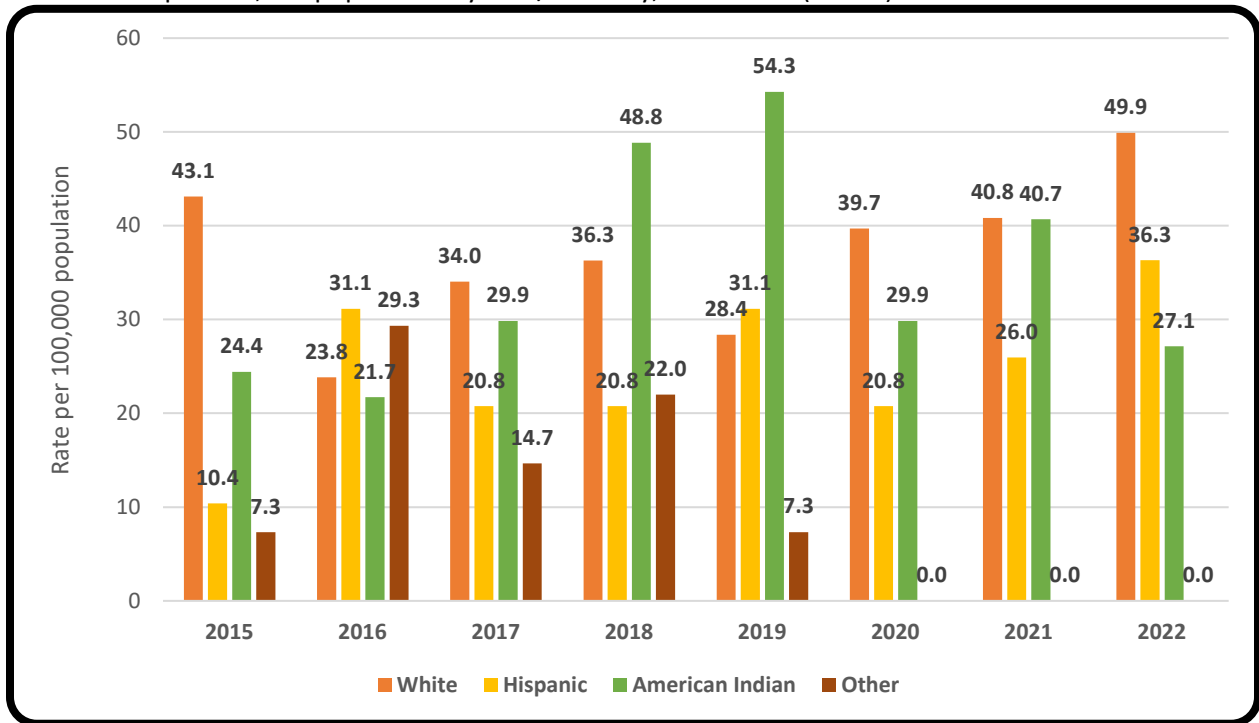
- From 2015-2021, the suicide rate for male victims intermittently ranged from about 51 to 61 deaths per 100,000 population.
- The male suicide rate rose substantially in 2022, to 74.1 suicides per 100,000 population.
- In contrast, the female suicide rate in 2022 was 10.9 per 100,000 population, which is the second lowest rate in the eight-year period.

### Suicides by Race and Ethnicity

Next, we examined suicide rates across races and ethnicities. For our analyses, the racial categories were limited to white non-Hispanic, white Hispanic, American Indian/Native American, and all others. We truncated the race/ethnicity categories in this manner due to population sizes. The Other category includes Black or African American, Asian and Pacific Islander, unidentified others, and multi-racial decedents. None of these groups accounted for more than 1% of the county's total population. Due to data anonymity and confidentiality protocols, the AZ-VDRS will not report on findings with a significantly low instance rate.

The graph below shows the annual rate per 100,000 population for the analyzed race/ethnicity categories from 2015-2022.

Suicide rates per 100,000 population by race/ethnicity, 2015-2022 (n=412)

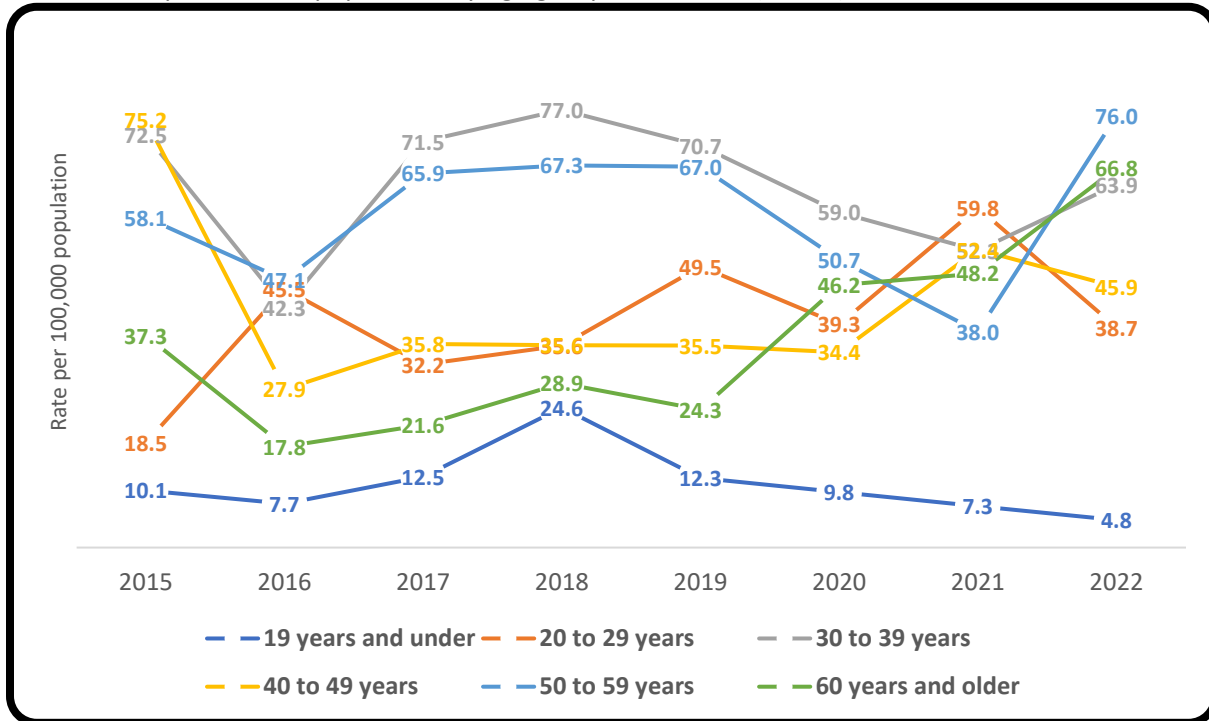


- Overall, white non-Hispanic and American Indian decedents were more than three times as likely to be a suicide victim than those in the “Other” category.
- Looking at the eight-year average rate per 100,000 population, white non-Hispanic victims were the highest at 37.0, followed by American Indian victims (34.6), white Hispanic victims (24.7), and victims in the Other category at 10.1.
- American Indian victims saw their highest rates in 2018 (48.8) and 2019 (54.3).
- Among both white non-Hispanic and white Hispanic victims, we found their highest rates in the eight-year study period in 2022 at 49.9 and 36.3, respectively.

### Suicides by Age Group

Next, we examined suicide rates across age groups. Using U.S. Census estimates, we collapsed our age groups into six categories, largely based on decades. The youngest group was aged 19 years and under, followed by 20-29, 30-39, 40-49, 50-59, and finally, 60 years and older.

Suicide rates per 100,000 population by age group, 2015-2022 (n=412)



- Those aged 30-39 years had the most consistently high suicide rates for all groups, with a mean of 63.6 (not shown) deaths per 100,000 population for the eight-year period.
- Victims aged 50-59 had the second highest average rate of suicide at 58.8 per 100,000 population (not shown).
- For those aged 30-39 years, the suicide rate in 2022 was 76.0 per 100,000 population. This was second only to 2018 (77.0) for this age group and significantly higher than the eight-year mean of 63.6 (not shown).
- Suicide rates for all groups were generally elevated in 2018.

### Suicides by Method of Death

Finally, we examined the method or cause of victims' fatal injuries. Over the period from 2015 through 2022, there were 412 suicides in our analysis file. Displayed in the table below are the numbers of suicide victims by method and the percentage of the total that method represents. Firearms were by far the leading method of death for suicide victims (n=194; 47.1%). Hanging/suffocation were also a common means of suicide, with nearly one-third (n=122; 29.6%) of victims using this method. The poisoning category was predominated by drug overdoses and carbon monoxide poisonings (n=44; 10.7%). Jumping from bridges, cliffs, or other great heights (i.e., falls) was also not uncommon among suicide victims (n=33; 8.0%). Vehicular deaths (n=13; 3.2%) included typical passenger cars, tractor-trailers, as well as trains.

Suicides occurring in Coconino County, 2015-2022 (n=412)

Method of fatal injury	n	%
Firearm	194	47.1
Hanging, strangulation, or suffocation	122	29.6
Poisoning	44	10.7
Fall	33	8.0
Vehicular	13	3.2
Other †	6	1.5

† Includes sharp force trauma, fire/burns, drowning, and other methods.

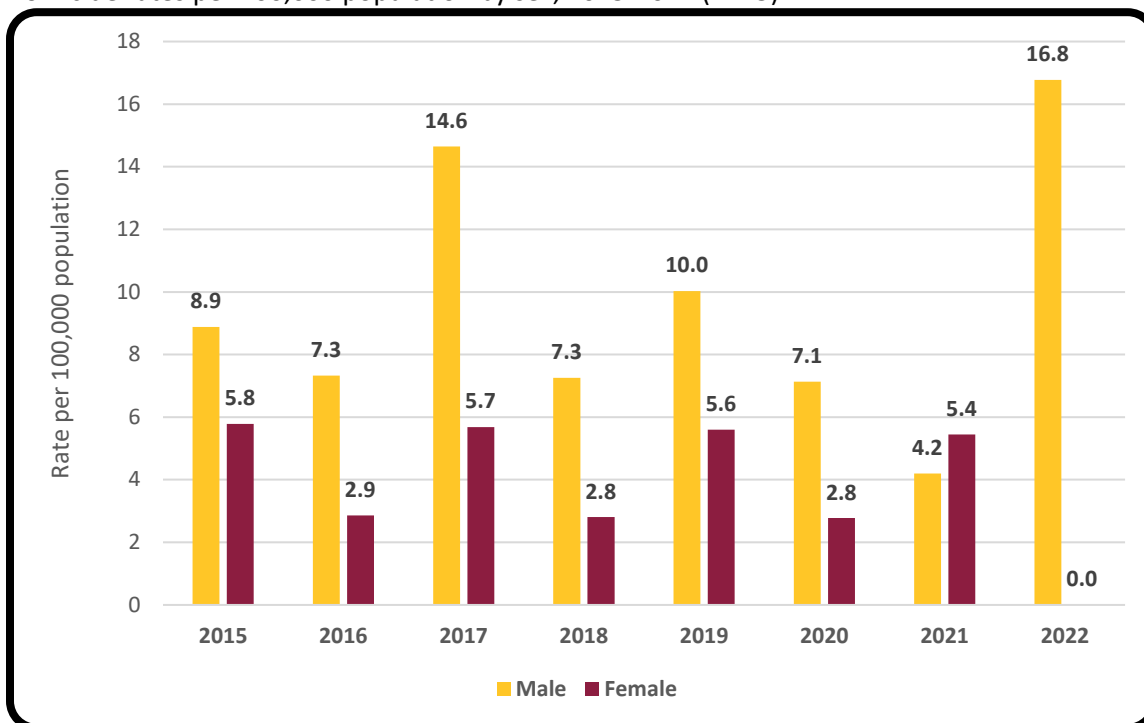
## Homicides

### Homicides by Sex

Examining homicide rates over the past eight years shows notable changes. As we did with suicides, we first examined differences in homicides between males and females occurring in Coconino County. Homicide rates are typically higher among male victims than female victims, and this largely holds true in Coconino County. The notable exception to this was seen in 2021 homicide rates, where females had 5.4 homicides per 100,000 population, compared to just 4.2 among males.

In 2022, Coconino County saw the highest rate of male homicide victims in the entire study period, with 16.8 homicides per 100,000 population. This far outpaced the mean rate for the period of 9.5 for male victims (not shown).

Homicide rates per 100,000 population by sex, 2015-2022 (n=75)

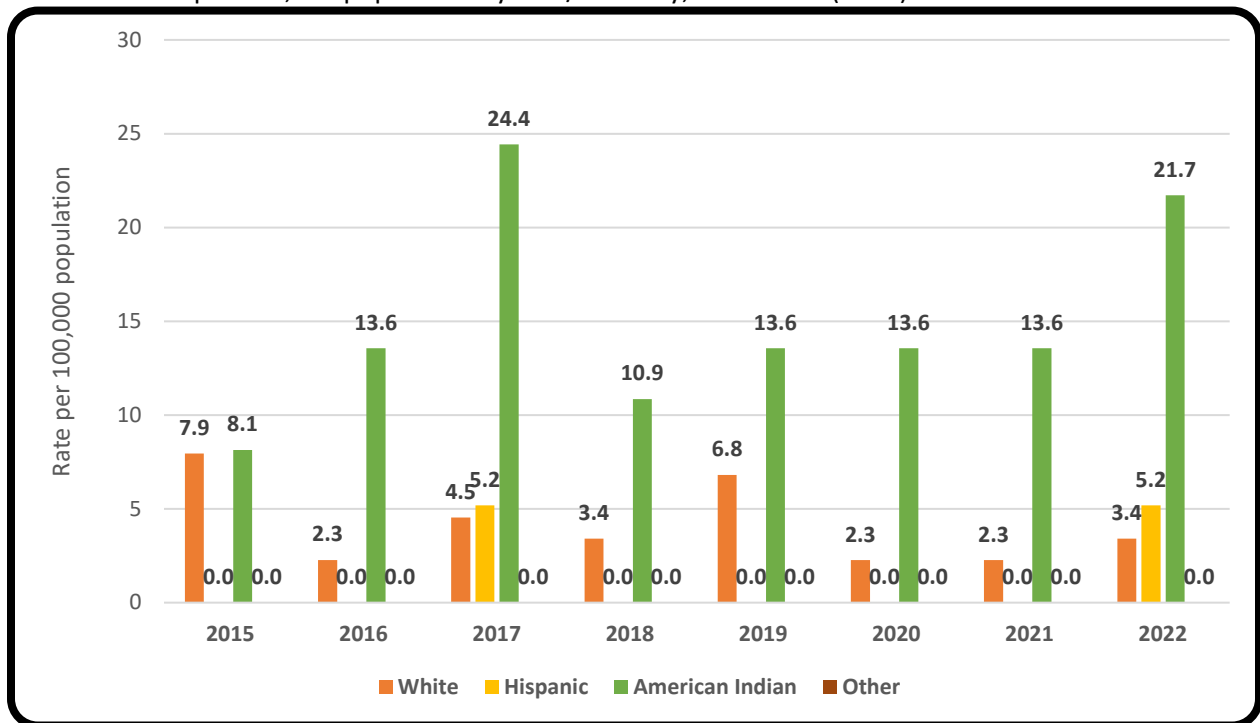


## Homicides by Race and Ethnicity

Next, we examined homicide rates across races and ethnicities. For our analyses, the racial categories were limited to non-Hispanic white, Hispanic white, American Indian/Native American, and all others. We truncated the race/ethnicity categories in this manner due to small population sizes. The Other category includes Black or African American, Asian and Pacific Islander, unidentified others, and multi-racial decedents. None of these groups accounted for more than 1% of the county's total population. Due to data anonymity and confidentiality protocols, the AZ-VDRS will not report on findings with a significantly low instance rate.

The graph below shows the annual rates per 100,000 population for the analyzed race/ethnicity categories, from 2015-2022. American Indian/Native American victims were consistently at the highest risk for being the victim of a homicide, seeing particularly high rates in 2017 and 2022.

Homicide rates per 100,000 population by race/ethnicity, 2015-2022 (n=75)

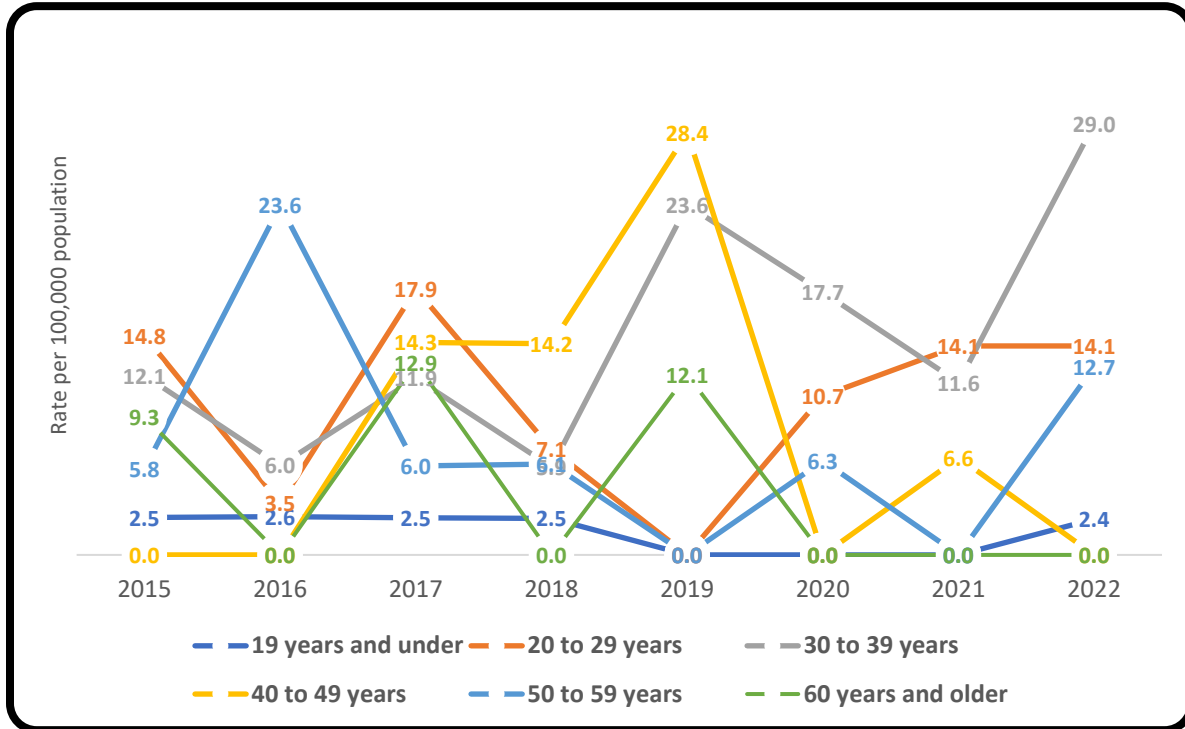


- American Indian/Native American victims saw their highest rates in 2017 (24.4) and 2022 (21.7).
- American Indian/Native American victims consistently saw double or more the rate per 100,000 population compared to any other race/ethnicity group.

## Homicides by Age Group

Next, we examined homicide rates across age groups. Using U.S. Census estimates, we collapsed our age groups into six categories, largely based on decades. The youngest group was aged 19 years and under, followed by 20-29, 30-39, 40-49, 50-59, and finally, 60 years and older.

Homicide rates per 100,000 population by age group, 2015-2022 (n=75)



- Those aged 30-39 years had the most consistently high homicide rates for all groups, with a mean of 14.7 (not shown) deaths per 100,000 population for the eight-year period.
- Victims aged 20-29 years had the second highest homicide rates, with a mean of 10.3 (not shown) deaths per 100,000 population for the eight-year period.
- A notable standout for the 40-49-years group was their rate of 28.4 in 2019, the highest recorded for that age group by double compared to any other year.
- For those aged 50-59 years, there was a similar spike in 2016 with 23.6 homicides per 100,000 population, although this group also saw a substantially high rate in 2022 (12.7).

## Homicides by Method of Death

Finally, we examined the method or cause of victims' fatal injuries. Over the period from 2015 through 2022, there were 75 homicides in our analysis file. Displayed in the table below are the numbers of homicide victims by method and the percentage of the total that method represents. Firearms were by far the leading cause of death for homicide victims, with more than four in 10 homicides occurring as a



result of a firearm injury (42.7%). Blunt force trauma, which could include the use of a blunt instrument as a weapon (e.g., bat, hammer, pipe) or the use of hands, fists, kicking, etc., was the second leading cause, with more than a quarter (28.0%) of victims receiving their fatal injuries by this method. Sharp force trauma (i.e., stab wounds or lacerations) was also common (n=17; 22.7%). All other means were rare (n=5; 5.3%).

Homicides occurring in Coconino County, 2015-2022 (n=75)		
Method of fatal injury	n	%
Firearm	32	42.7
Blunt force trauma	21	28.0
Sharp force trauma	17	22.7
Other †	5	5.3

† Includes poisoning, strangulation, suffocation, falls, fire/burns, drowning, motor vehicles, and other methods.

## Conclusion

This report was prepared on request. Stakeholders in Coconino County have used AZ-VDRS data and customized jurisdictional reports like this for many years. This report uses the available data from 2015, the start of the Arizona Violent Death Reporting System (AZ-VDRS), through the most recent data collection year, 2022. These data are not routinely publicly available, but data requests and reports like this can be created and provided by the AZ-VDRS team for its stakeholders and their uses.

This report, as with all AZ-VDRS products, will be made available on the AZ-VDRS website: <https://cvpcs.asu.edu/content/about-azvdrs> .