



The Epidemiological Trends and Patterns of Firearm Violence in Maryland

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MISSION AND VISION

MISSION

The mission of the Prevention and Health Promotion Administration is to protect, promote and improve the health and well-being of all Marylanders and their families through provision of public health leadership and through community-based public health efforts in partnership with local health departments, providers, community based organizations, and public and private sector agencies, giving special attention to at-risk and vulnerable populations.

VISION

The Prevention and Health Promotion Administration envisions a future in which all Marylanders and their families enjoy optimal health and well-being.

Agenda

- Key data sources
- Rates, patterns, and trends of *non-fatal* injury involving firearms
- Overview of violent death
- Rates, patterns, and trends of *fatal* injury involving firearms
 - Suicide
 - Homicide - victims and suspects

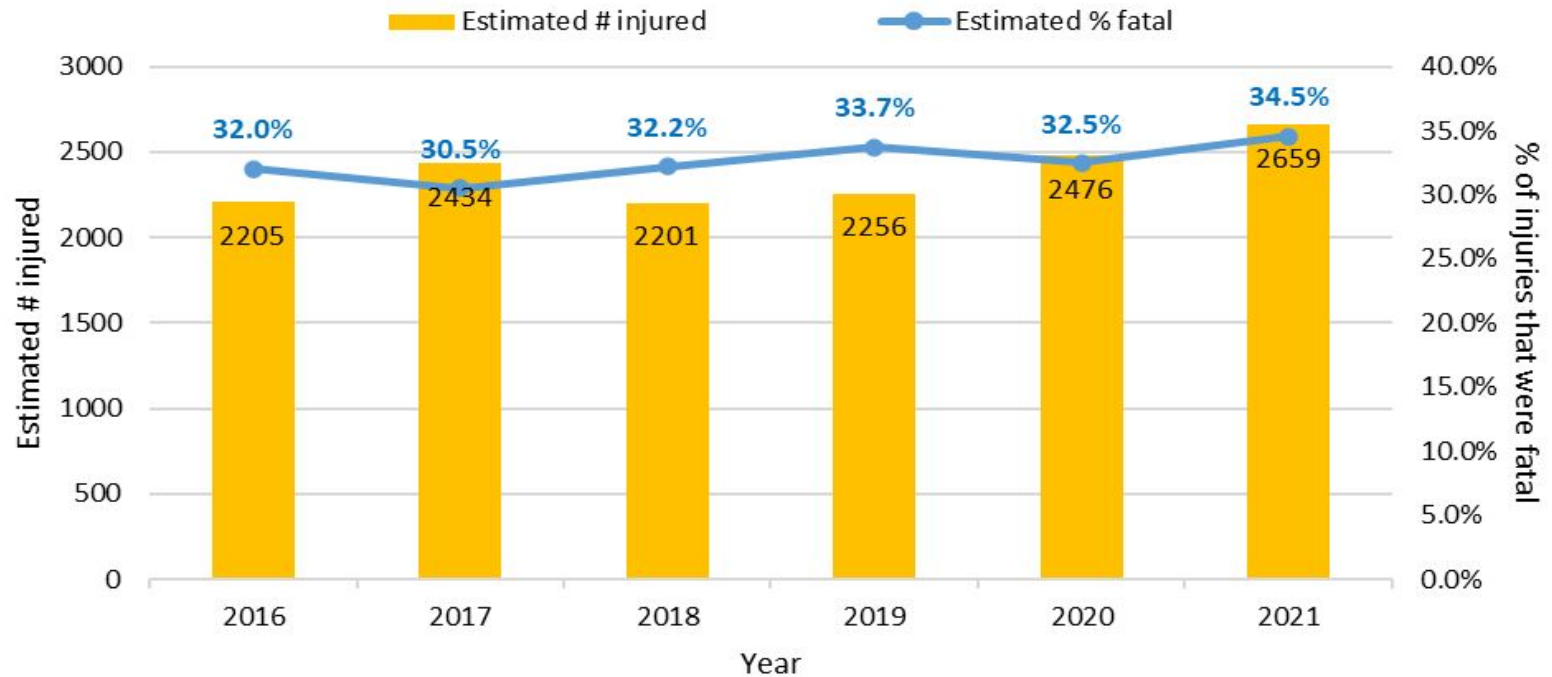
Data sources

1. Health Services Cost Review Commission (HSCRC)
 - Emergency department (ED) visits
 - Inpatient hospitalization
2. Web-based Injury Statistics Query and Reporting System (WISQARS)
 - Mortality data: numbers and rates of death
3. Maryland Violent Death Reporting System (MVDRS)
 - Supplemental mortality data: characteristics of homicide incidents, suspect demographics

Firearm-related injury

Estimated number of victims of firearm - related injury, estimated fatality, by year

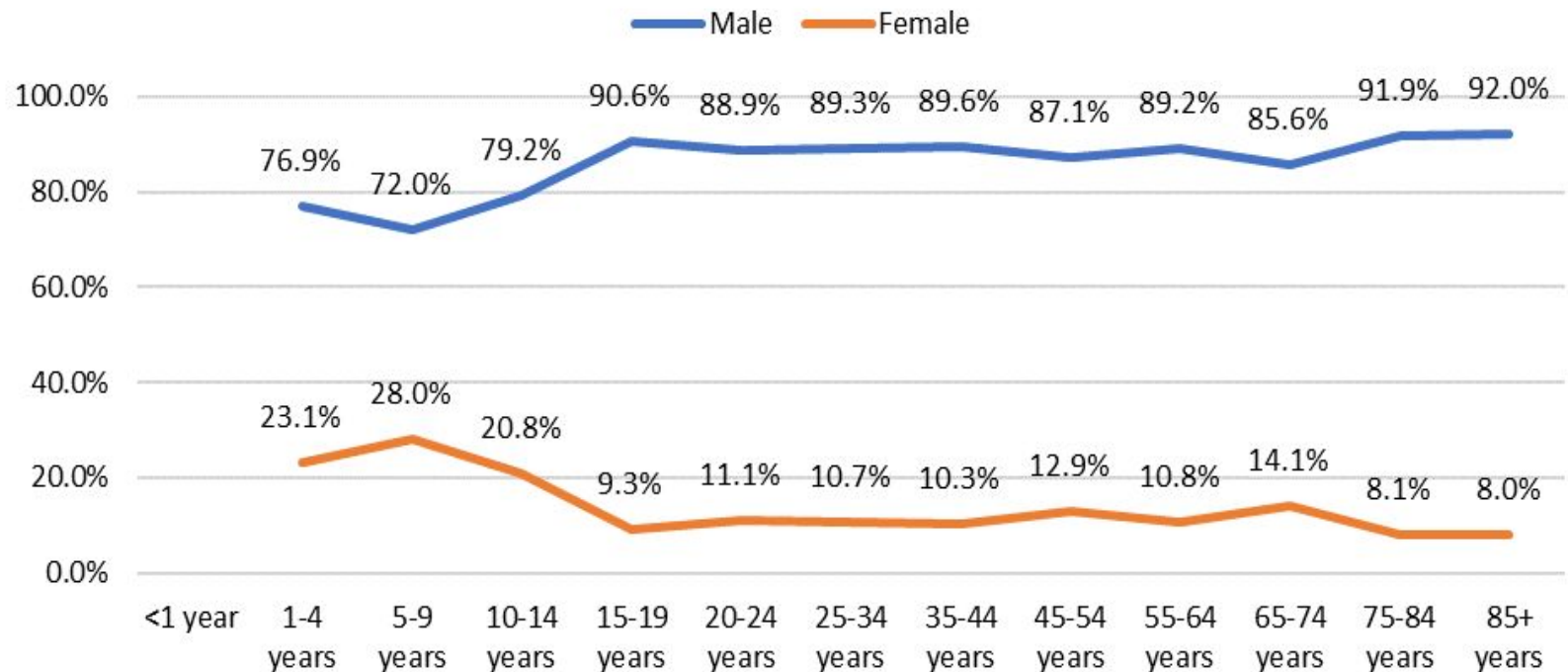
Estimated number of Marylanders injured by firearms per year, and estimated percentage of firearm injuries that were fatal



Data source #1: Maryland HSCRC: ED visit and inpatient hospitalization data
Data source #2: CDC WISQARS

Sex of victims of firearm-related injury in Maryland, by age, 2017-2021

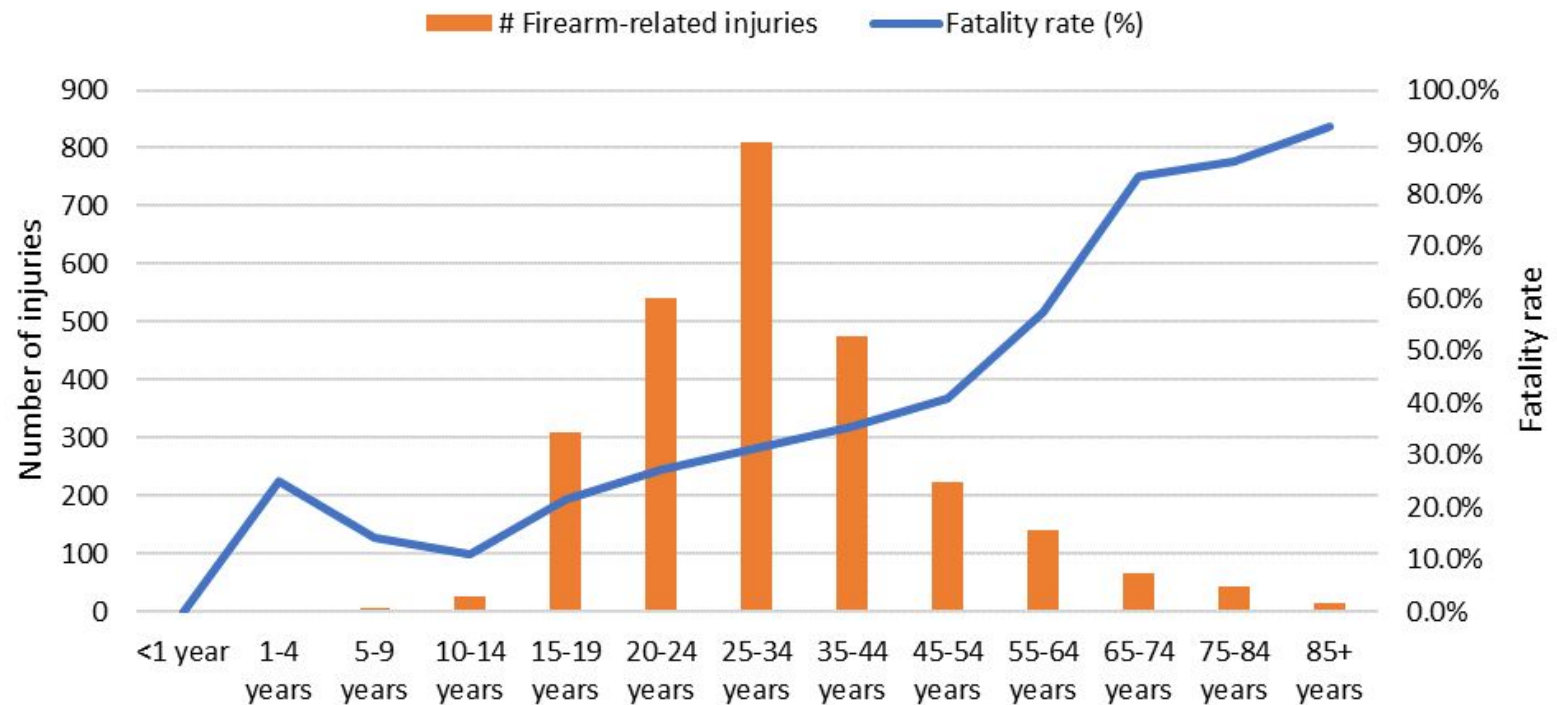
Sex of victims of firearm-related injuries in Maryland, estimated percentage by age, 2017-2021



Data source #1: Maryland HSCRC: ED visit and inpatient hospitalization data
 Data source #2: CDC WISQARS

Age of victims of firearm-related injury in Maryland, and fatality rate, 2021

Estimated number of firearm-related injuries in Maryland, and percentage that were fatal, 2021



Data source #1: Maryland HSCRC: ED visit and inpatient hospitalization data
Data source #2: CDC WISQARS

Key takeaways: Firearm-related injury

- There are over 2,200 firearm related injuries in Maryland per year, and that number is increasing.
- The majority of victims are male
 - approximately 70 - 80% for children
 - approximately 90% for ages 15 to 19 and all older ages.
- About 1/3 of firearm related injuries are fatal.
- Fatality rate varies by age; highest for older ages.

Violent death

Terminology: Cause and Manner of Death

Cause of Death: The underlying medical condition, disease or injury that begins a lethal chain of events resulting in death.

Manner of Death: Describes the way in which a death occurs, which may be Homicide, Suicide, Accidental, Natural or Undetermined.

Maryland Office of the Chief Medical Examiner

<https://health.maryland.gov/ocme/Pages/cause-manner.aspx>

Leading manners of violent death in Maryland, 2021

1,338 violent deaths in Maryland in 2021:

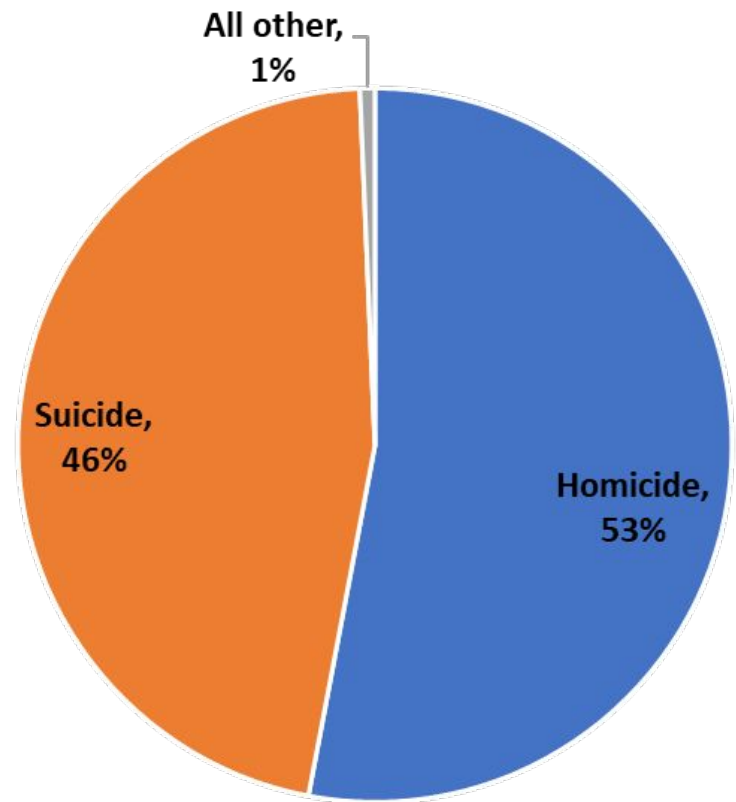
53% Homicides (n=709)

46% Suicides (n=620)

Legal intervention

Unintentional

Undetermined intent



Leading mechanisms of violent death in Maryland, 2021

Weapons or mechanisms of injury:

68.1% Firearms (n=911)

14.8% Suffocation (n=198)

4.3% Drug poisoning (n=58)

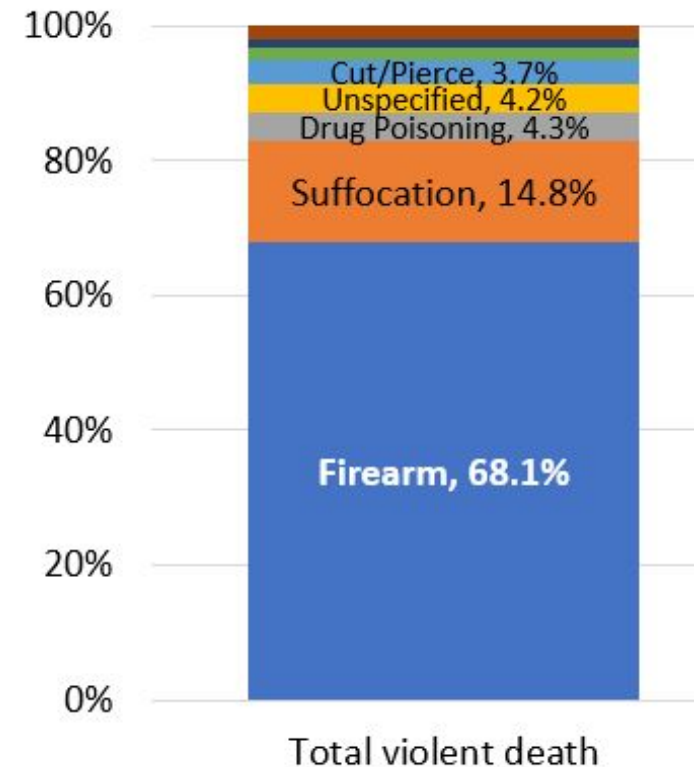
4.2% Unspecified (n=56)

3.7% Cut/pierce (n=49)

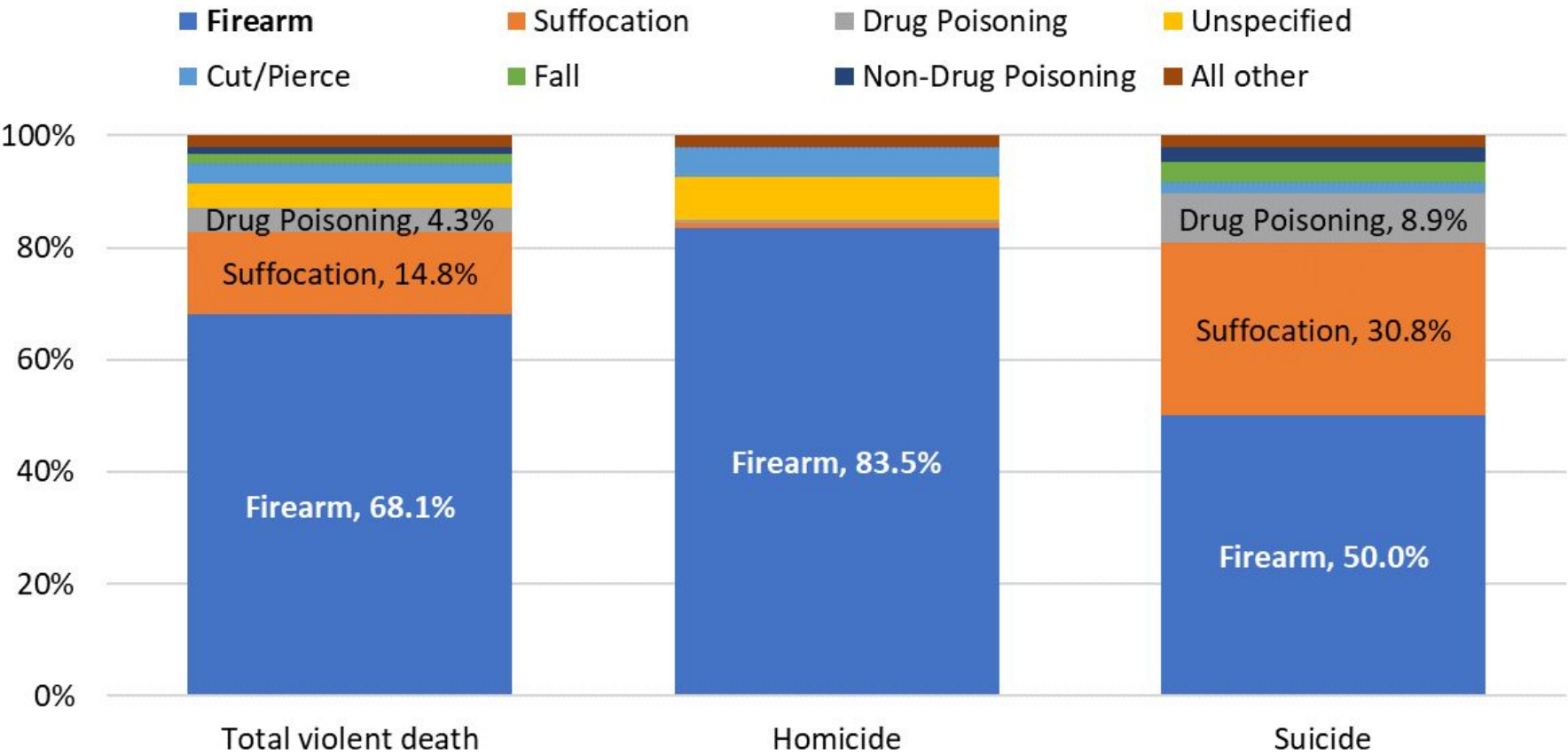
1.7% Falls (n=23)

1.2% Non-drug poisoning (n=16)

2.0% All other

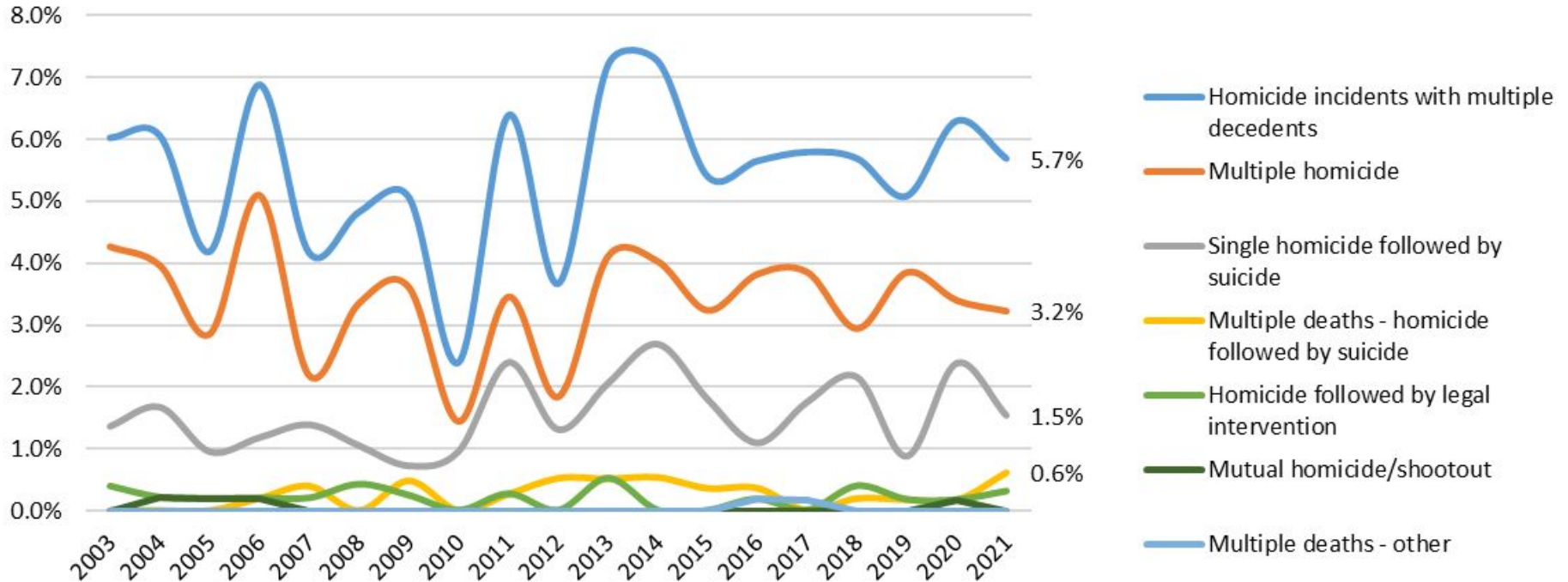


Leading mechanisms of violent death in Maryland in 2021, by manner of death



Data source #3: Maryland Violent Death Reporting System (MVDRS)

Homicide incidents in Maryland with multiple decedents, by type and year



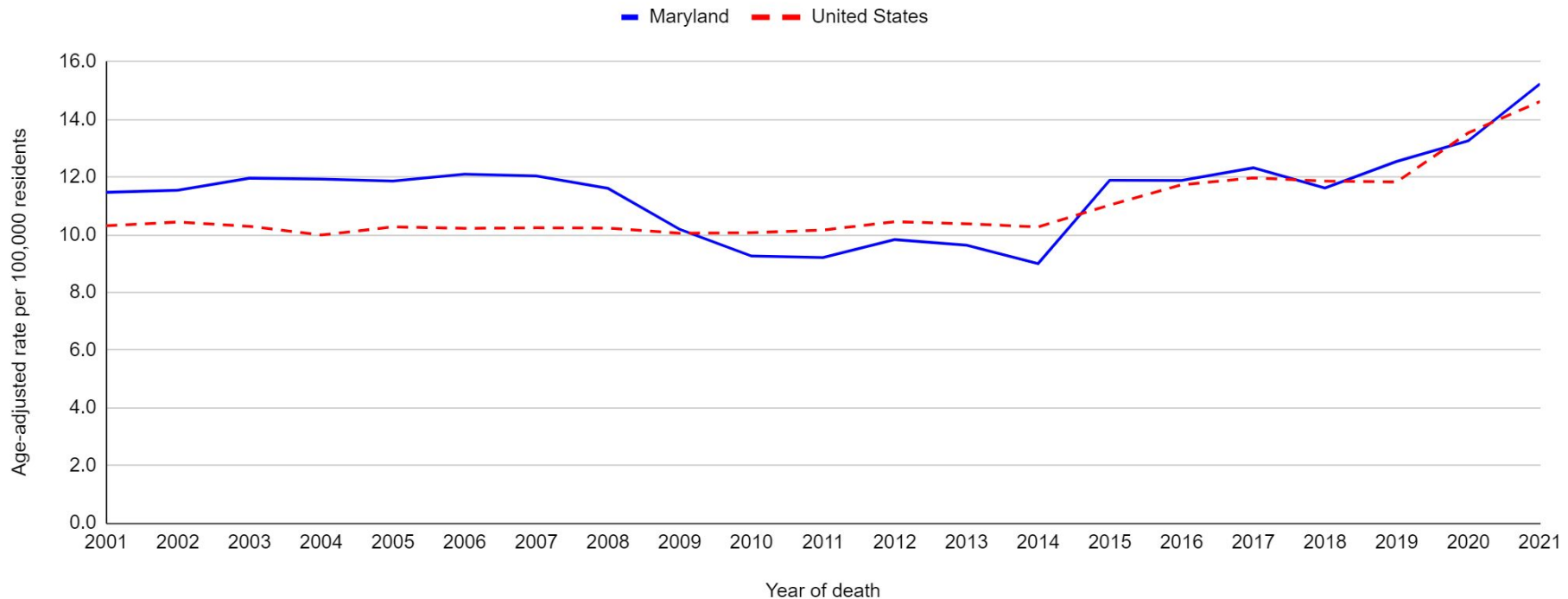
Key takeaways: Violent death

- While homicide was the leading mechanism of violent death, suicide accounted for 46% of violent deaths in Maryland in 2021.
- Firearms were the primary mechanism of homicide and of suicide in Maryland in 2021.
- About 10% of Maryland homicides involve multiple decedents, which may include additional homicides, suicide, or legal intervention deaths.

Firearm-related mortality

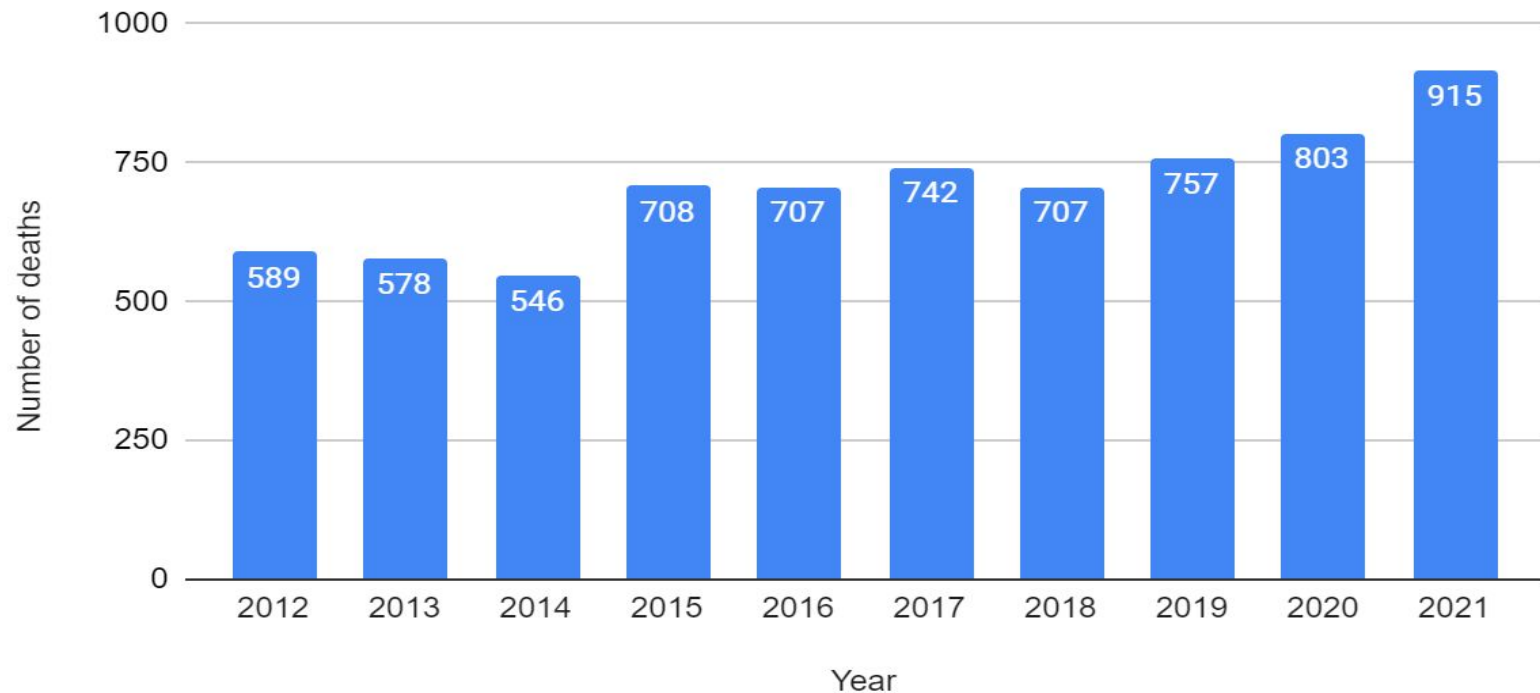
Age-adjusted rate of firearm-related deaths, Maryland vs. US, by year

Age-adjusted rate of firearm-related deaths, Maryland (MD) vs. United States (US), by year
Data source: CDC WISQARS accessed 02.07.24



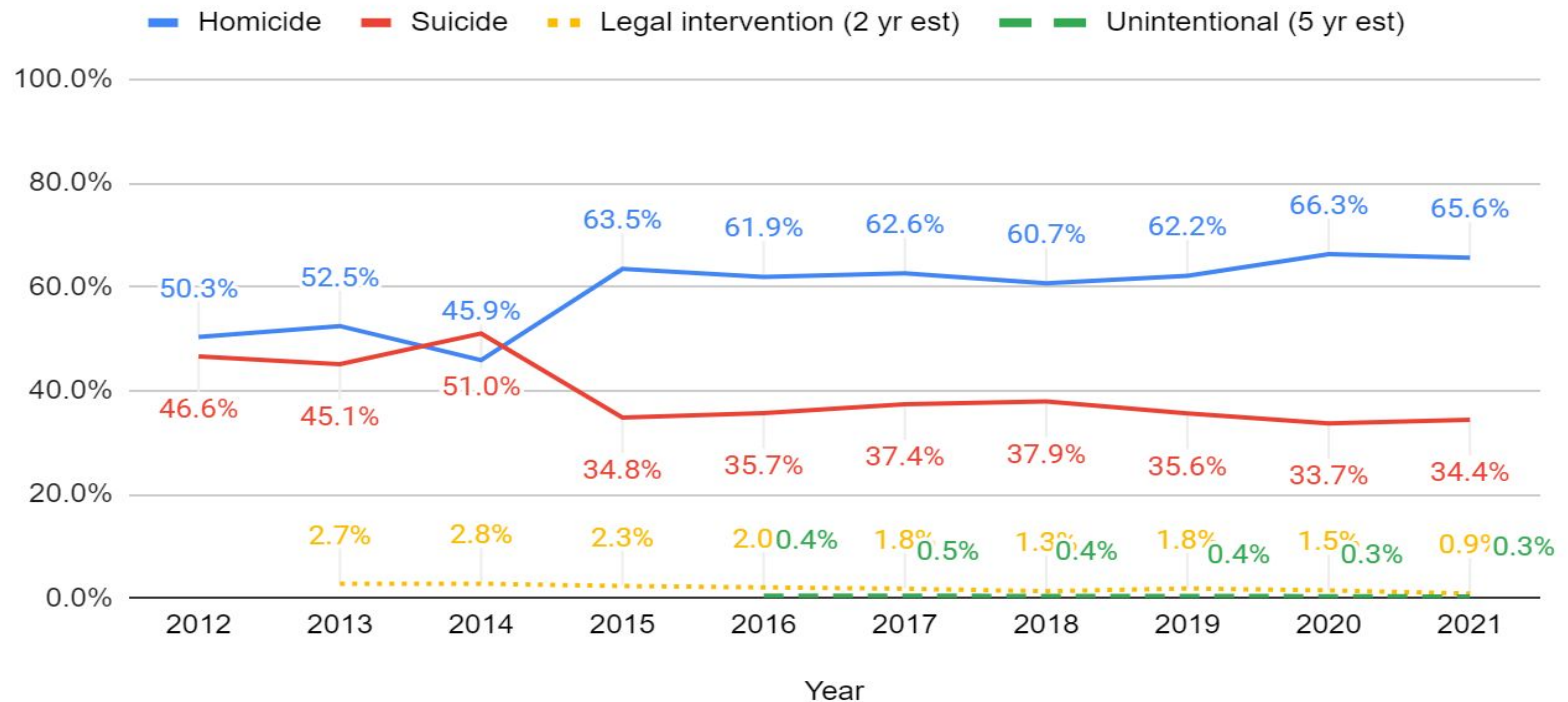
Number of firearm-related deaths in Maryland, by year

Total number of firearm-related deaths in Maryland, by year
(Data source: CDC WISQARS)

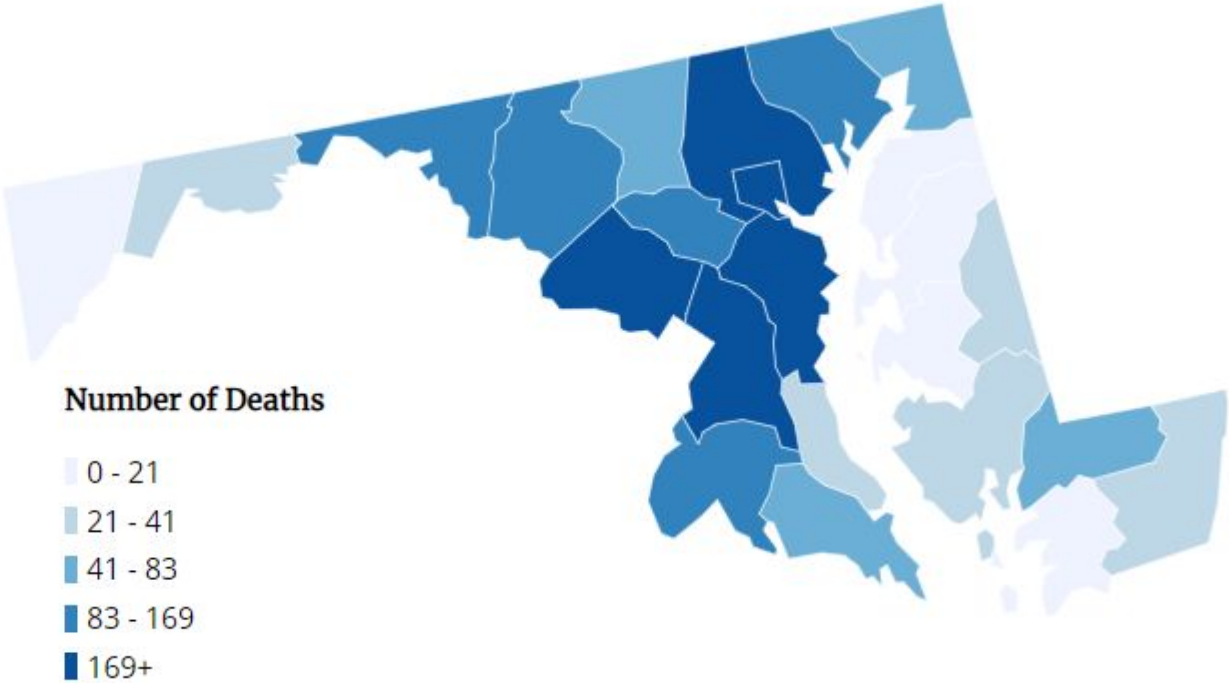


Manner (intention) of firearm - related deaths, Maryland 2012-2021

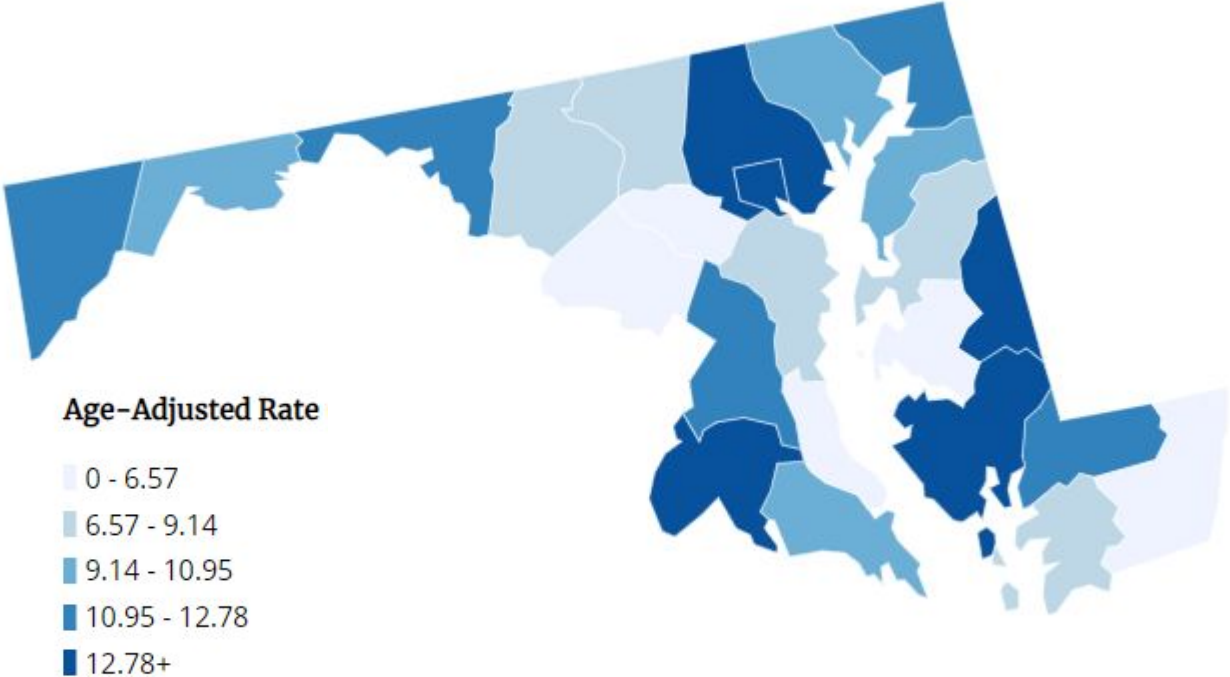
Manner of firearm-related deaths in Maryland, by year
(Data source: CDC WISQARS)



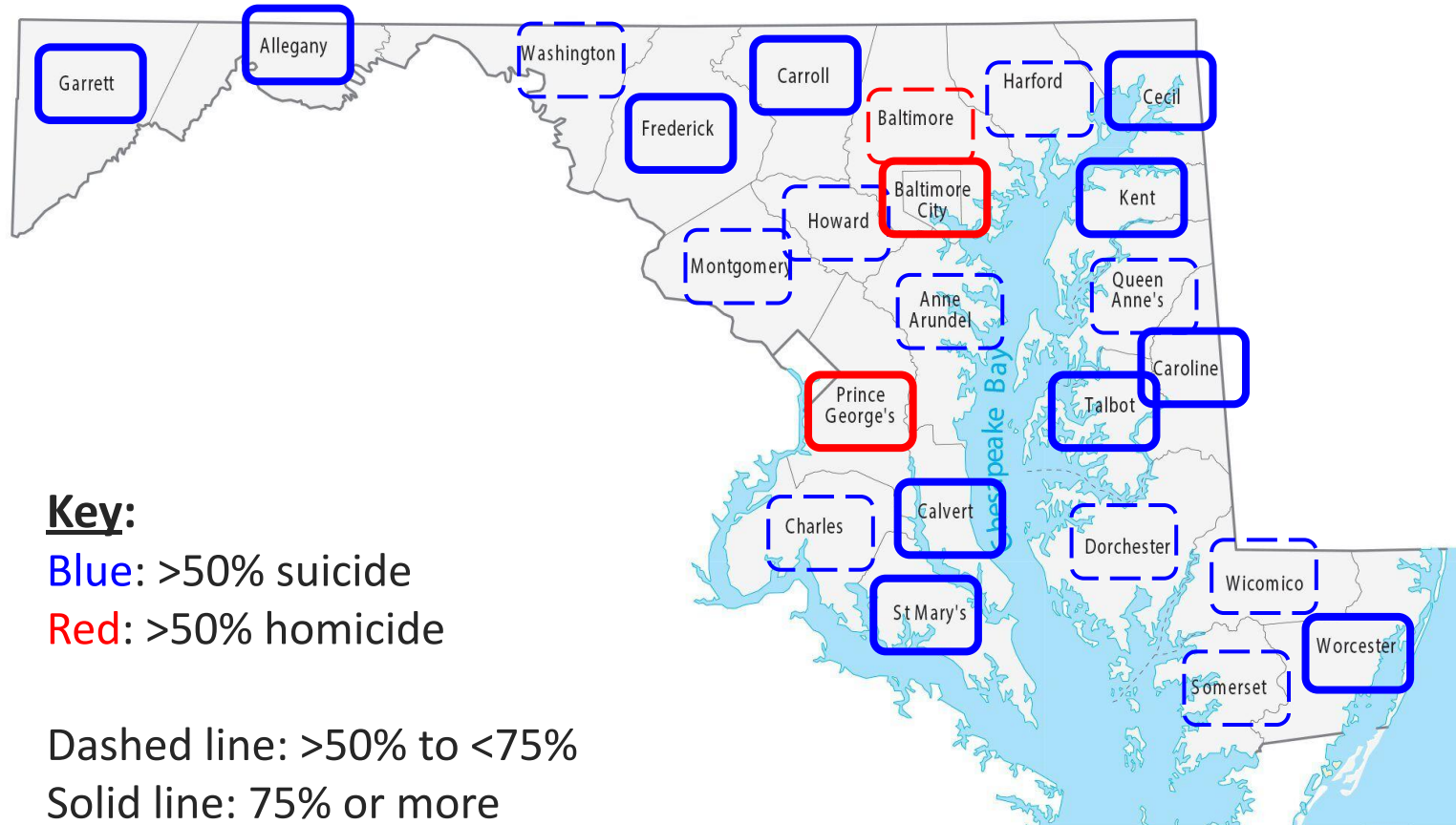
Number of firearm-related deaths in Maryland, by county, 2017-2021



Rate of firearm-related death per 100,000 Maryland residents, by county, 2017-2021

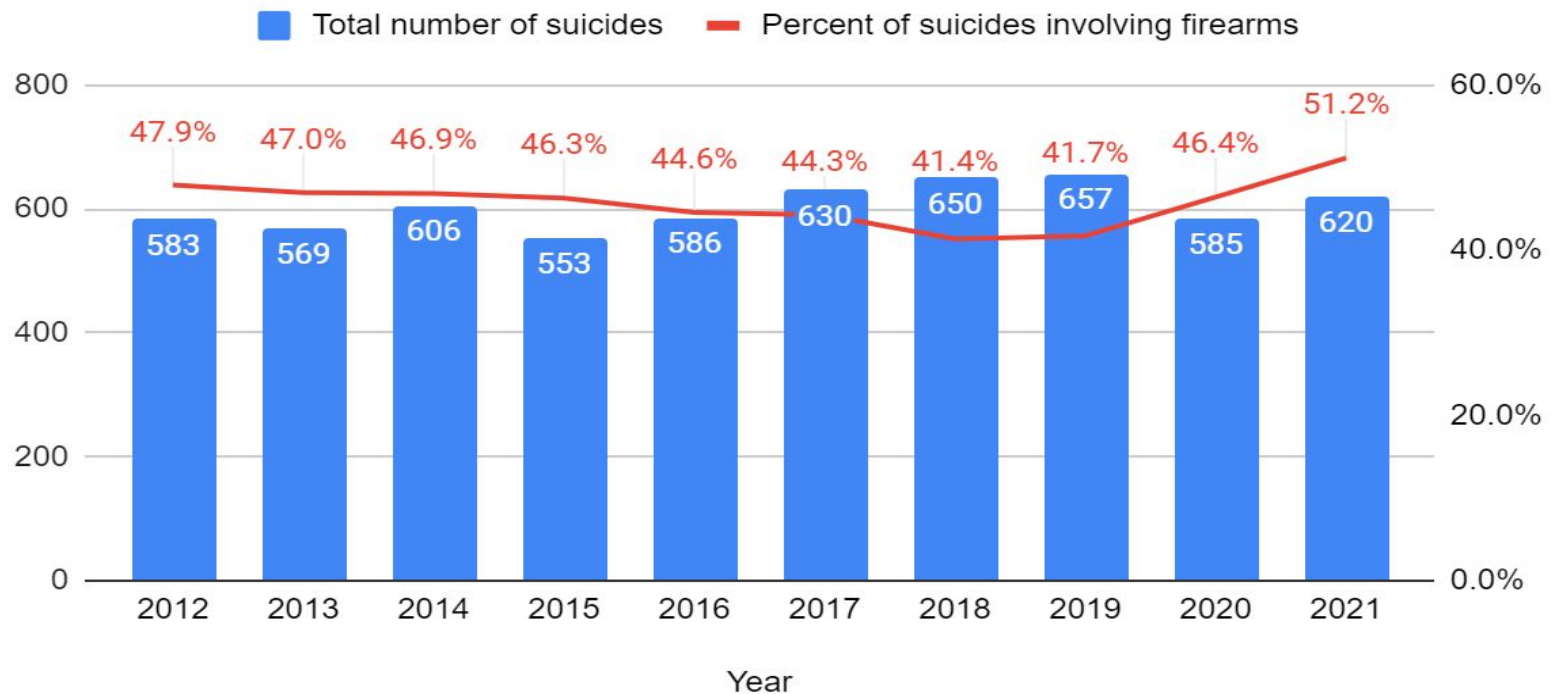


Most common manner of firearm-related death, by county



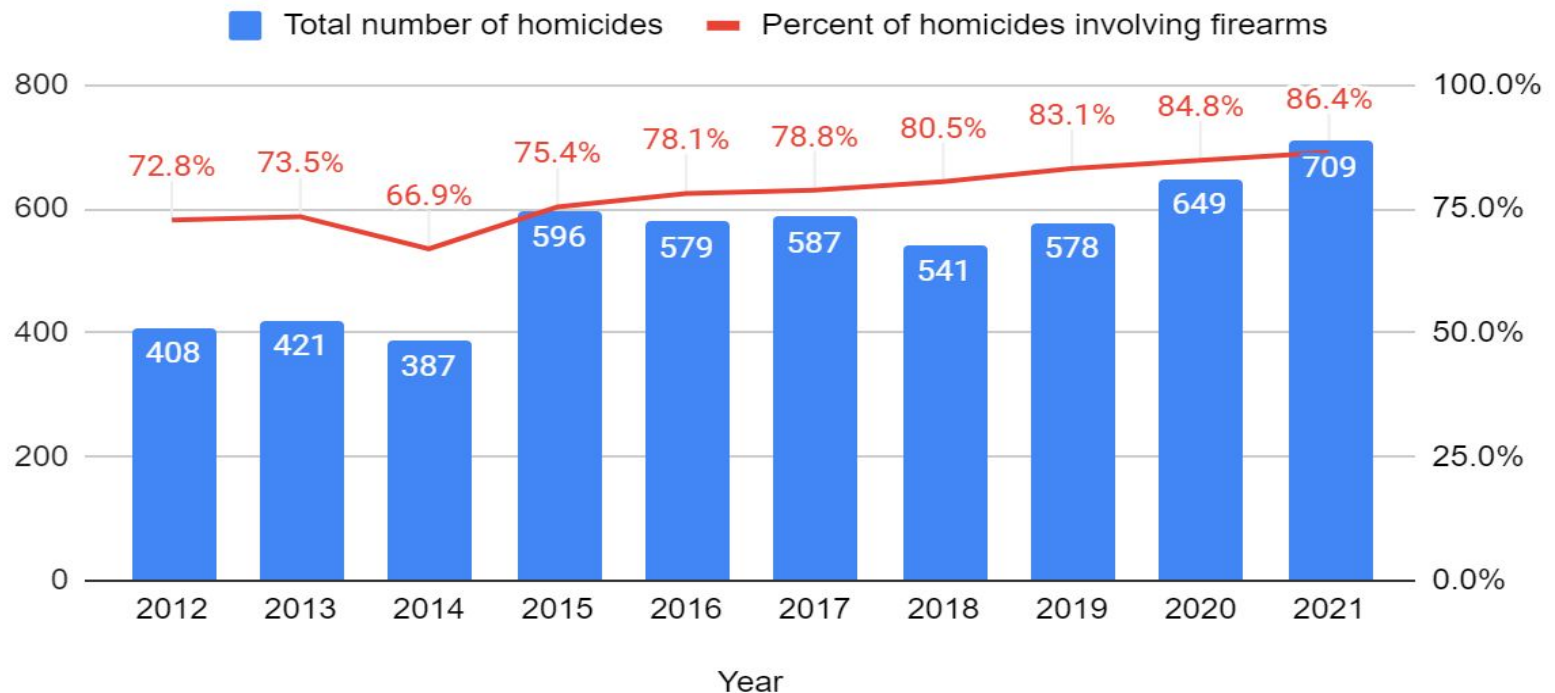
Firearm-related suicide deaths

Total number of suicides and percentage involving firearms, in Maryland, by year (Data source: CDC WISQARS)



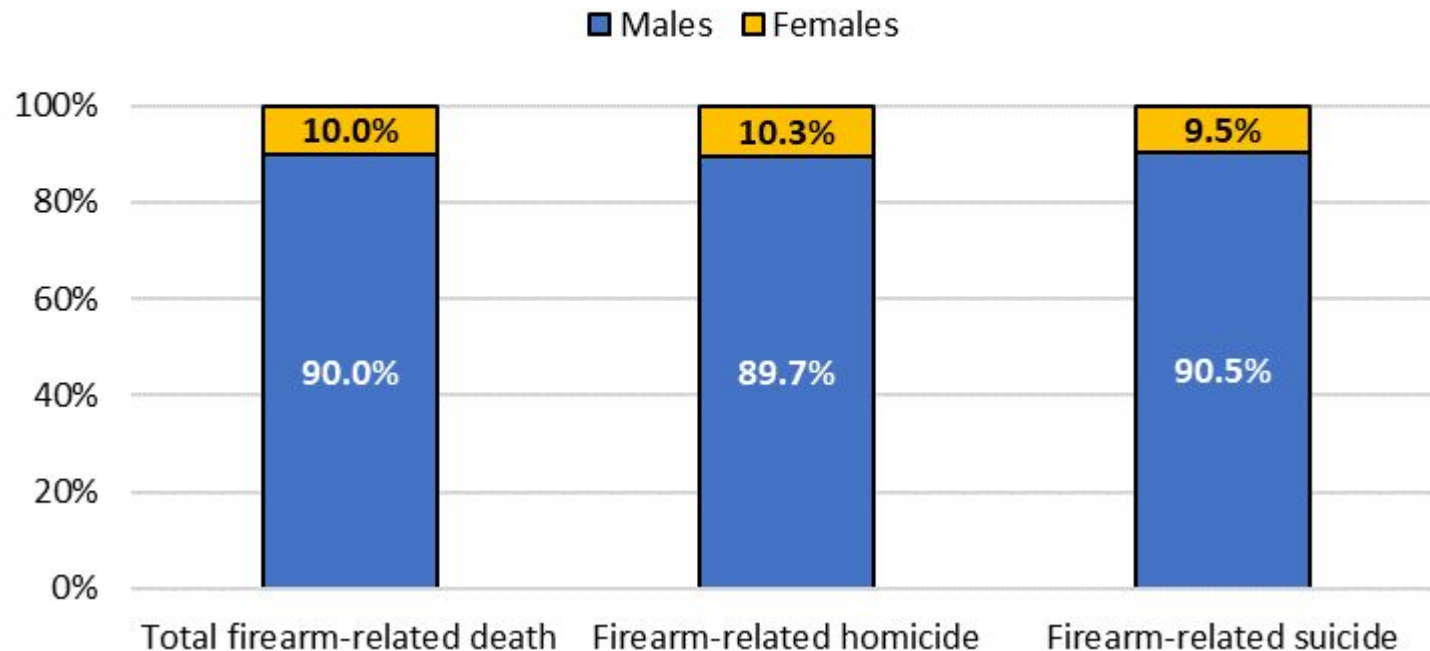
Firearm-related homicide deaths

Total number of homicides and percentage involving firearms, in Maryland, by year (Data source: CDC WISQARS)



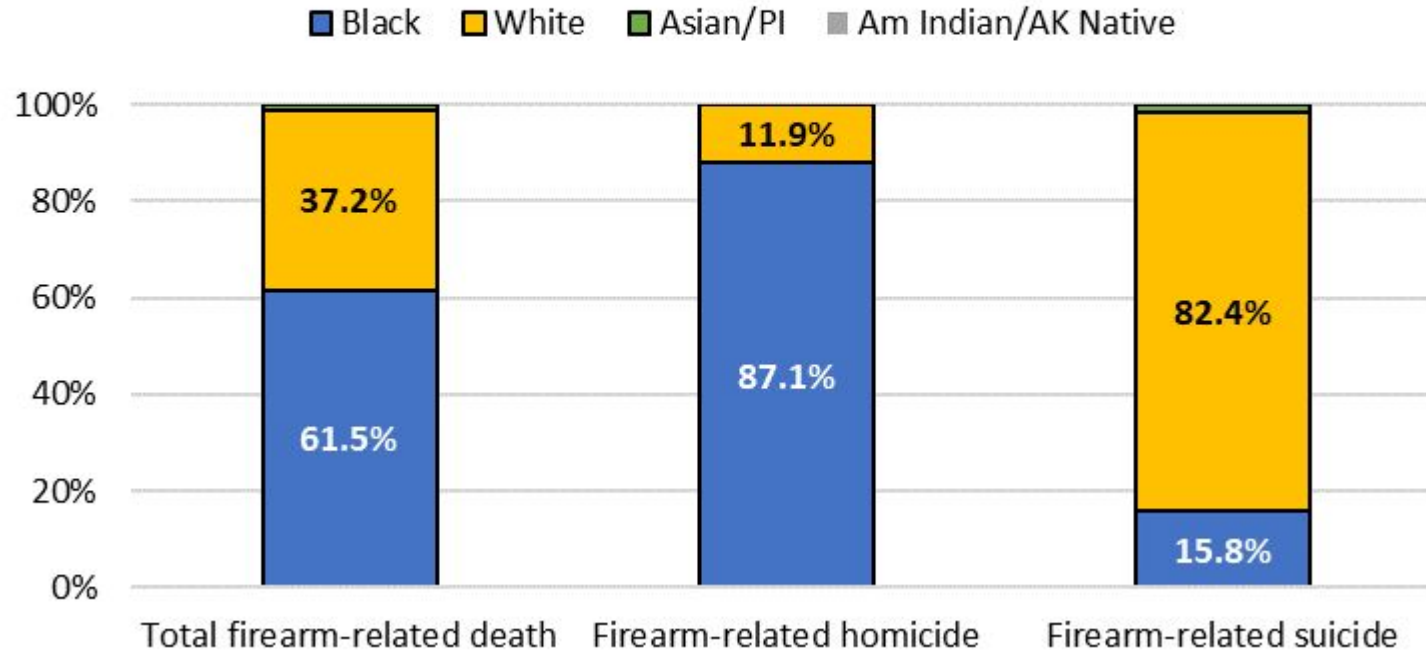
Demographics for firearm-related death: decedent sex

Percentage of firearm-related deaths in Maryland by sex and manner of death, 2016-2020



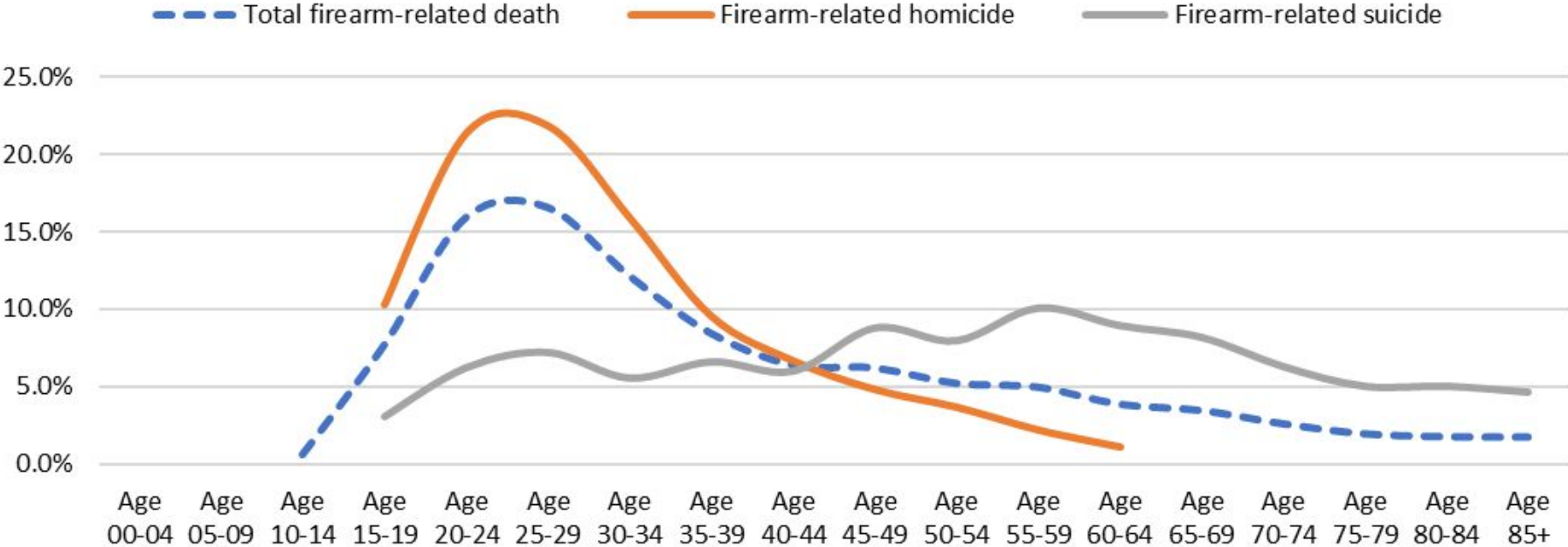
Demographics for firearm-related death: decedent race

Percentage of firearm-related deaths in Maryland by race and manner of death, 2016-2020



Demographics for firearm-related death: decedent age

Percentage of firearm-related deaths in Maryland by age group and manner of death, 2016-2020



Demographics for firearm homicide: suspect age <18 years old

Percentage of Maryland homicides for which one or more known suspect is age <18, by year and firearm involvement, 2003-2021



Key takeaways: Firearm-related mortality

- Firearm related deaths increasing since 2015
- Firearm-related deaths in Maryland:
 - 65% homicide, 34% suicide, <1% legal intervention, <1% accidental
- Suicide is the leading manner of firearm-related death in 21 of Maryland's 24 jurisdictions
- Firearms increasing as % of suicide deaths in 2020 and 2021
- Firearms increasing as % of homicide deaths since 2014

Key takeaways: Firearm-related mortality

- Decedent demographics vary by manner of death
 - Homicide: 90% male, 87% black, 43% age 20 to 29
 - Suicide: 90% male, 82% white, 19% age 55 to 64
- 11.5% of firearm-related homicides with known suspect information in 2021 involved 1 or more suspect(s) age <18
 - *Almost 1 in 9*

For more information

Email us: mdh.mvdrs@maryland.gov

1. Health Services Cost Review Commission (HSCRC)
<https://hscrc.maryland.gov/Pages/hsp-data-request.aspx>
2. Web-based Injury Statistics Query and Reporting System (WISQARS)
<https://www.cdc.gov/injury/wisqars/index.html>
3. Maryland Violent Death Reporting System (MVDRS)
<https://health.maryland.gov/phpa/OEHFP/Injury/Pages/mvdrs.aspx>



Maryland

DEPARTMENT OF HEALTH

Prevention and Health Promotion Administration

<https://phpa.health.Maryland.gov>

