

Population Health Vital Statistics Brief:

Assault-Related Deaths and ER Visits, 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



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Introduction

This is one of a series of several reports produced by the Summit County Public Health Population Health Division's Vital Statistics Brief report series. These reports provide 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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Assault-Related Deaths (Homicides) in Summit County, 2007-2021

In 2021, there were a total of 47 assault-related deaths in Summit County that were ruled as an assault (homicide) death. Of those, 44 were caused by a firearm. Since 2007, there have been 536 confirmed assault-related deaths.

Assault-related deaths in Summit County have been trending upward since 2003, driven primarily by assault with firearms. Firearm-related deaths rose from 2.0 per 100,000 people in 2007 to a peak of 9.2 per 100,000 in 2020. Firearm-related deaths dropped to 8.1 per 100,000 in 2021.

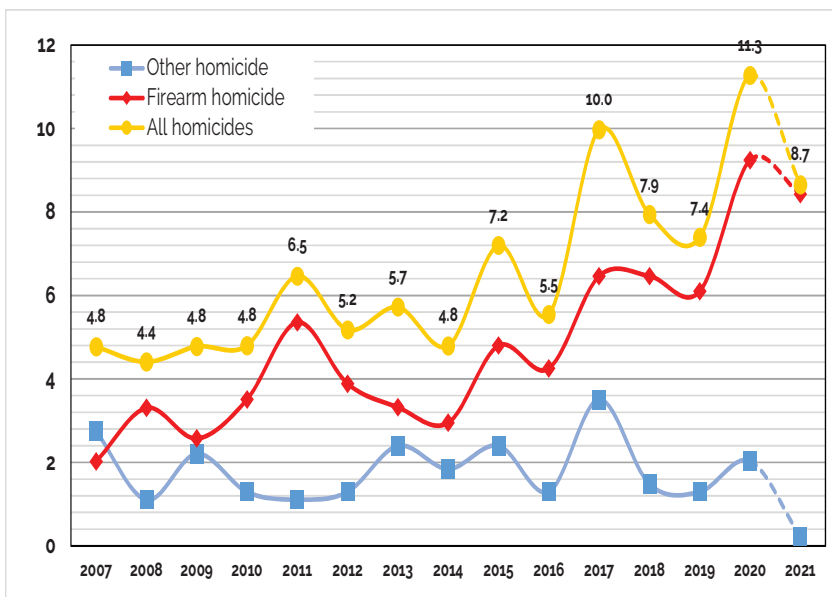


Figure 1: Assault-Related Death Rates in Summit County, 2007-2021
 Source: SCPH / Ohio Department of Health (ODH) Death Certificate Data

Note: Data for assault-related deaths is from 2007-2021, while data for assault-related ER visits is from 2017-2022 (current as of August 2022).

Figure 2 shows that firearm-related deaths as a percent of deaths from all causes has been growing since 2013. Since 2013, firearm deaths as a percent of all assault deaths have trended upward from 2013's total of nearly 60% to 94% in 2021 (44 of the 47 assault deaths).

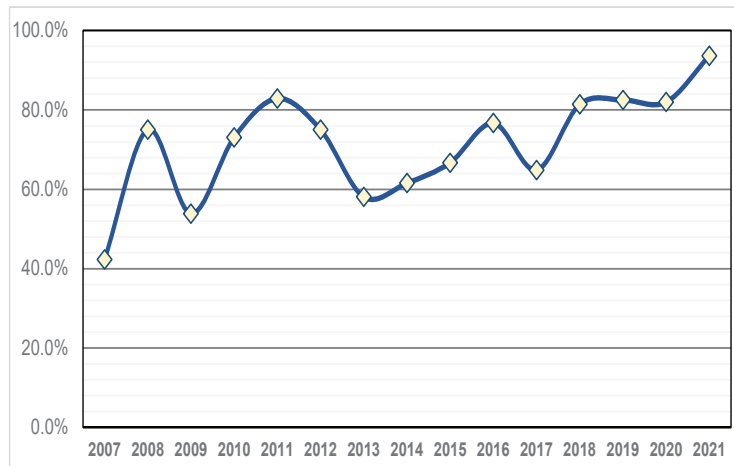


Figure 2: Firearm-Related Assault Deaths As A Percent of Total Assault Deaths, Summit Co. 2007-2021 Source: SCPH / Ohio Department of Health (ODH) Death Certificate Data

Age-Adjusted Assault-Related Death Rates by Type

Figures 3 and 4 present age-adjusted death rates. Age-adjusted death rates remove bias caused by the fact that older age groups in a population die at greater rates than younger ones. Age-adjusting controls for these differences and provides a more reliable way of comparing different groups, or comparing the same groups over time.

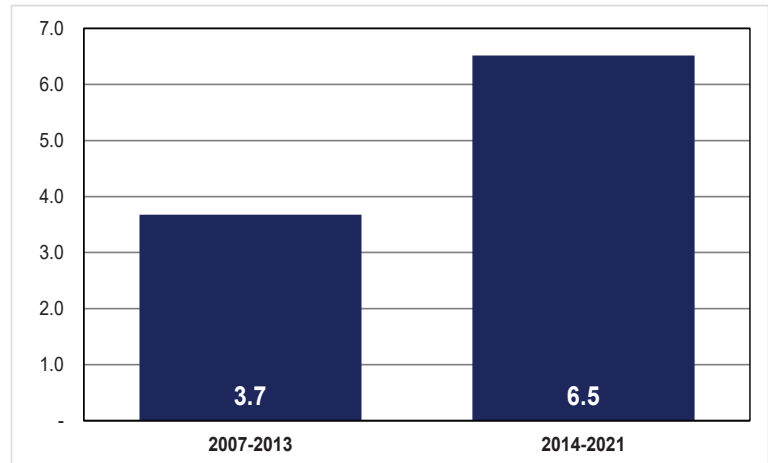


Figure 3: Age-Adjusted Death Rate - Firearm-Related Assault Deaths, Summit Co. 2007-2021 Source: SCPH / Ohio Department of Health (ODH) Death Certificate Data

Figure 3 shows the age-adjusted death rates for deaths due to assault involving a firearm since 2007. These rates rose from 3.7 per 100,000 between 2007-2013 to 6.5 per 100,000 between 2014-2021; a 77% increase.

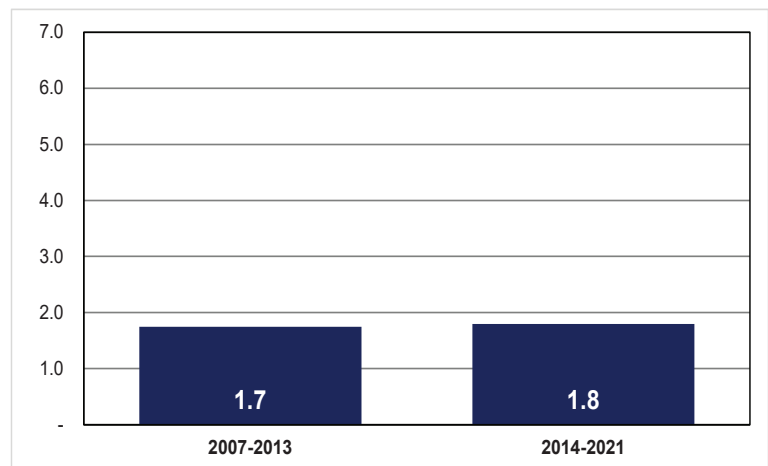


Figure 4: Non-Firearm-Related Assault Deaths As A Percent of Total, Summit Co. 2007-2021 Source: SCPH / Ohio Department of Health (ODH) Death Certificate Data

Figure 4 shows that age-adjusted death rates for assault deaths not involving a firearm are significantly lower, and have only risen by 3% between the 2007-2013 and 2014-2021 periods.

Demographic Differences In Assault-Related Deaths

Age -- Over two-thirds (69%) of all assault-related deaths were between the ages of 15 and 44. Just under 6% of assault-related deaths are under age 15, while just under 7% occur among people age 65 or older. The 25-34 age group had the highest assault death rate, nearly 99 per 1,000 people age 25-34, followed by those 15-24 with 75.5 assault deaths per 1,000 people age 15-24.

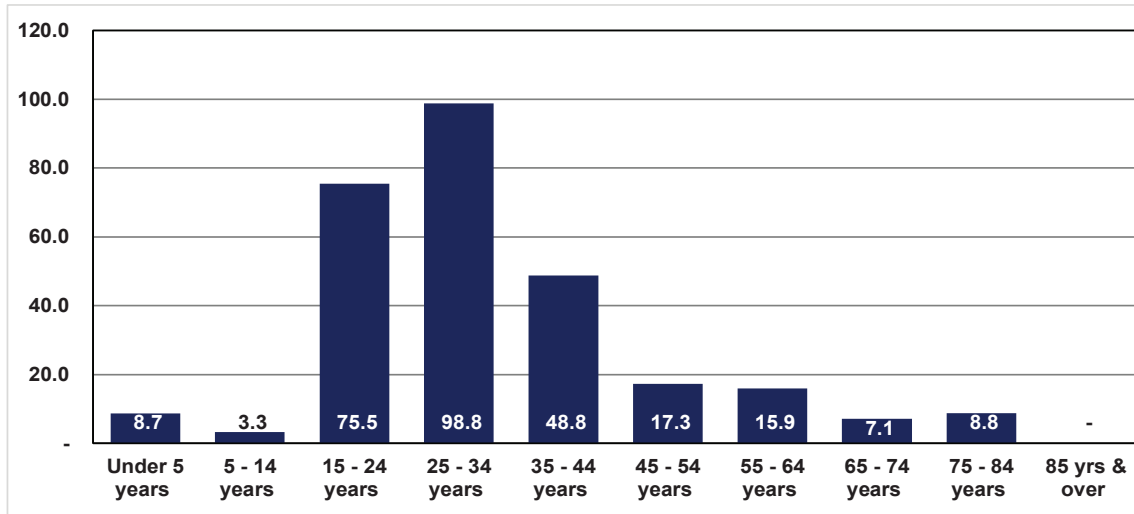


Figure 5: Assault-Related Deaths By Age Group (crude rate per 1,000 population), Summit Co. 2007-2021
Source: SCPH / Ohio Department of Health (ODH) Death Certificate Data

Race -- Black individuals made up nearly two-thirds (64%) of all assault-related deaths between 2007 and 2021 (Figure 6a). Black individuals are three times more likely to be involved in a firearm-related assault death than White individuals. For Black individuals, three-quarters of all assault-related deaths are by firearm, vs. one-quarter of all assault-related deaths for White individuals (Figure 6b).

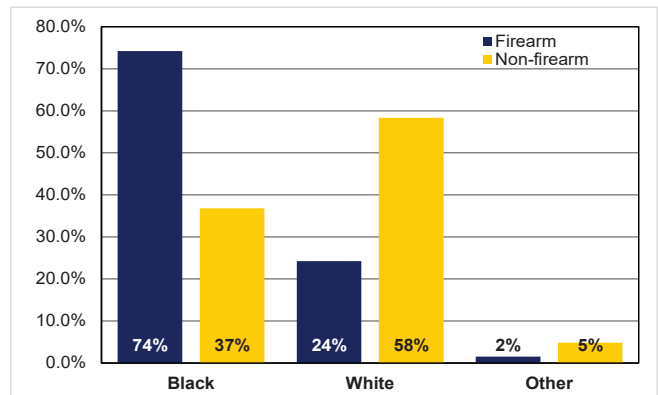
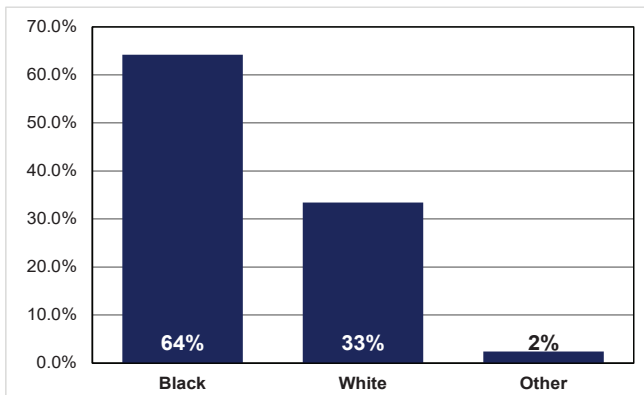


Figure 6a and 6b: Percent of Assault-Related Deaths By Race, Summit Co. 2007-2021 (6a), Percent of Firearm and Other Means of Assault Deaths, 2007-2021 (6b) Source: SCPH / Ohio Department of Health (ODH) Death Certificate Data

Sex -- Males make up the vast majority of assault-related deaths (76%).

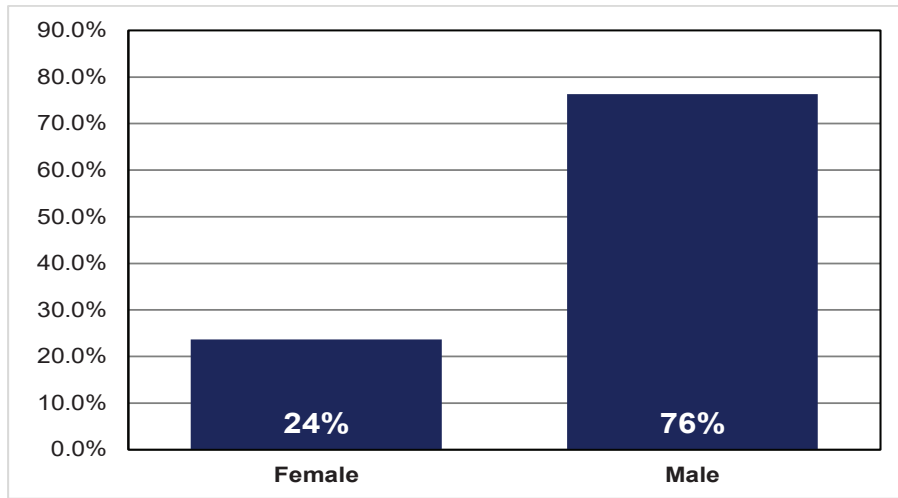


Figure 7 Percent of Assault-Related Deaths By Sex, Summit Co. 2007-2021
 Source: SCPH / Ohio Department of Health (ODH) Death Certificate Data

Sex and Race -- Over half of all assault-related deaths are Black males (54%), while White males make up one-fifth of all assault-related deaths (20%). White females make up the next largest percentage at just over 13%, while Black women make up 10% of all assault-related deaths. Males and females in the other / unknown race categories make up about 2.4% of all assault-related deaths combined.

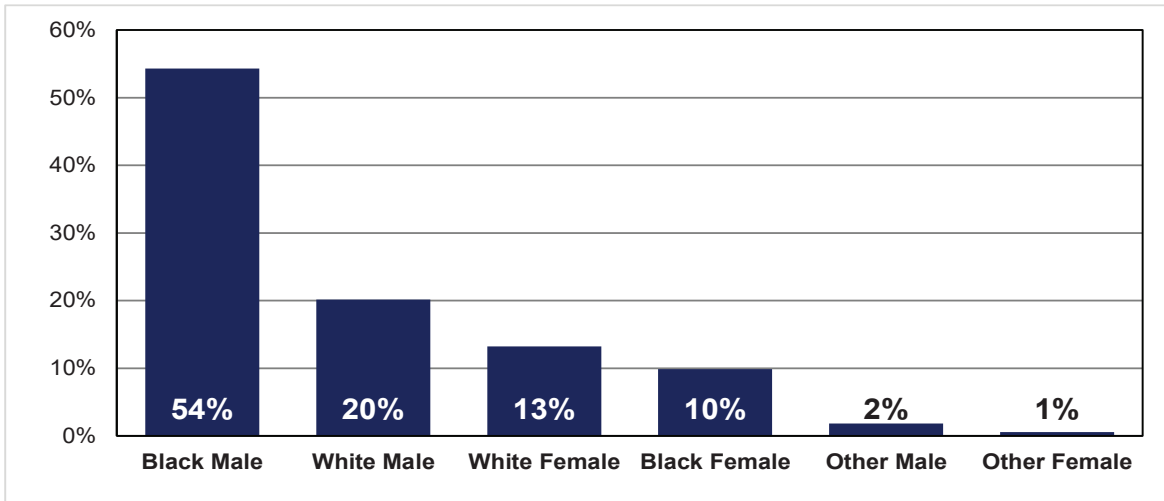


Figure 8: Percent of Assault-Related Deaths By Sex and Race, Summit Co. 2007-2021
 Source: SCPH / Ohio Department of Health (ODH) Death Certificate Data

Educational Attainment -- The vast majority of assault-related deaths are among people with a high school diploma or lower education level (81%). Of that group, those with only a high school diploma or GED were the most likely to be the victim of an assault-related death (44%), closely 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 91% of all assault-related deaths. For those with any college degree, the percentage of people with an assault-related death declines as educational attainment rises, dropping from just under 5% for those with a 2-year degree to just 2% for those with a 4-year or professional degree.

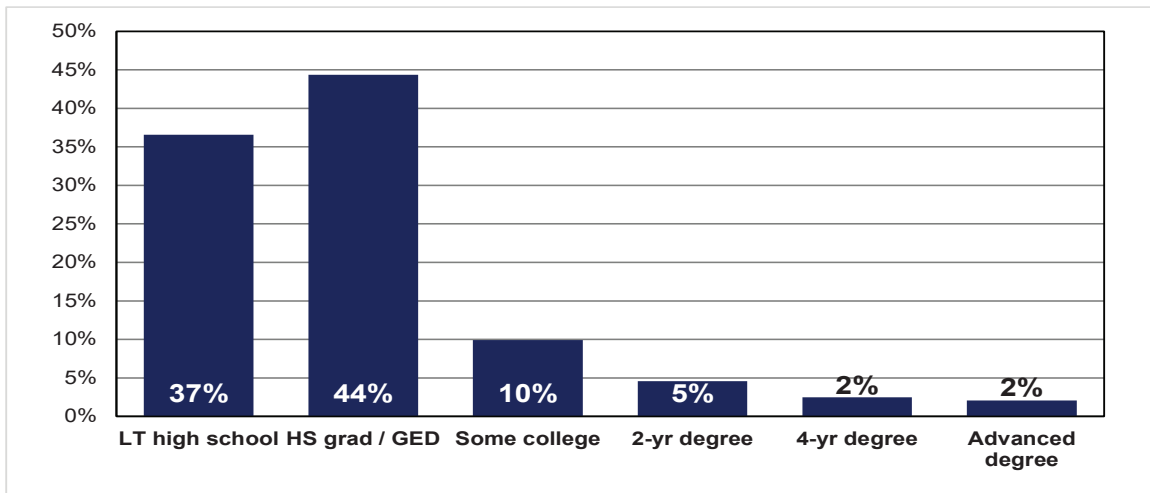


Figure 9: Percent of Assault-Related Deaths By Educational Attainment, Summit Co. 2007-2021

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

Marital Status -- Three-quarters of all assault-related deaths were among those who were single and never married (75%), while 12% were divorced or separated, and a further 13% of victims were married. The average age of single victims was just over 28; for married, divorced / separated, and widowed victims, the average ages ran between 48 and 52. Those who were single were much more likely to have died by firearm than those who were married (82% and 61%, respectively).

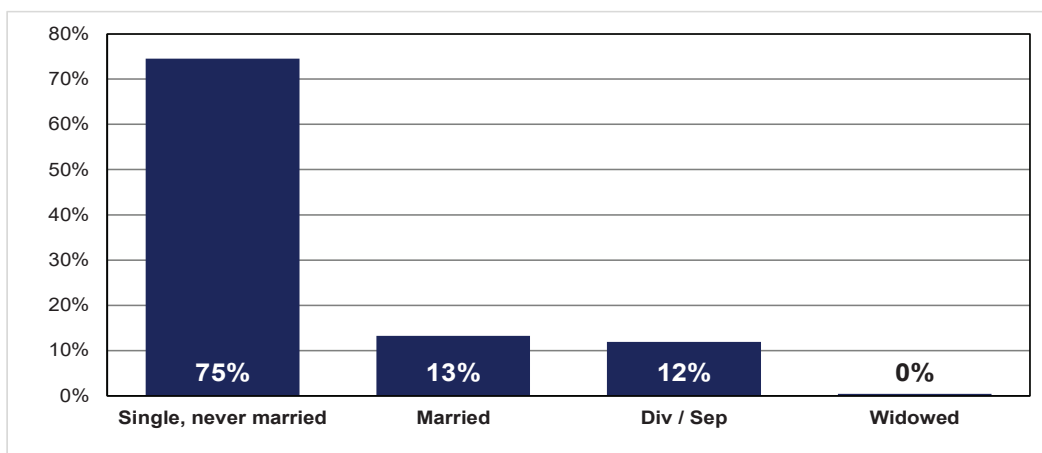


Figure 10: Percent of Assault-Related Deaths By Marital Status, Summit Co. 2007-2021

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

Racial Disparities In Assault-Related Death Rates

The age-adjusted assault-related death rate per 100,000 people is significantly higher for Black individuals than for White individuals (see Figure 11). Not only is the rate higher for Black individuals, the gap has grown over the past several years. Rates for White individuals rose from 2.7 to 2.9 per 100,000 between the 2007-2013 and the 2014-2021 periods; an increase of 7.4%. During those same periods, the rate for Black individuals rose from 21.4 to 37.5; an increase of 75%. The rate for Black individuals was nearly 8 times higher than the rate for White individuals from 2007-2013. By the 2014-2021 period, the rate for Black individuals was nearly 13 times higher than the rate for White individuals.

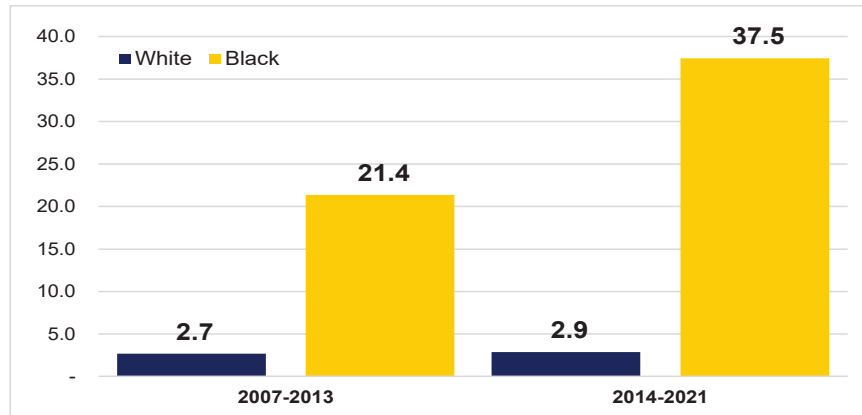


Figure 11: Age-Adjusted Assault-Related Deaths Per 100,000 By Race, 2007-2013 and 2014-2021 Source: SCPH / Ohio Department of Health (ODH) Death Certificate Data

Geographic Distribution of Assault-Related Death Rates, 2007-2021

Figure 12 shows that the heaviest concentration of assault-related deaths occur in the Akron West, Akron Southwest, Akron Southeast, and Akron North clusters. For non-firearm-related assault deaths, the Akron Southeast and Akron Southwest clusters have the heaviest concentrations. Because they are a significant portion of total assault deaths, the pattern of firearm-related deaths closely resembles the overall density pattern.

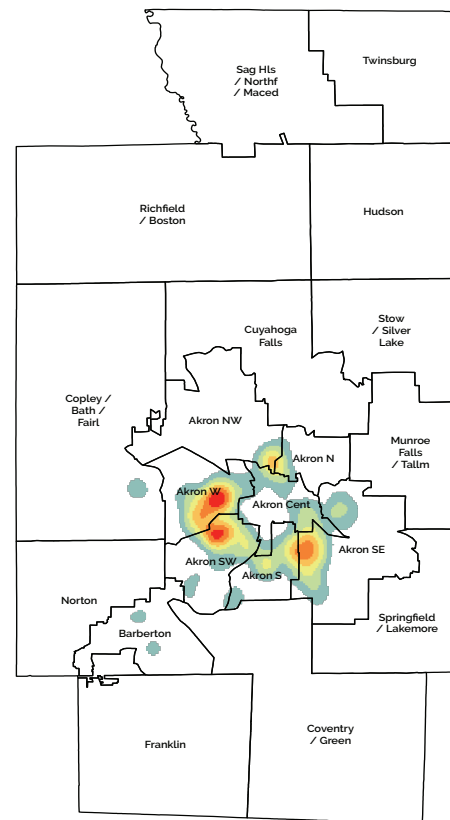


Figure 12: Density Map of All Assault-Related Deaths by Summit County Cluster Source: SCPH / Ohio Department of Health (ODH) Death Certificate Data, SCPH calculations

The Geography of Firearm Deaths

Figure 13 presents a density map of all firearm-related deaths (by homicide and suicide) between 2007 and 2021. The map is laid over a map of Summit County's most vulnerable census tracts as defined by the CDC.

Based on the map, SCPH identified 13 census tracts where the density of firearm deaths was significantly higher than the rest of the county. As the map shows, the areas of highest firearm deaths are all in areas of the county which are the most socially vulnerable. An analysis of American Community Survey data reveals some demographic traits these tracts have in common. Residents of census tracts with significantly higher rates of firearm fatalities...

- ...have higher divorce rates and rates of those who were never married (50% combined) than the rest of the county (38%).
- ...are half as likely to have 2-year, 4-year, or advanced college degree (16% vs. 34%).
- ...are more likely to be unemployed (8.3% vs. 5.4%).
- ...have family and individual poverty rates that are nearly twice as high (21% and 26% vs. 11% and 15%, respectively).
- ...are twice as likely to have a household income of less than \$25,000 than the remainder of the county (33% vs. 17%).
- ...have significantly higher percentages of the population identify as Black or African-American (38% vs. 11%).
- ...are almost twice as likely to have no health insurance (9% vs. 5%) and 1.5 times as likely to have public health insurance (59% vs. 39%).
- ...are 7 times more likely to rent their home than own it (49% vs. 7% for the rest of the county).
- ...are more likely to have overburdened renters (those paying more than 30% of their income for rent; 57% vs. 44% for the rest of the county).
- ...are more likely to live in housing that was built before 1940 (30% vs. 18%).

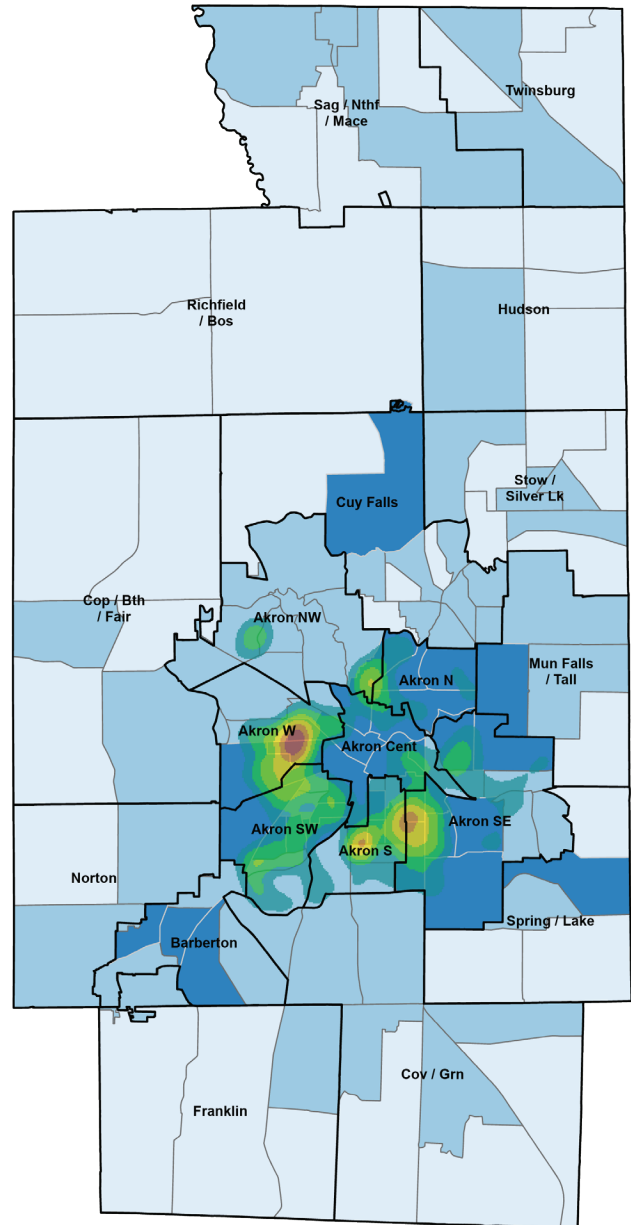
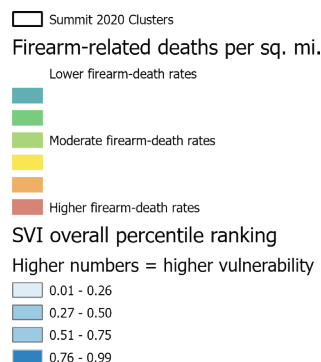


Figure 13: Density Map of Firearm-Related Deaths and Social Vulnerability Index by Census Tract, 2007-2021 Source: CDC / Ohio Department of Health (ODH) Death Certificate Data, SCPH calculations



"High firearm-related death rates" are defined as those areas where the density of death rates from homicide, suicide, or other firearm-related deaths with an undetermined cause are significantly higher than for the rest of the county.

The Social Vulnerability Index (SVI) ranks census tracts on 16 variables grouped into four themes, socioeconomic status, household characteristics, racial and ethnic minority status, and housing type and transportation. .

Emergency Room Visits for Gun Shot Wounds (GSW) and Accidental Discharge (AD)

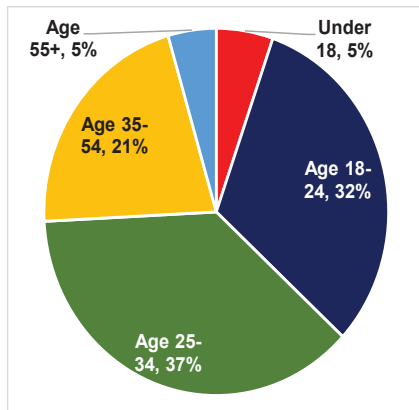
Between 2016 and the end of 2021, nearly 1,000 Summit County residents were treated in emergency rooms for a firearm-inflicted wound. Trends in emergency room (ER) visits for GSW mirror those for firearm-related fatalities. As Figure 14 shows, the 60-day average number of GSW visits rose from 0.2 per day (about one visit every five days) in 2016 to 0.4 per day (about one visit every 2.5 days) by the end of 2021.



GSW by Age - Nearly 70% of all victims were ages 18-34. The average GSW-related visitor to an ER was 31 years old.

GSW by Gender - The vast majority of GSW-related visits to the ER were male (See Figure 17).

Figure 14: ER Visits for GSW, 2016-2021 Source: EpiCenter, SCPH



GSW by Race - More than a quarter of GSW-related ER visits were by Black individuals, while 55% were White individuals (See Figure 18). The White individual rate was lower than the percentage of the White population (55% of GSW visits, 78% of Summit County's population, while the Black individual rate was higher (26% of GSW visits, 14% of Summit County's population).

GSW by Zip Code - More than half of all GSW visits (54%), and just over half of all AD-related visits (51%), came from the zip codes of 44306, 44320, 44311, 44310, 44305.

Figure 15: Emergency Room Visits for GSW by Age Group, 2016-2021 Source: EpiCenter, SCPH calculations

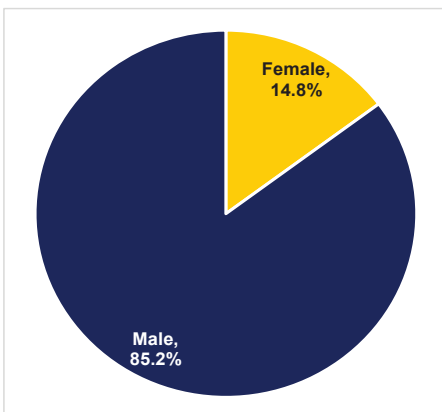


Figure 16: ER Visits for GSW by Sex, 2016-2021 Source: EpiCenter

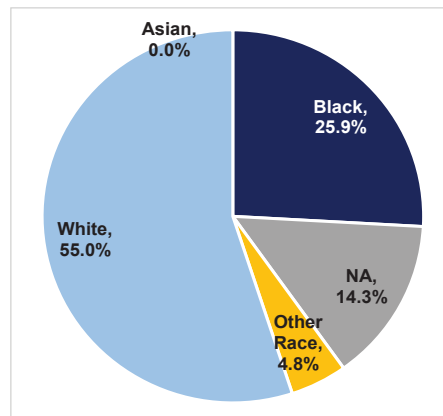


Figure 17: ER Visits for GSW by Race, 2016-2021 Source: EpiCenter

Accidental Discharge - There have been 585 ER visits caused by an accidental firearm discharge (about one visit every 4.2 days) since 2016. In 15% of these visits, the injured was someone under age 18 (61 visits). The average age of a minor visiting an ER for an accidental firearm discharge is just under 14. The average age of an adult visiting an ER for an accidental discharge was just under 29. Most of these visits (85%) were male.

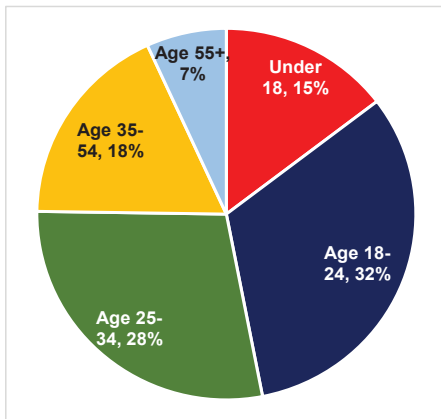
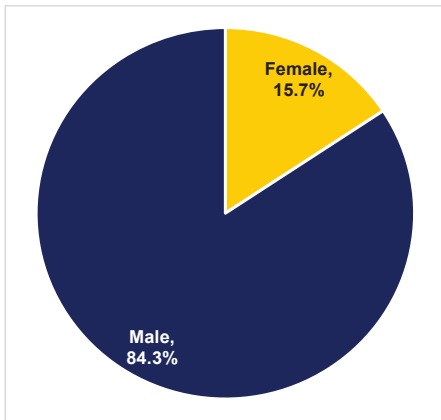
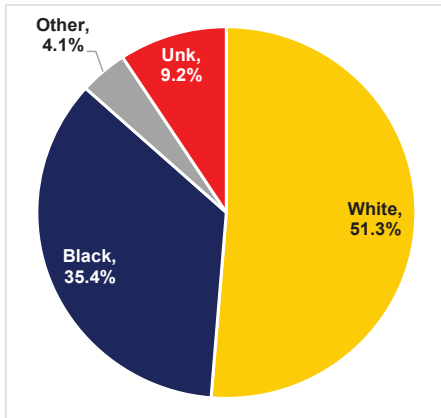


Figure 18 a-c: Accidental-Discharge Related ER Visits by - Age (18a), Sex (18b), Race (18c), 2016-2021 Source: EpiCenter, SCPH

Violence at a Glance



VIOLENCE-RELATED ER STATISTICS, 2017-2022

| | |
|--|---|
| | <p>Sexual Violence</p> <p>One Emergency Room visit every...</p> <p>2.6 days</p> |
| | <p>Senior Assault</p> <p>One Emergency Room visit every...</p> <p>7.8 days</p> |
| | <p>Child Assault</p> <p>One Emergency Room visit every...</p> <p>4.5 days</p> |
| | <p>Assault by Firearm</p> <p>One Emergency Room visit every...</p> <p>5.4 days</p> |
| | <p>Accidental Firearm Discharge Injury</p> <p>One Emergency Room visit every...</p> <p>4.2 days</p> |

Other Violence-Related Emergency Room Visits (not GSW)

Between 2016 and 2022, over 10,000 Summit County residents were treated in emergency rooms for a violence-related reason (not related to gunshots), averaging 4.2 visits per day (Figure 19). A total of 676 of violence-related visits involved a child (63 per 1,000 assault-related ER visits), with another 324 involving seniors (31 per 1,000 assault-related ER visits). Other violence demographics include:

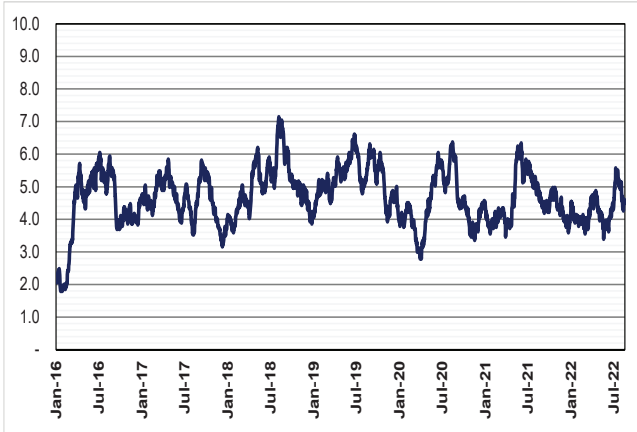


Figure 19: 30-Day Moving Average Emergency Room Visits for Violence / Assault, 2016-2022 Source: EpiCenter, SCPH calculations

seniors (31 per 1,000 assault-related ER visits). Other violence demographics include:

Violence by Age - More than half (53%) of violence-related visits to the ER were under age 35.

Violence by Gender - Fifty-seven percent of all violence-related ER visits were female.

Violence by race - White individuals make up about 62% of violence-related visits.

Rape / Sexual Assault - Since 2016, there were about 1,000 ER visits related to rape or sexual assault. The majority of rape and sexual assault cases visiting an ER (84%) are adult women age 18-54. About 7% of rape and sexual assault visits were among children, with another 10% among those age 55 and older (see Figures 21a - 21c).

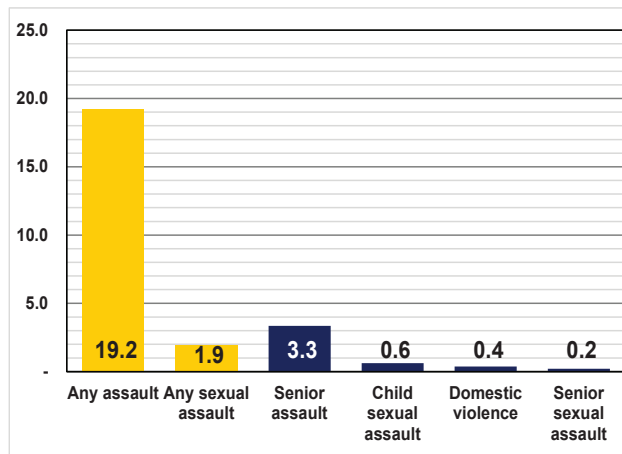


Figure 20: Other Violence / Assault -Related ER Visits Per 1,000 Population, 2016-2022 Source: EpiCenter, SCPH calculations

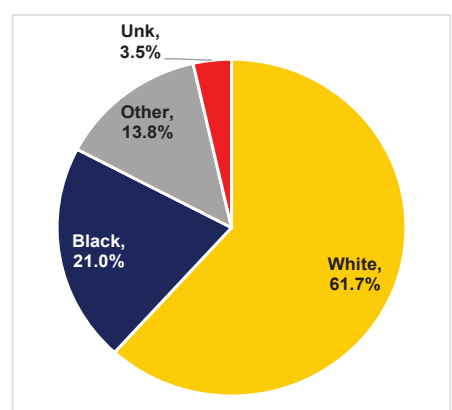
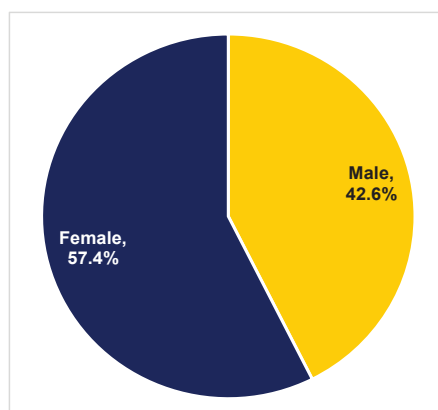
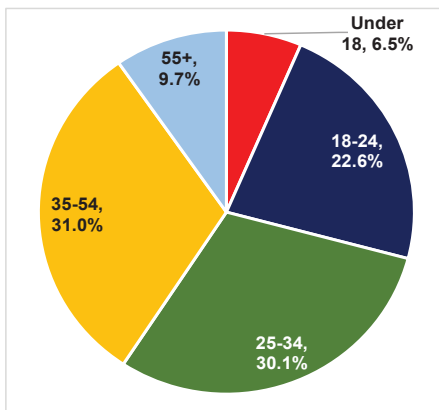


Figure 21 a-c: Violence / Assault-Related ER Visits by - Age (23a), Sex (23b), Race (23c), 2016-2022 Source: EpiCenter, SCPH