

Population Health Vital Statistics Brief:

Suicide, 2007-2021

The *Population Health Vital Statistics Data Brief* series was created to provide regular updates to the Community Health Assessment and to provide the community with additional important information about population health. For more information on the Community Health Assessment and to access other reports in the *Vital Statistics Data Brief* series, please visit [scph.org/assessments-reports](https://www.scph.org/assessments-reports)

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Introduction

The Summit County Public Health Population Health Division's *Vital Statistics Brief* report series provides the citizens of Summit County with regular updates on several key topics related to health and health outcomes. Additional volumes in the series will also be released from time to time, updating the community on other topics of interest.

For those interested in obtaining detailed data and statistics, please visit our website, <https://www.scph.org/assessments-reports>. There, visitors can access our interactive Data Dashboards, which allows users to design customized graphics and tables for their own use.

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Age-Adjusted Suicide Rates in Summit County

Age-adjusted suicide rates in Summit County were just above the national average, 14.1 per 100,000 in 2020 (the last year that comparable data was available). Suicide rates rose steadily to a peak of 18.5 per 100,000 by 2015, and have been higher than the national average every year since 2013. Suicide rates also rose for the nation as a whole, peaking at 14.3 per 100,000 in 2018.¹ Despite the recent declines, age-adjusted suicide rates were 42% higher in 2020 than they were in 2007. The national rate only rose by 19% between those same years.

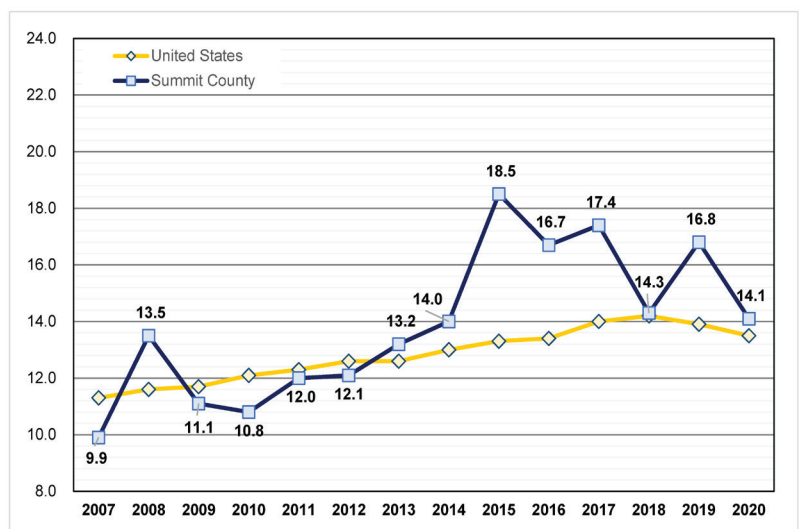


Figure 1: Age-Adjusted Suicide Rates in Summit County and the U.S.
Source: CDC WONDER Underlying Cause of Death Statistics; accessed from <https://wonder.cdc.gov/>

¹ Source: CDC WONDER Underlying Cause of Death Statistics; accessed from <https://wonder.cdc.gov/>

10 Leading Causes of Death by Age Group, Summit County, 2007-2021

Rank	Under 5	5 - 14	15 - 24	25 - 34	35 - 44	45 - 54	55 - 64	65 - 74	75 - 84	85 & over
1	Unintentional injury	Unintentional injury	Unintentional injury	Unintentional injury	Unintentional injury	Cancer	Cancer	Cancer	Heart disease	Heart disease
2	Perinatal condit.	Cancer	Assault (homicide)	Assault (homicide)	Cancer	Heart disease	Heart disease	Heart disease	Cancer	Alzheimer's disease
3	Congen / chromo abnorm	Assault (homicide)	Suicide	Suicide	Heart disease	Unintentional injury	COVID-19	COVID-19	COVID-19	COVID-19
4	Heart disease	Other cancers	Diabetes	Heart disease	Suicide	COVID-19	Unintentional injury	Chronic lower respiratory	Alzheimer's disease	Cancer
5	Cancer	Suicide	Cancer	Cancer	COVID-19	Chronic liver disease	Chronic lower respiratory	Diabetes	Chronic lower respiratory	Stroke
6	Assault (homicide)	--	Congen / chromo abnorm	COVID-19	Assault (homicide)	Stroke	Diabetes	Stroke	Stroke	Chronic lower respiratory
7	--	--	COVID-19	Septicemia	Diabetes	Diabetes	Stroke	Unintentional injury	Diabetes	Unintentional injury
8	--	--	Heart disease	Chronic lower respiratory	Chronic liver disease	Suicide	Chronic liver disease	Chronic liver disease	Unintentional injury	Hypertension
9	--	--	Diseases of appendix	Influenza and pneumonia	Stroke	Chronic lower respiratory	Septicemia	Kidney disease	Parkinson's disease	Diabetes
10	--	--	Septicemia	Congen / chromo abnorm	Kidney disease	Septicemia	Suicide	Septicemia	Kidney disease	Kidney disease
Suicide Rank	--	5	3	3	4	8	9	--	--	--

Figure 2: Ten Leading Causes of Death Ranked For 10 Different Age Groups Source: ODH Death Certificate Data, Centers for Disease Control and Prevention

The table above, originally published in the *Death and Life Expectancy* data brief, is based on a format originally designed by the CDC. It shows the top 10 leading causes of death for each of 10 age groups for people in Summit County. Some of the more common causes of death are color-coded so that readers can follow the progression of that disease throughout the age spectrum. Suicide rates are the second, third, and fourth-leading causes of death in earlier years (ages 15-44), then drops to 10th place for those age 55-64, and out of the top 10 causes altogether for older adults.

Trends in attempted suicides² -- About 7.2 Summit County residents visit an emergency room (ER) per day to be treated for a suicide-related visit between 2017 and 2022 to date. ER visits for suicide-related reasons peaked at 9.7 per day in mid-May 2018, and currently stand at 7.2 per 100,000.³ Most visits to the ER for suicide attempts are by Whites (87%), males (53%) and those age 18-64. The average age for all suicide-related ER visits is 37.1 years.

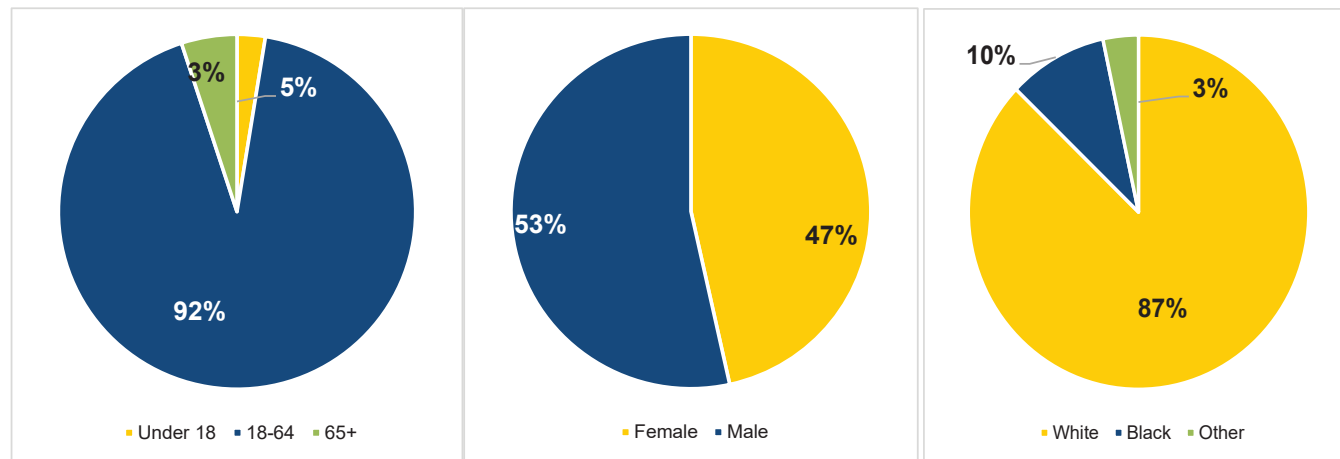


Figure 3a (age), 3b (sex), 3c (race): Suicide-related visits to an ER, 2017-2022, Source: EpiCenter

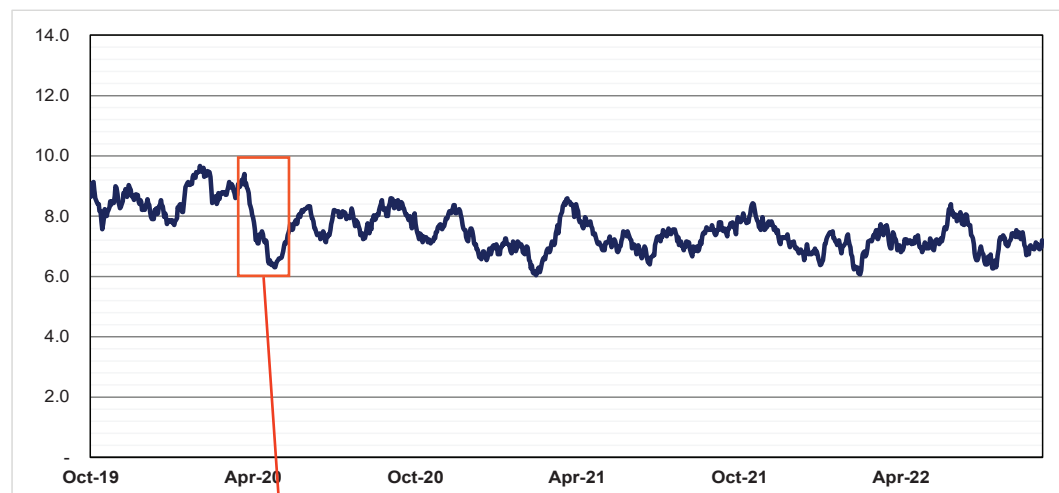


Figure 4: 30-Day Moving Average of Visits to the ER for Any Suicide-Related Reason, Summit Co. 2017-22 YTD
Source: EpiCenter

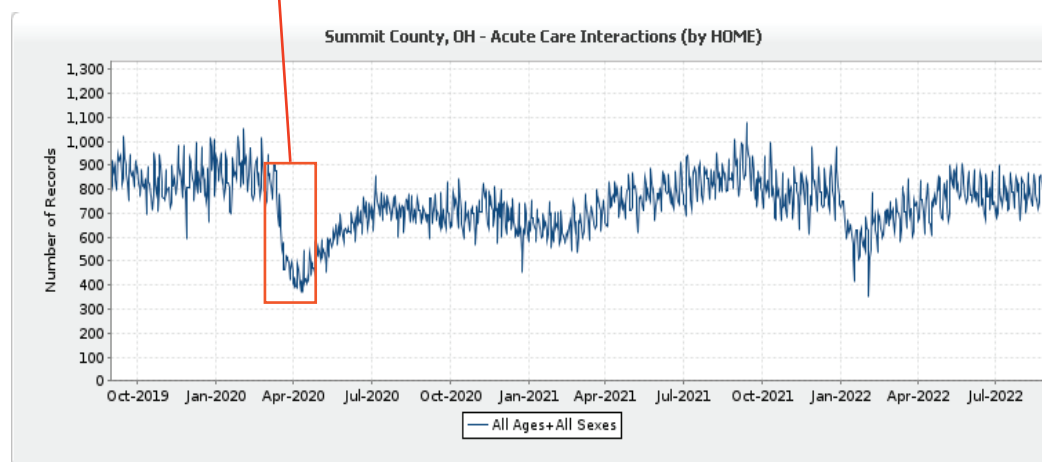


Figure 5: Total ER visits, Summit Co. 2017-22 YTD, Source: EpiCenter

³ Total visits ER visits dropped by 21% in Spring 2020 due to COVID-19. Suicide-related visits dropped at the same time and have remained lower since then. Therefore, this data should be viewed with caution, as there is no way to know for sure how suicide-related visits may have been impacted by COVID-19.

² There is no way to determine the ultimate outcome of those who visit the ER because of a suicide attempt based on available ER data. However, based on data analyzed by the *American Association of Suicidology*, only about one out of every 25 suicide attempts is successful. If this estimate is accurate, it's possible that many of those who end up in the ER because of a suicide attempt may have survived it.

Trends In State and National Suicide Rates Overall and by Race -- Age-adjusted suicide rates in Ohio and the nation have been trending upward at least since 2007. Overall suicide rates rose by 19% nationally and 25% state-wide between 2007 and 2020. While white individuals saw suicide rates nationally and in Ohio rise at about the overall rates (21% and 19%, respectively), black individuals saw suicide rates rise at a far faster pace. Black suicide rates rose by 51% nationally and 52% in Ohio from 2007-2020. Black suicide rates rose at an even faster rate since 2015, increasing by 32% nationally and 43% in Ohio between 2015-2020. Overall and white rates stayed the same or declined during that same period.

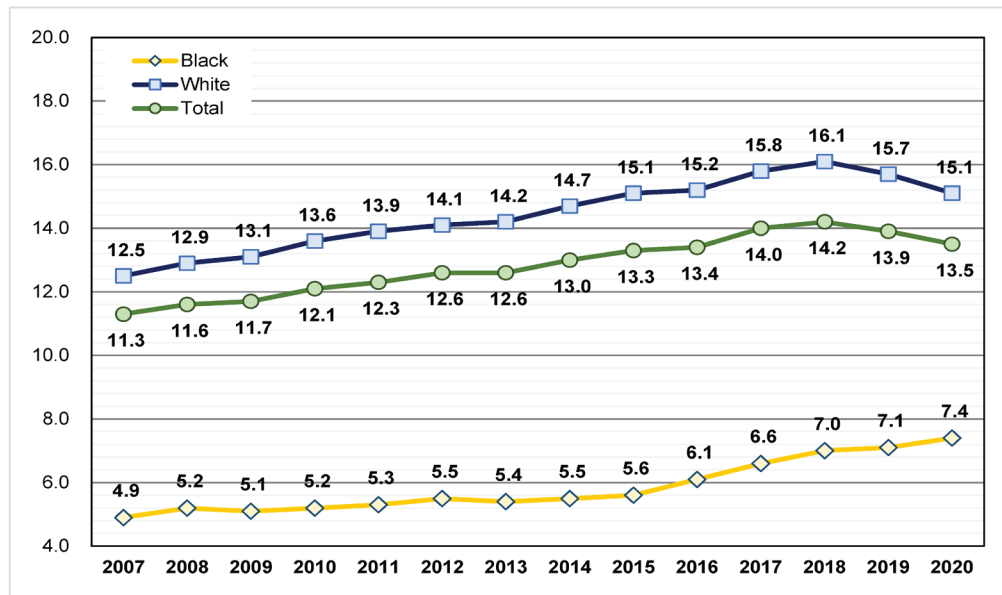


Figure 6a: Age-Adjusted Suicide Rates per 100,000 Population, by Race, United States, 2007-2020
 CDC WONDER Underlying Cause of Death Statistics; accessed from <https://wonder.cdc.gov/>

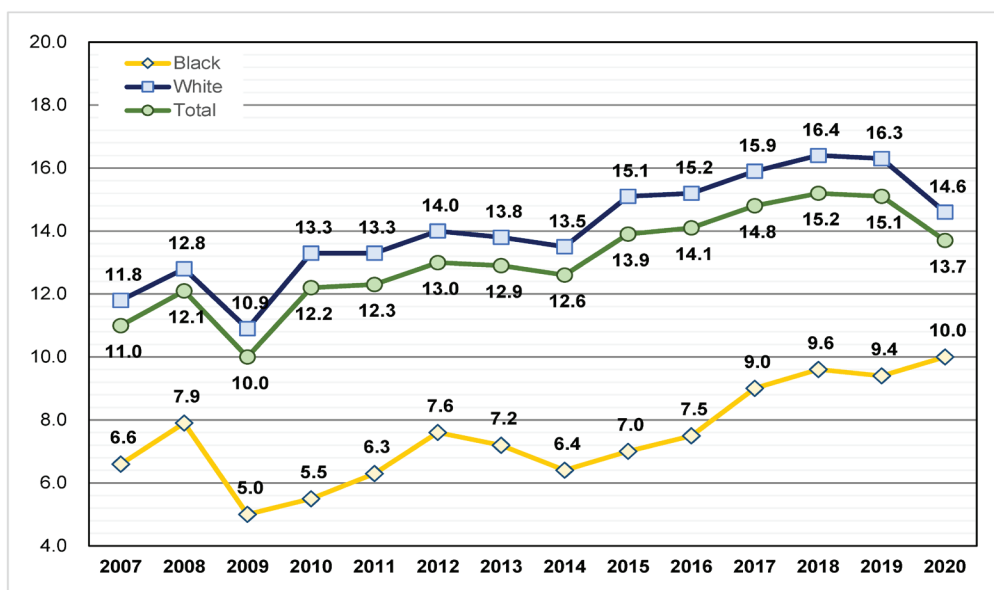


Figure 6b: Age-Adjusted Suicide Rates per 100,000 Population, by Race, State of Ohio, 2007-2020
 CDC WONDER Underlying Cause of Death Statistics; accessed from <https://wonder.cdc.gov/>

Trends in completed suicides by means³ -- Suicides by firearm rose from 28 per year from 2007-2011 to 52 per year from 2017-2021, while suicide by other means rose from 36 per year to 49 per year during those same time periods. Suicide rates by firearm rose from 4.9 to 8.5 per 100,000 (73%), while suicide rates from other means rose from 6.7 to 7.5 per 100,000 (14%).

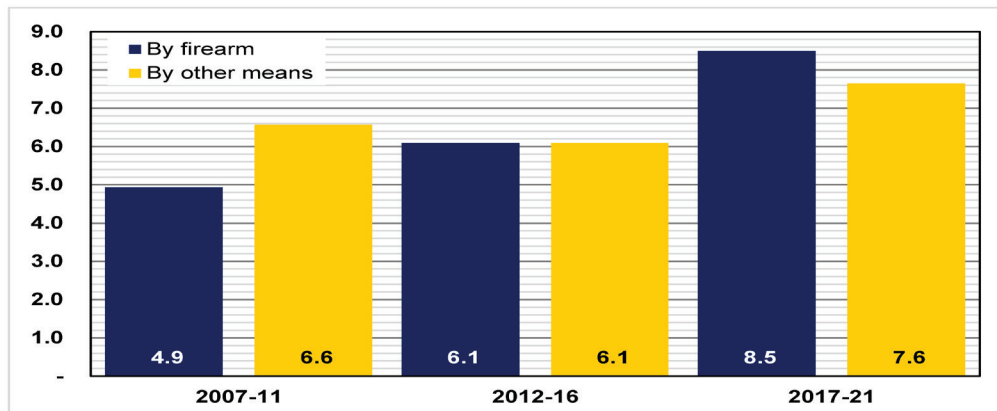


Figure 7: Age-Adjusted Suicide Rates per 100,000 Population, by Means Used, Summit Co. 2007-2021

Source: Ohio Department of Health (ODH) Death Certificate Data, American Community Survey

Trends in Suicide Rates by Means and Race -- Suicides by firearm rose at a much faster rate than suicides by other means for the two largest racial groups. While the white rates for both means of suicide were higher than Black individuals in all years, the suicide rate among Black individuals has been rising significantly faster for Black individuals for both firearm-related suicides (56% for whites vs. 210% for Black individuals) and for suicide by other means (18% for whites vs. 38% for African-Americans). This trend of faster growth in Black individual suicide rates is consistent with state and national trends.

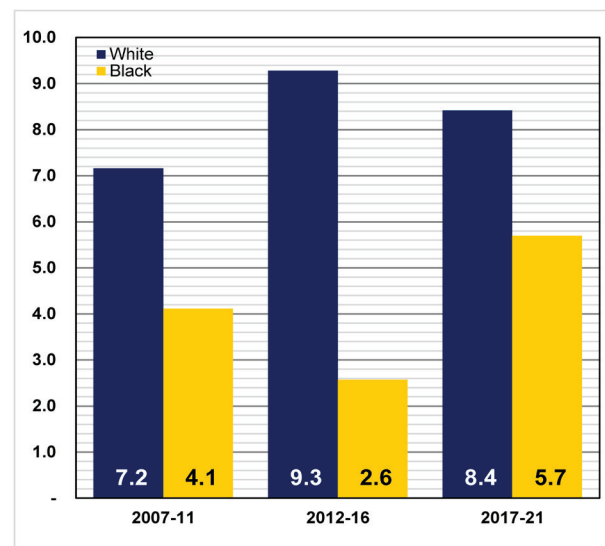
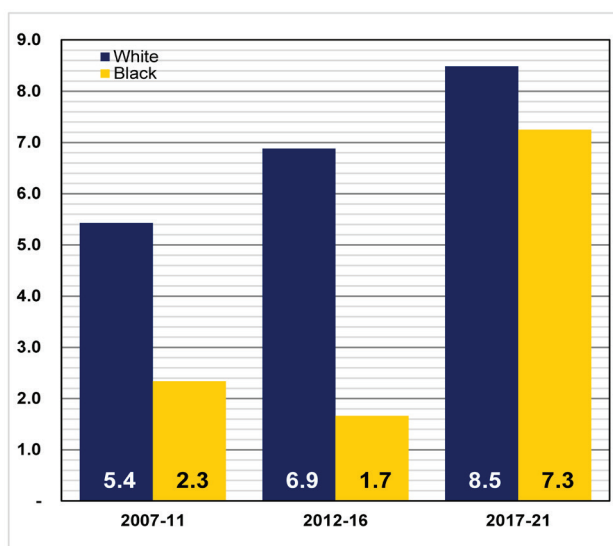


Figure 8a and 8b: Age-Adjusted Suicide Rates by Firearm (left) and Other Means (right) per 100,000 Population, by Race, Summit Co. 2007-2021 Source: Ohio Department of Health (ODH) Death Certificate Data, American Community Survey

³ Suicide trends by race have been grouped into multi-year categories because the absolute number of African-American suicide deaths is too low in any single year to calculate stable rates. Between 2007 and 2021, there were 105 confirmed African-American suicide deaths as compared to 1,095 confirmed white suicide deaths. There were an additional 40 suicides from all other races combined and 9 recorded as Hispanic or Latino during that same period, resulting in totals that are too small to calculate stable rates for these other races and ethnicities.

Demographic Differences In Suicide Rates

Age -- Suicides are rare in the under age 14 population (1.2 per 1,000 population). Suicide by age group ranges from 14 per 1,000 and 19 per 1,000 overall. The pattern of suicide rates changes depending on the means used (See Figure 9). For firearm-related suicides, suicide rates trend upward as age rises, reaching it's peak of 14.3 per 1,000 people for those age 85 and older. For suicide by other means (not involving a firearm), suicide rates peak between ages 45 and 54, then decline by half or more as age rises.

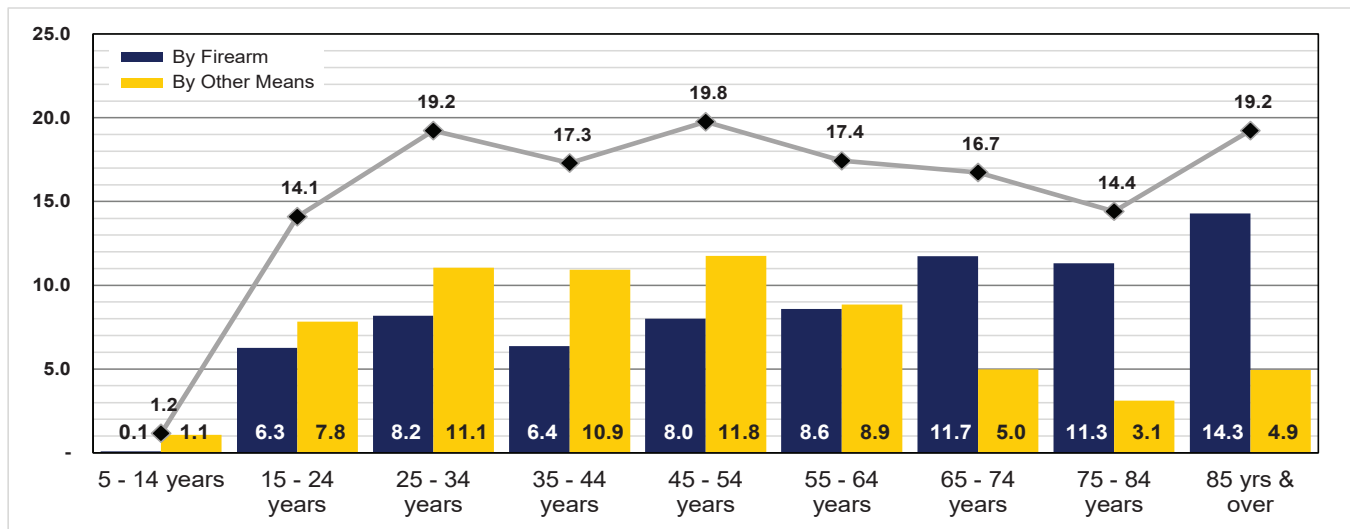


Figure 9: Percent of Suicides By Age Group, Summit Co. 2007-2021

Source: Ohio Department of Health (ODH) Death Certificate Data

Race / Ethnicity-- The vast majority of people who committed suicide between 2007 and 2022 were white (89%), while 8% of suicides were African-American and 3% were members of another race. Comparisons to the nation as a whole show that Summit County is more or less in line with national trends. Less than 1% of suicide deaths were identified as Hispanic.

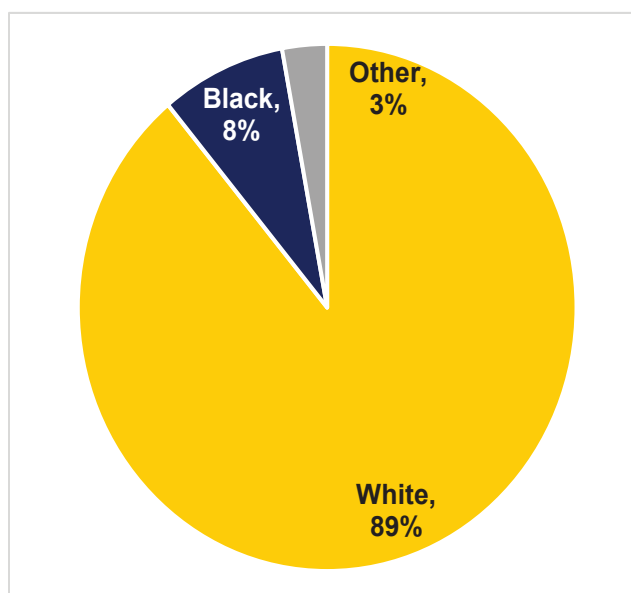


Figure 10: Percent of Suicides By Race, Summit County, 2007-2021

Source: Ohio Department of Health (ODH) Death Certificate Data

Gender -- Males make up an overwhelming majority of suicide deaths, 79% vs. 21% for females. This is also true nationally, and has been consistent since at least 2007 in Summit County.

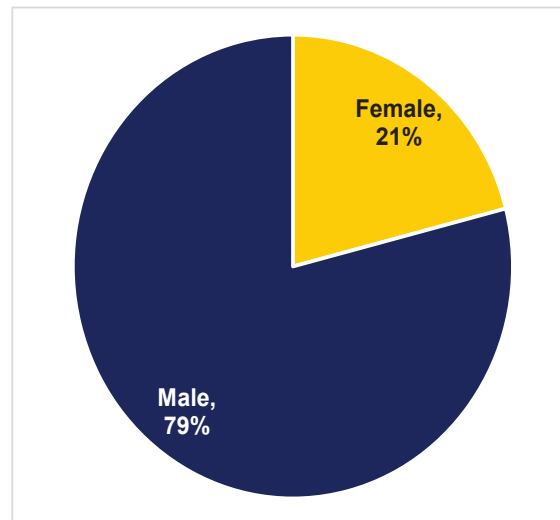


Figure 11: Percent of Suicides By Sex, Summit County, 2007-2021
 Source: Ohio Department of Health (ODH) Death Certificate Data, Centers for Disease Control and Prevention

Gender and Means -- According to the Centers for Disease Control and Prevention, females are more likely than males to have suicidal thoughts and to attempt suicide. However, as shown above, males are four times more likely to successfully take their own lives than females.⁴ One reason is the preferred means of suicide for each gender (see Figure 12). Males are more likely to use a firearm than females, while females are more likely to intentionally overdose on drugs than males. The fact that firearms are both far more lethal and kill more quickly than drug overdoses is a major contributing factor to the higher death rate among males.⁵ Data presented in Figure 6 show that males are twice as likely as females to use a firearm in their suicide attempt, while females were 6 times more likely to resort to intentional poisoning (most often drug poisoning) than males. Males and females were about equally likely to use a means other than firearms or drug overdoses.

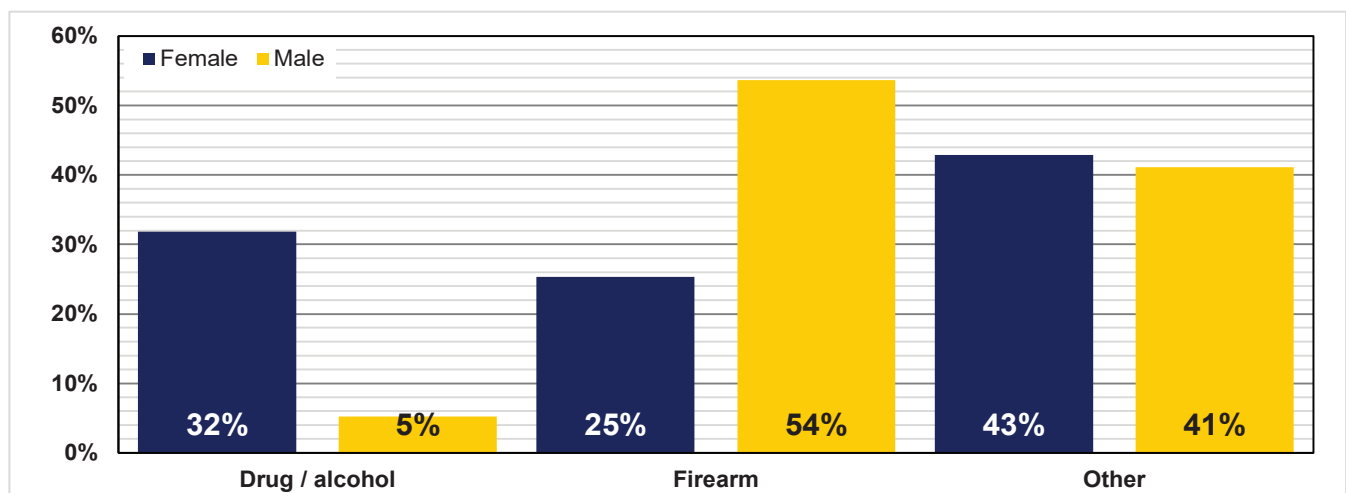


Figure 12: Suicide by Gender and Means of Suicide in Summit County, 2007-2021 Source: ODH death records and SCPH calculations

⁴ Centers for Disease Control and Prevention (CDC). Web-based Injury Statistics Query and Reporting System (WISQARS) [Online]. (2013, 2011) National Center for Injury Prevention and Control, CDC (producer). Available from <http://www.cdc.gov/injury/wisqars/index.html>.

⁵ Spicer, R.S. and Miller, T.R. Suicide acts in 8 states: incidence and case fatality rates by demographics and method. American Journal of Public Health. 2000;90(12):1885).

Educational Attainment -- Nearly two-thirds of all suicide deaths are among people with less than a 4-year degree. Of that group, those with only a high school diploma or GED were the most likely to commit suicide (49%), followed by those with a 9th grade-12th grade education (without a diploma or GED) and those with some college. Together, these three categories accounted for 83% of all suicides. Males made up the vast majority of suicides across all educational categories.

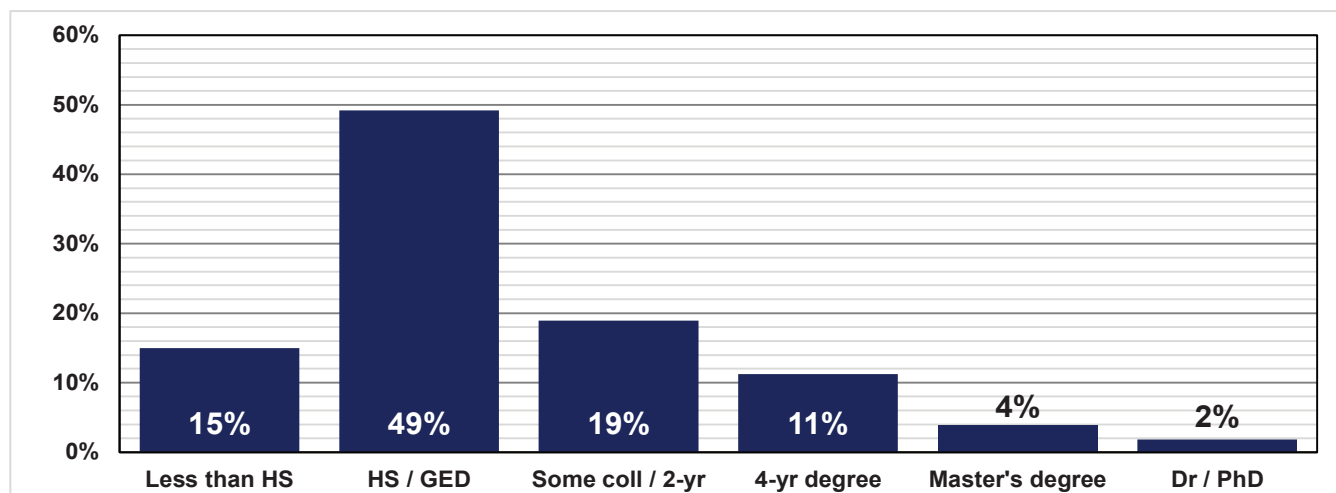


Figure 13: Percent of Suicides By Educational Attainment and Sex, Summit County, 2007-2021 (total for all categories = 100%) Source: Ohio Department of Health (ODH) Death Certificate Data, Centers for Disease Control and Prevention

Marital Status -- The marital status of suicide victims is very different from the population as a whole. Those who commit suicide are significantly more likely to be divorced, more likely to be single (never married), and significantly less likely to be married, than Summit County residents age 15 and over.

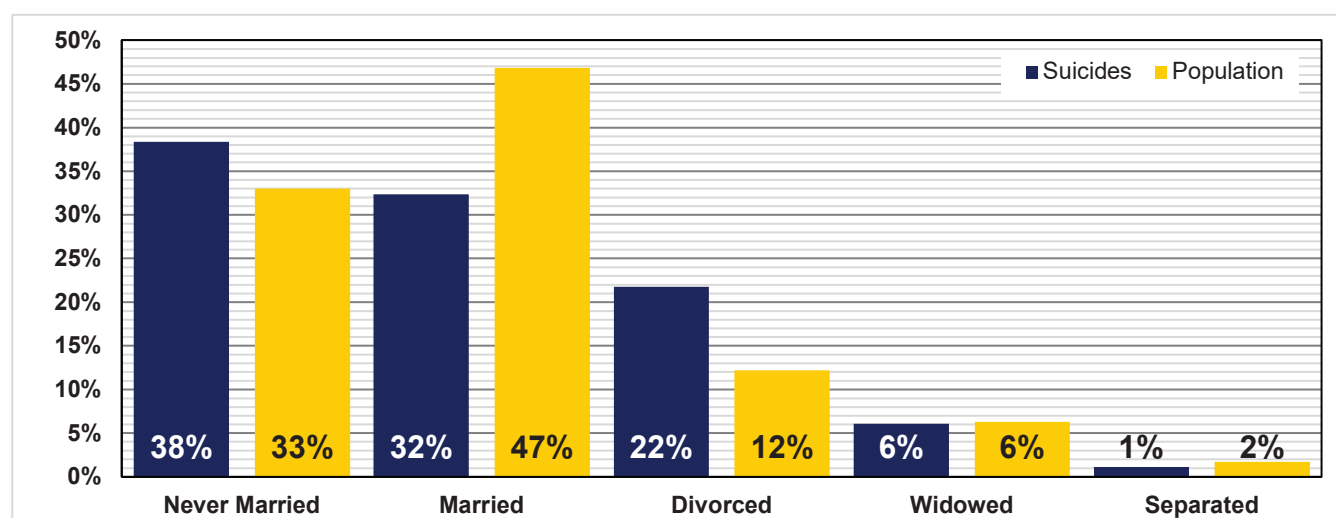
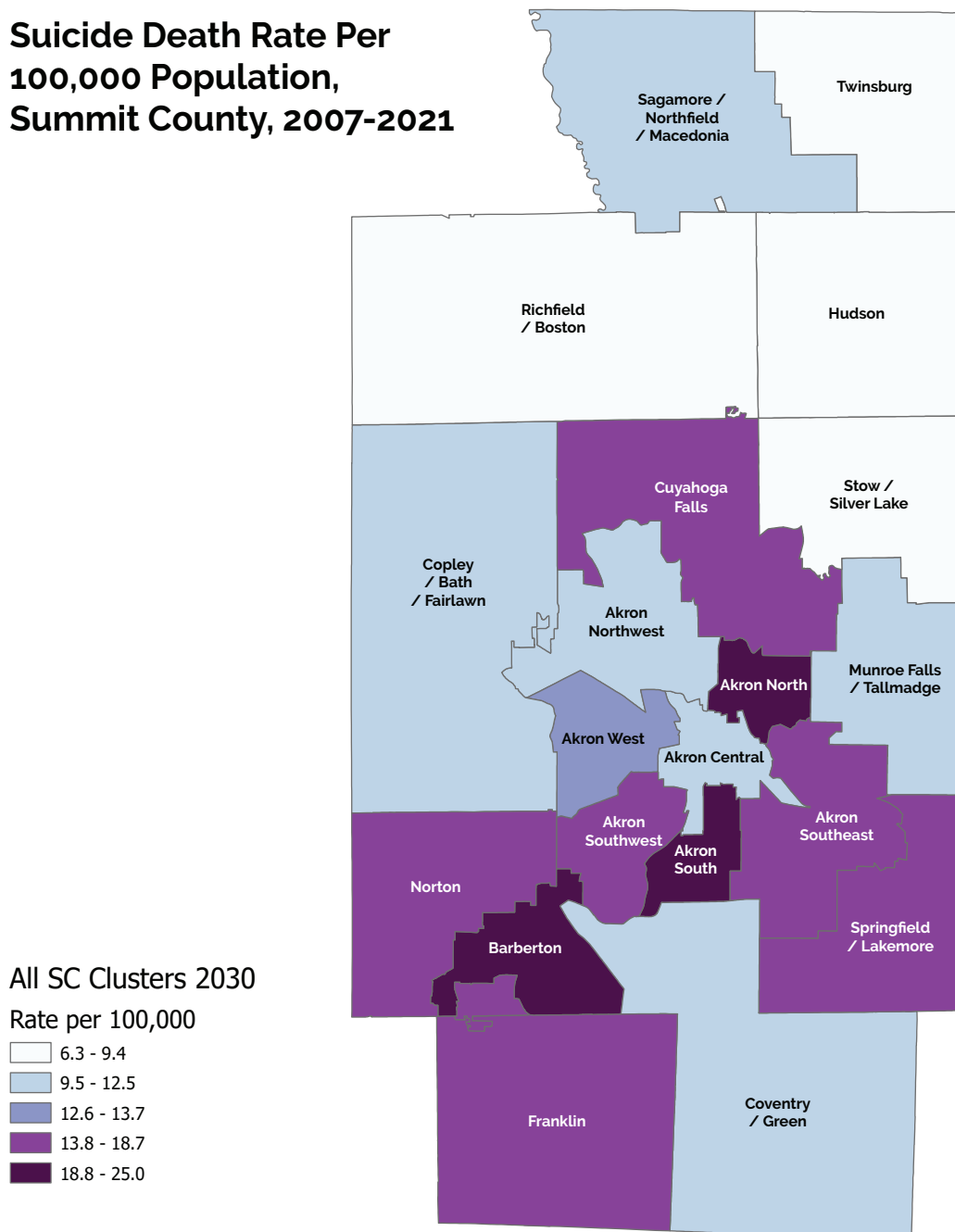


Figure 14: Suicides By Marital Status, Summit County, 2007-2021

Source: Ohio Department of Health (ODH) Death Certificate Data, , SCPH calculations, American Community Survey

Geography -- Crude suicide rates per 100,000 people are highest in the Akron North, Barberton, and Akron South clusters. The county's lowest suicide rates can be found in the Hudson and Richfield / Boston, Twinsburg, and Stow / Silver Lake clusters.

Suicide Death Rate Per 100,000 Population, Summit County, 2007-2021



Map 1: Crude Suicide Rates Per 100,000 by Summit County Cluster

Source: ODH death records, SCPH calculations

Risk and Protective Factors for Suicide

The Centers for Disease Control and Prevention (CDC) have identified several risk and protective factors that help identify situations in people's lives that make suicide more likely (risk factors) or less likely (protective factors). These factors, taken from the CDC's Violence Prevention website, are listed below:

Risk Factors	Protective Factors
<p>Suicide is rarely caused by a single circumstance or event. Instead, a range of factors—at the individual, relationship, community, and societal levels—can increase risk. These risk factors are situations or problems that can increase the possibility that a person will attempt suicide.</p>	<p>Many factors can reduce risk for suicide. Similar to risk factors, a range of factors at the individual, relationship, community, and societal levels can protect people from suicide. Everyone can help prevent suicide. We can take action in communities and as a society to support people and help protect them from suicidal thoughts and behavior.</p>
Individual Risk Factors	Individual Protective Factors
<ul style="list-style-type: none"> • Previous suicide attempt • History of depression and other mental illnesses • Serious illness such as chronic pain • Criminal/legal problems • Job/financial problems or loss • Impulsive or aggressive tendencies • Substance use • Current or prior history of adverse childhood experiences • Sense of hopelessness • Violence victimization and/or perpetration 	<ul style="list-style-type: none"> • Effective coping and problem-solving skills • Reasons for living (family, friends, pets, etc.) • Strong sense of cultural identity
Relationship Risk Factors	Relationship Protective Factors
<ul style="list-style-type: none"> • Bullying • Family/loved one's history of suicide • Loss of relationships • High conflict or violent relationships • Social isolation 	<ul style="list-style-type: none"> • Support from partners, friends, and family • Feeling connected to others
Community Risk Factors	Community Protective Factors
<ul style="list-style-type: none"> • Lack of access to healthcare • Suicide cluster in the community • Stress of acculturation • Community violence • Historical trauma • Discrimination 	<ul style="list-style-type: none"> • Feeling connected to school, community, and other social institutions • Availability of consistent and high quality physical and behavioral healthcare
Societal Risk Factors	Societal Protective Factors
<ul style="list-style-type: none"> • Stigma associated with help-seeking and mental illness • Easy access to lethal means of suicide • Unsafe media portrayals of suicide 	<ul style="list-style-type: none"> • Reduced access to lethal means of suicide • Cultural, religious, or moral objections to suicide

Figure 15: Risk and Protective Factors for Suicide

Source: Centers for Disease Control and Prevention, Injury Prevention and Control.
Retrieved from <https://www.cdc.gov/suicide/factors/index.html>