



The Epidemiological Trends and Patterns of Suicide 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

- Data sources
 - Web-based Injury Statistics Query and Reporting System (WISQARS)
 - Maryland Violent Death Reporting System (MVDORS)
- Rates, patterns, and trends of suicide
- Weapons or means of suicide
- Circumstances of suicide

Data sources

Web-based Injury Statistics Query and Reporting System (WISQARS)

- Online, interactive, federal database of fatal and nonfatal injury data
- Multiple data sources including
 - National Center for Health Statistics (NCHS)
 - US Census Bureau
 - National Violent Death Reporting System (NVDRS)
 - National Electronic Injury Surveillance System (NEISS)
 - US HHS Office of the Assistant Secretary for Planning and Evaluation
 - Journal articles

<https://www.cdc.gov/injury/wisqars/index.html>

Web-based Injury Statistics Query and Reporting System (WISQARS)

- Multiple interactive modules:
 - Fatal injury data ←
 - National Violent Death Reporting System (NVDRS)
 - Nonfatal injury data (*national only*)
 - Leading causes of death and injury ←
 - Years of potential life lost (YPLL)
 - Provisional data (*national only, 2023 available now*)
 - Cost of injury
 - Infographics
 - Health equity
- **Most** available at national **and** state level

Maryland Violent Death Reporting System (MVDRS)

- Enhanced public health surveillance system for violent death; MD was an early adopter (2002)
- Systematically collects 600+ unique indicators about the circumstances of violent death, including decedent demographics, details about the fatal injury and death, life circumstances, weapons, suspects (when applicable), toxicology, and overdose (when applicable)
- Part of CDC's National Violent Death Reporting System (NVDRS)

MVDRS source documents and endorsement of circumstances

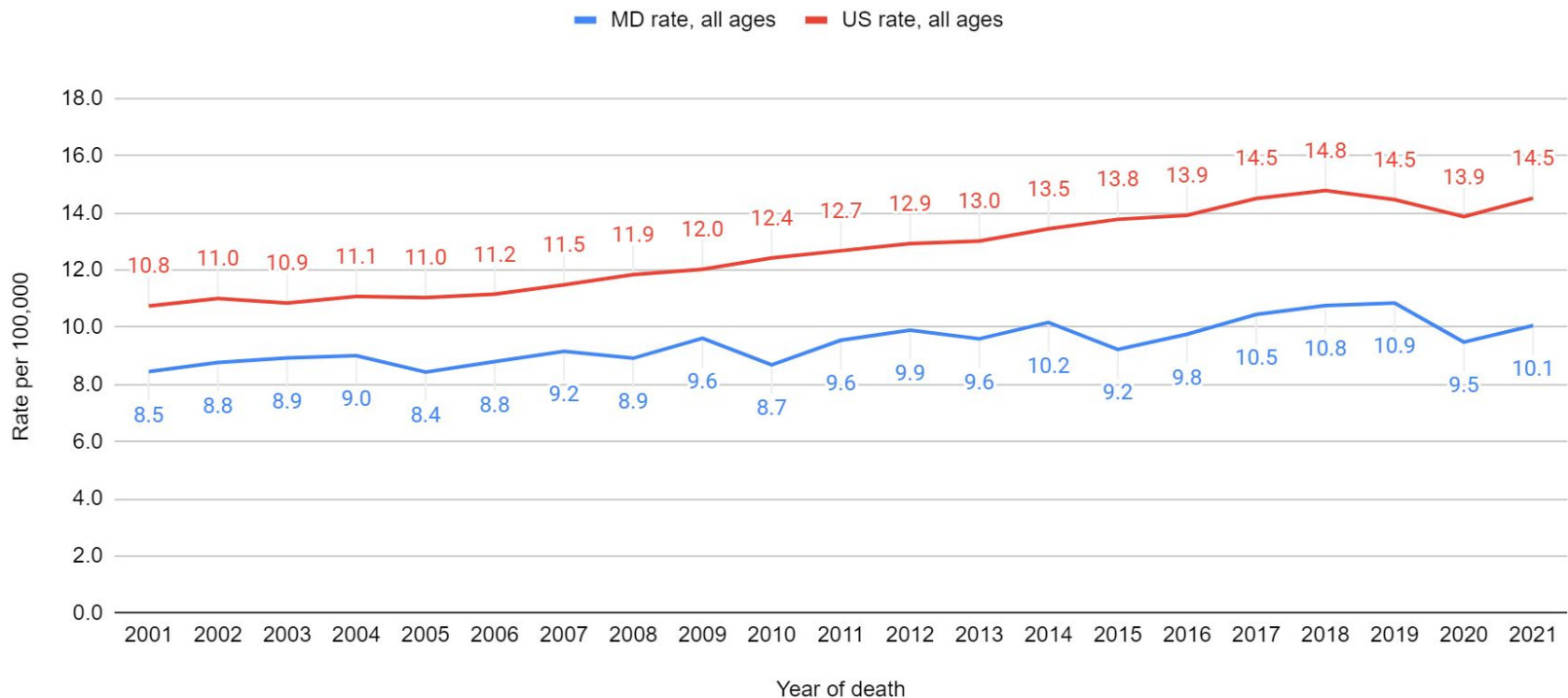
- Three primary, required source documents
 - Death certificates (DC)
 - Coroner/medical examiner reports (C/ME)
 - Law enforcement reports (LE)
- EMS data, hospital records, other medical records are not required and not collected in MD unless available in a primary source document
- Circumstances must be noted in a source document and meet criteria of the NVDRS coding manual
- *Some circumstances are probably underreported*

Data source: WISQARS

Rates, patterns, and trends

Suicide rate per 100,000 residents: Maryland vs. United States

Suicide rate per 100,000 residents, Maryland vs United States, 2001-2021
Data source: CDC WISQARS, accessed 12/18/23

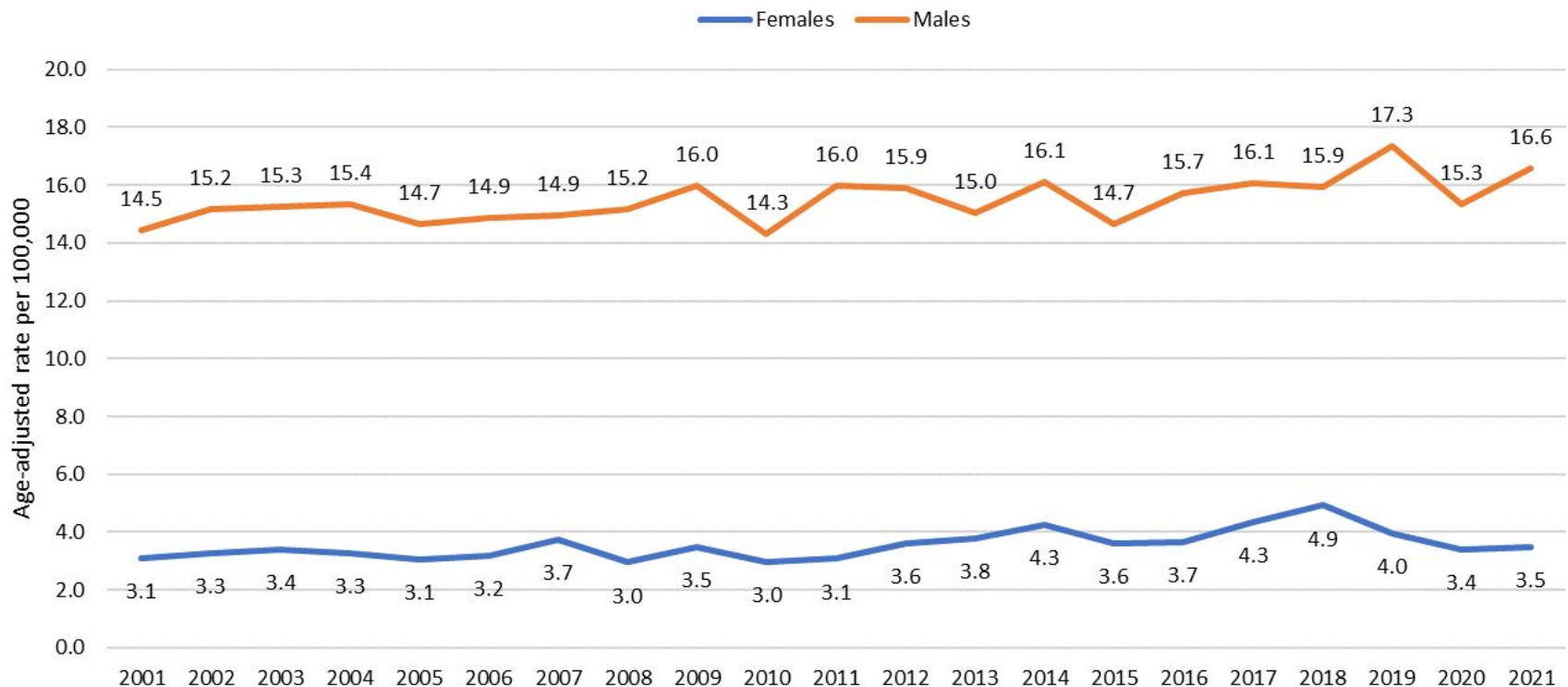


What age group is most impacted by suicide? Number vs. rate vs. rank in Maryland

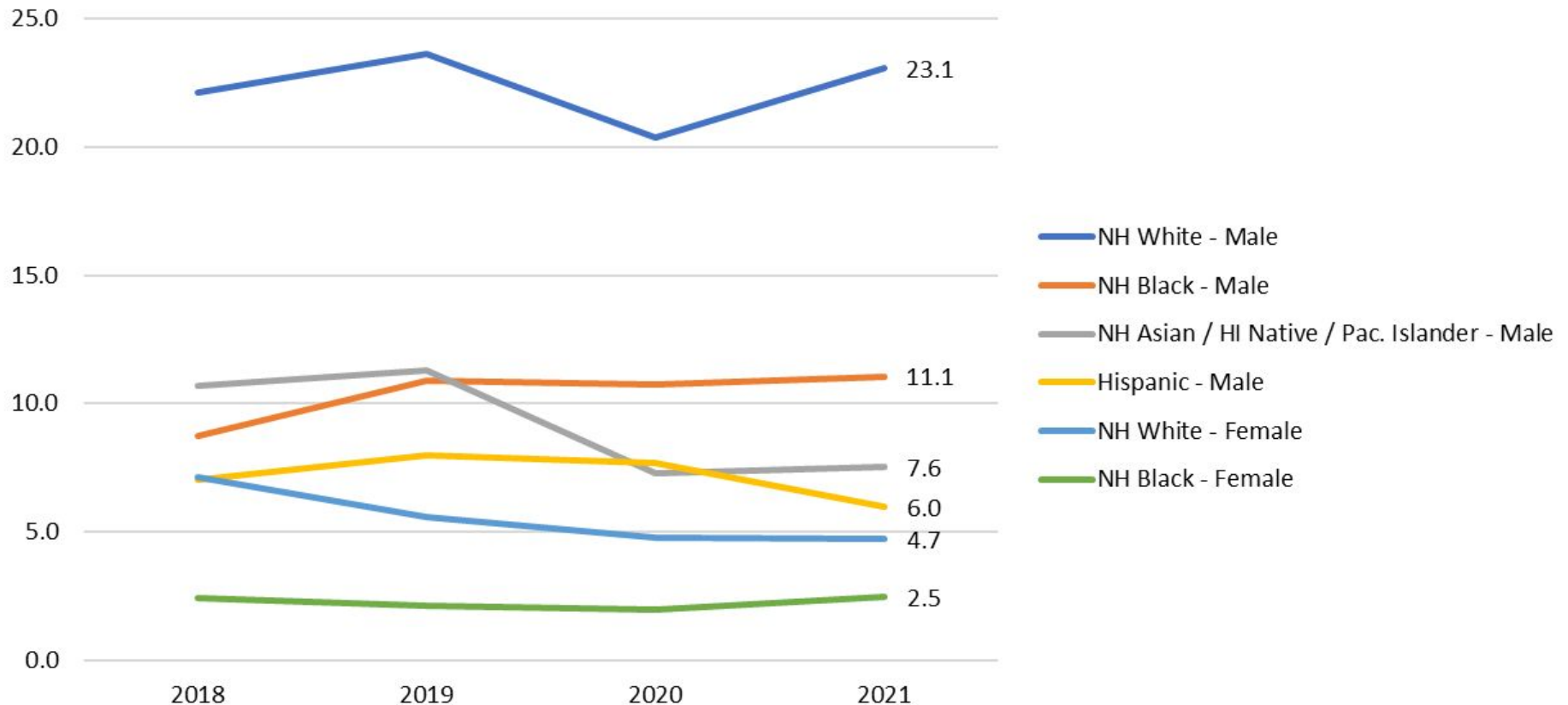
	Age 10 to 14	Age 15 to 19	Age 20 to 24	Age 25 to 29	Age 30 to 34	Age 35 to 39	Age 40 to 44	Age 45 to 49
Number of deaths	–	34	55	49	50	41	55	49
Rate per 100,000	–	8.7	14.8	12.4	11.7	9.6	13.7	13.2
Rank	Tied@1	Rank 3	Rank 3	Rank 3		Rank 6		Rank 8*
Trend (2012-2021)	–	+0.316	+0.0824	+0.243	+0.456	+0.159	-0.141	-0.0795
	Age 50 to 54	Age 55 to 59	Age 60 to 64	Age 65 to 69	Age 70 to 74	Age 75 to 79	Age 80 to 84	Age 85+
Number of deaths	48	49	42	40	34	29	16	20
Rate per 100,000	11.7	11.3	10.4	12.0	12.5	16.3	14.3	18.3
Rank	*Rank 8	Rank 10		Rank 15		Rank 17		Rank>20
Trend (2012-2021)	-0.457	-0.282	-0.013	+0.235	+0.144	+0.122	+0.392	+0.0575

Suicide rate per 100,000 MD residents: Rate in females vs. rate in males

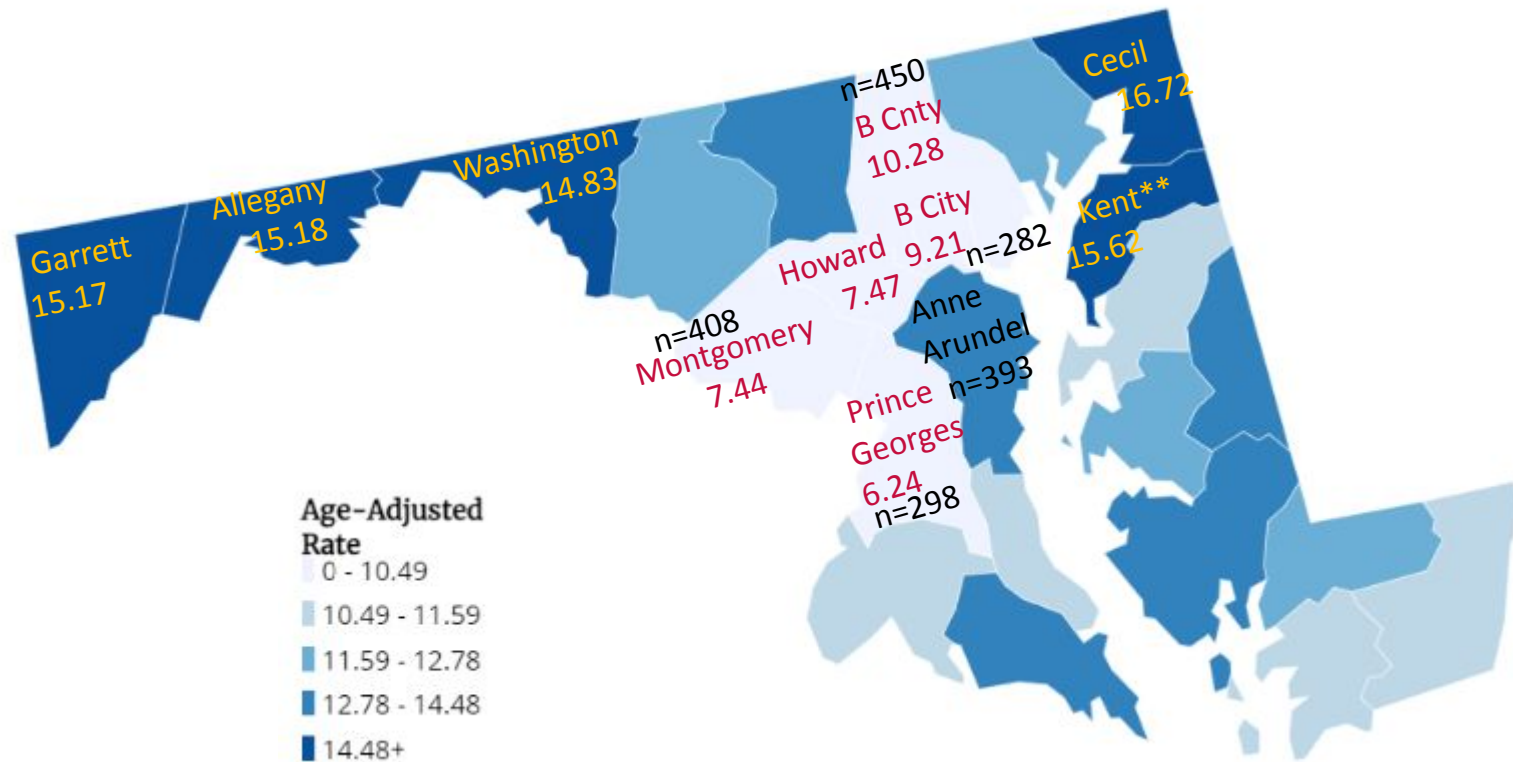
Age-adjusted rate of suicide by sex in Maryland, over time



Age-adjusted suicide rates by race/ethnicity and sex



2017-2021 Maryland suicide deaths by county



Rates are per 100,000 population

** Indicates unstable value

Key Takeaways: Patterns and Trends

- Highest rates: age 75+
- Highest numbers: age 20 - 59
- Leading cause of death: Youth

- Rates highest in men

- Rates increasing in Maryland
 - Particularly age 30 to 34, age 80 to 84, age 15 to 19

- 2020: decrease NH White males, NH Asian Males
 - No decrease for NH Black males, Hispanic males, NH White women, NH Black women

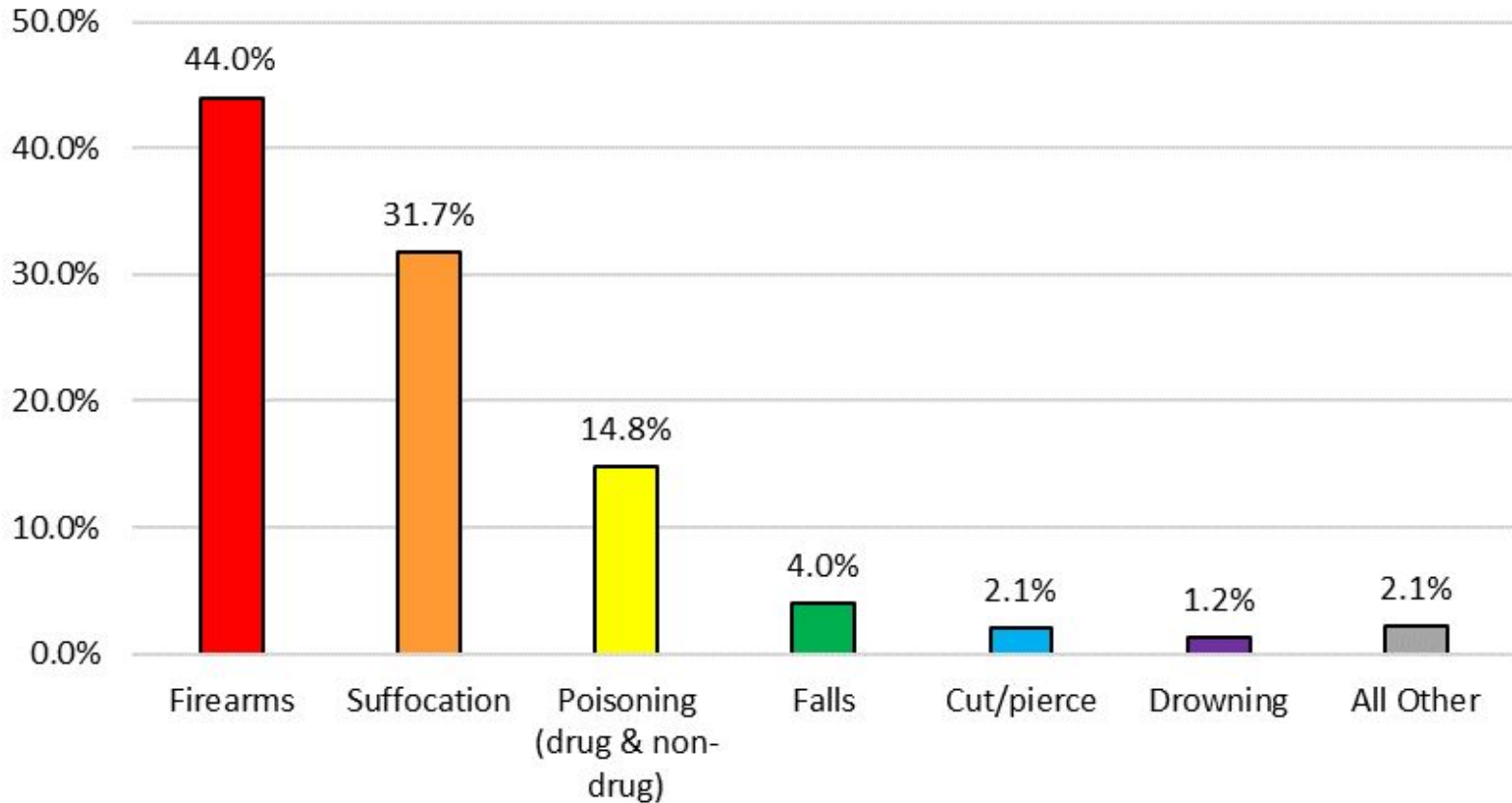
Key Takeaways: Patterns and Trends

- Rates highest in more rural jurisdictions
 - Cecil, Kent, Allegany, Garrett, Washington counties
- Rates lowest in more urban jurisdictions
 - Prince Georges, Montgomery, Howard, Baltimore counties and Baltimore City
- Numbers highest in more urban jurisdictions
 - Baltimore, Montgomery, Anne Arundel, Prince Georges counties and Baltimore City

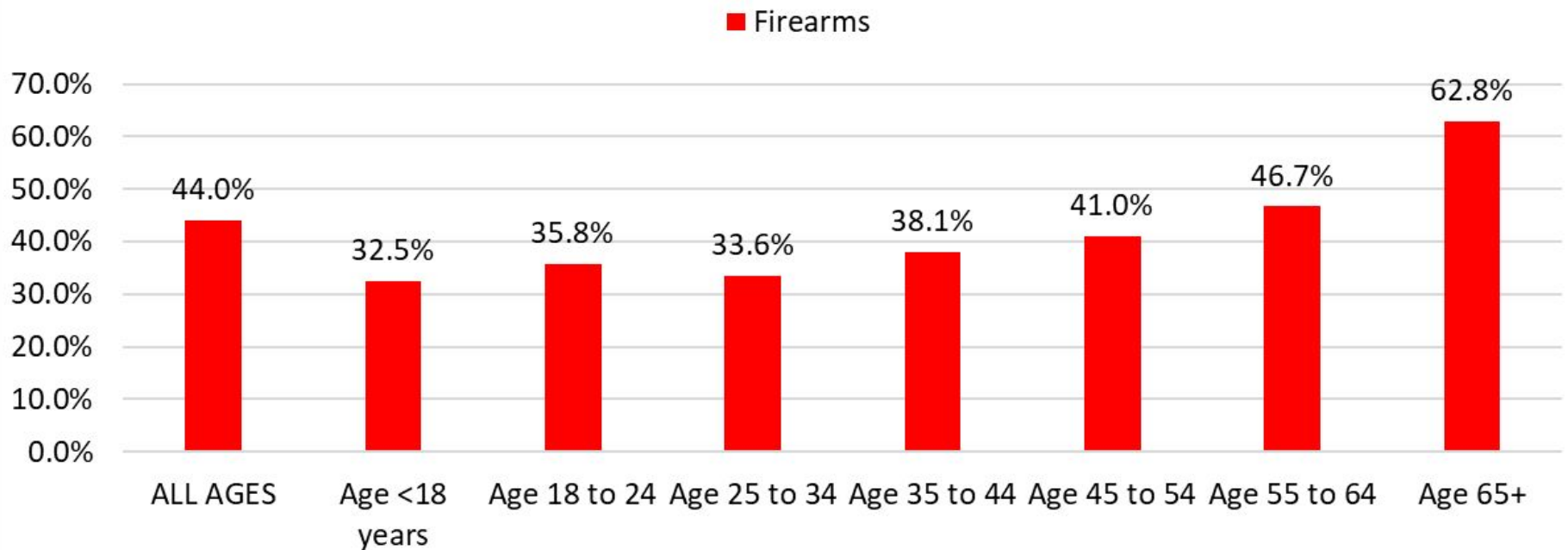
Data sources: WISQARS and MVDRS

Weapons or Means

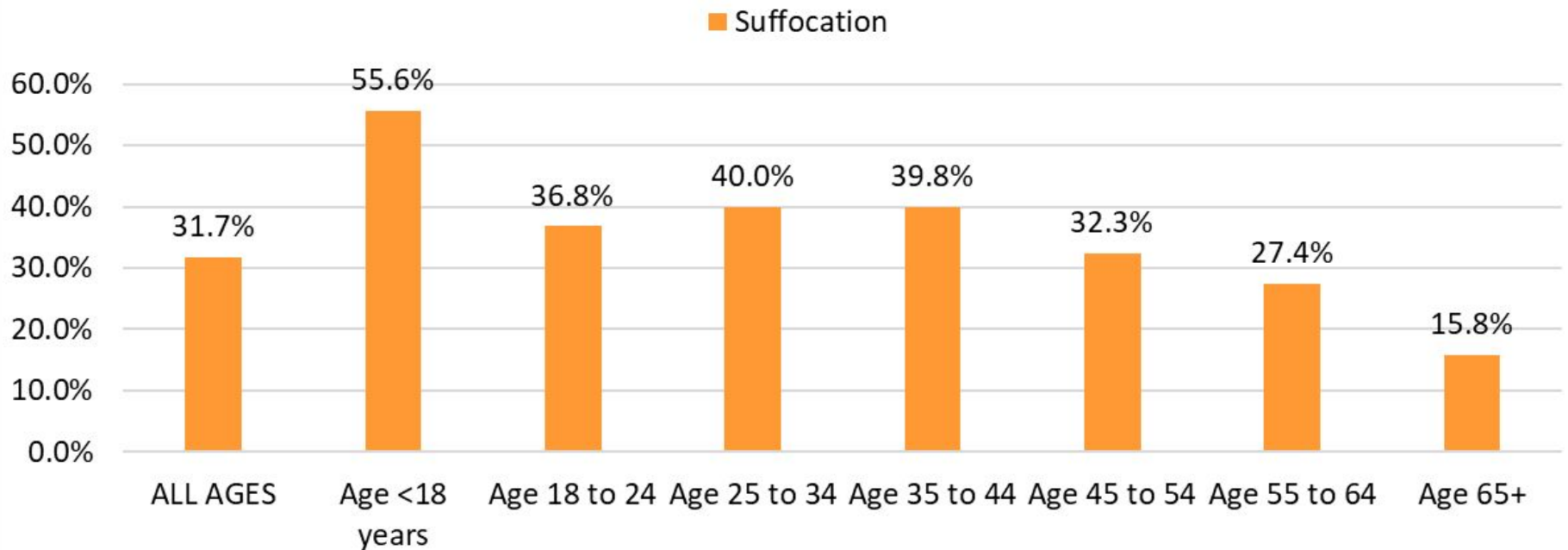
Most common means of suicide in Maryland, 2017-2021



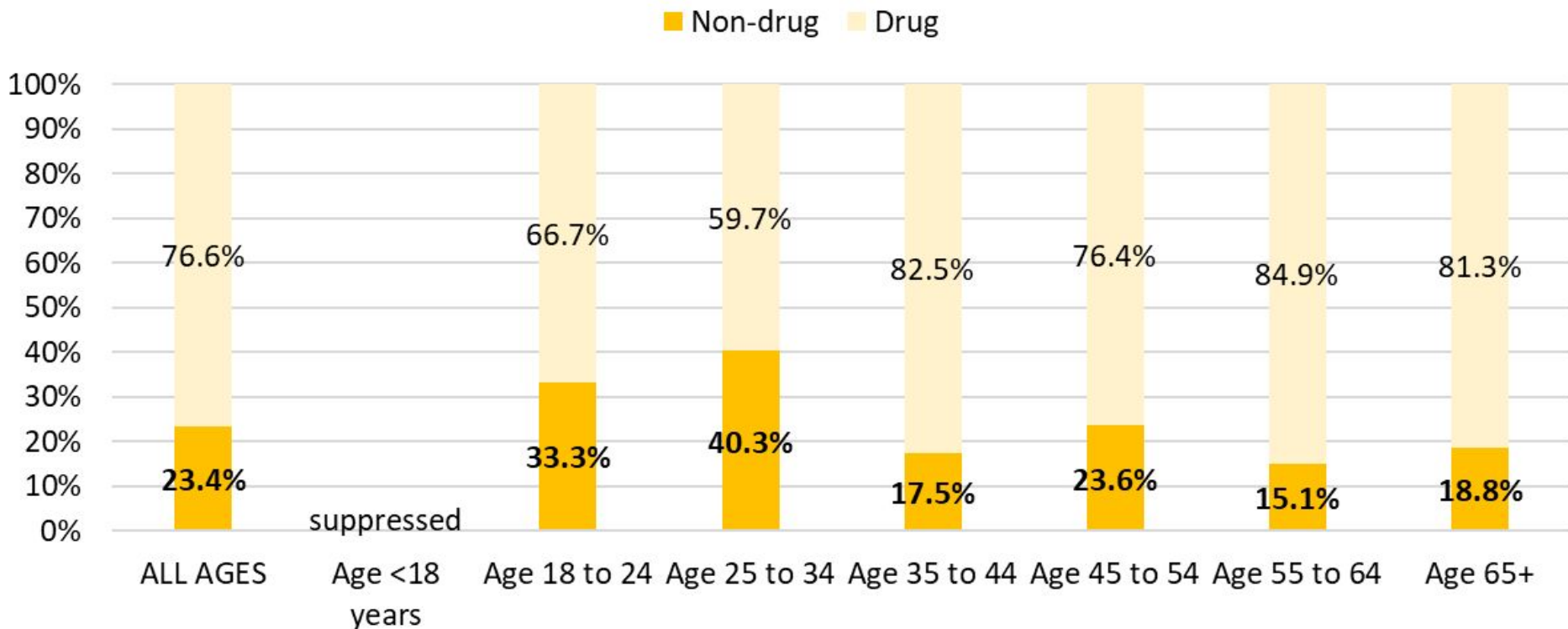
Common means of suicide in Maryland, by age group: Firearms



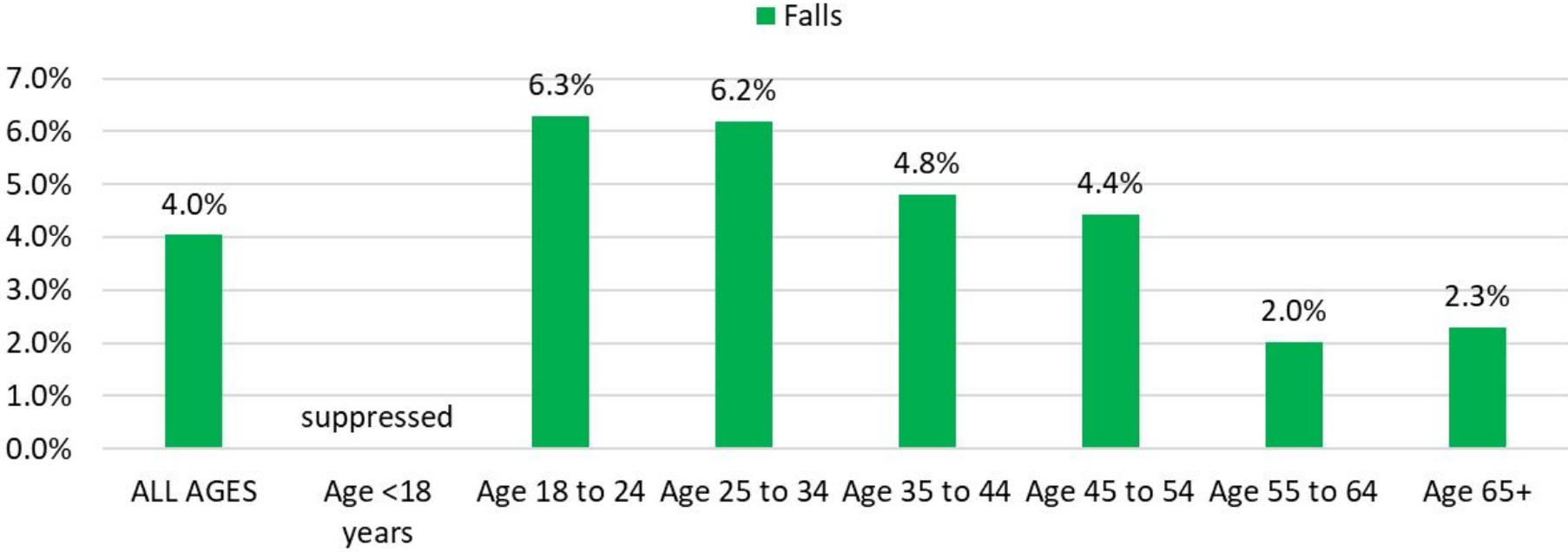
Common means of suicide in Maryland, by age group: Suffocation



Common means of suicide in Maryland, by age group: Poisoning

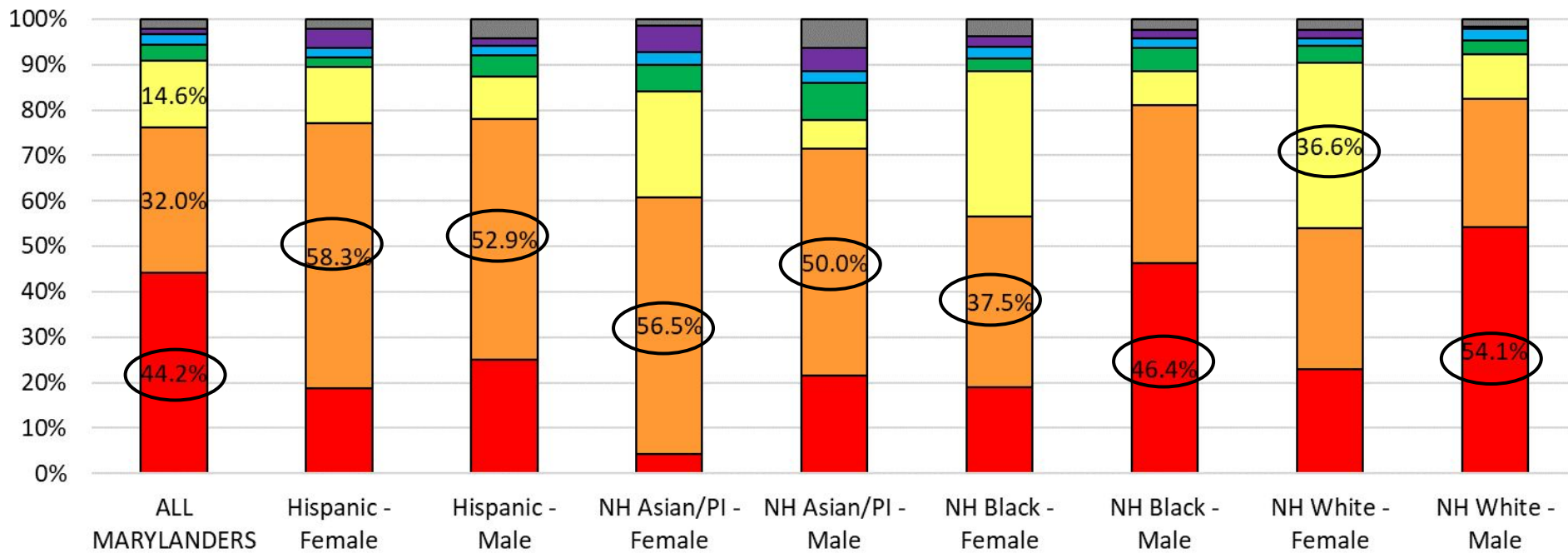


Common means of suicide in Maryland, by age group: Falls

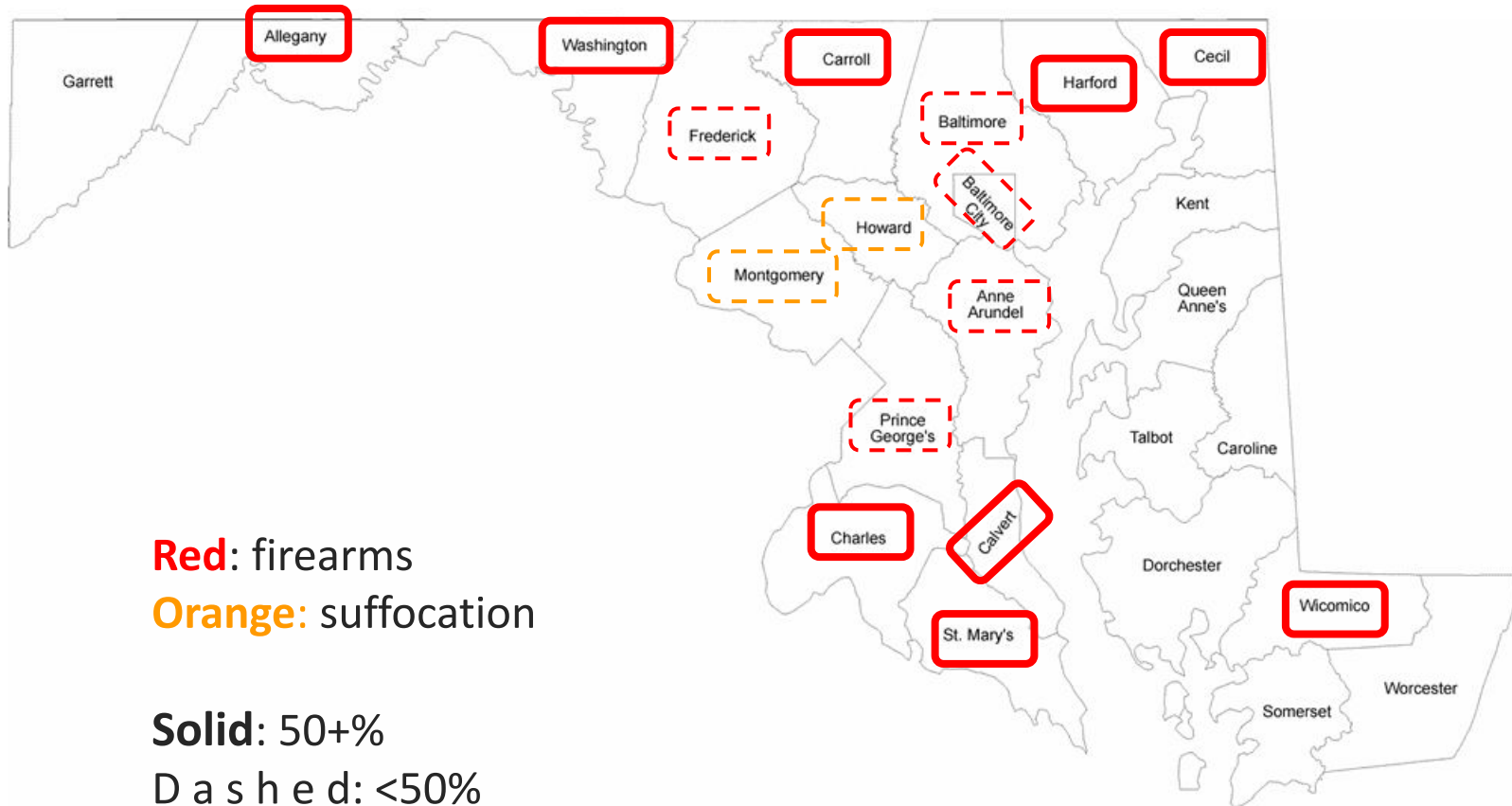


Primary means used, by decedent race/ethnicity and sex

■ Firearm
 ■ Hanging, strangulation, suffocation
 ■ Poisoning
 ■ Fall
 ■ Sharp instrument
 ■ Drowning
 ■ All other



Most common means by decedent jurisdiction of residence



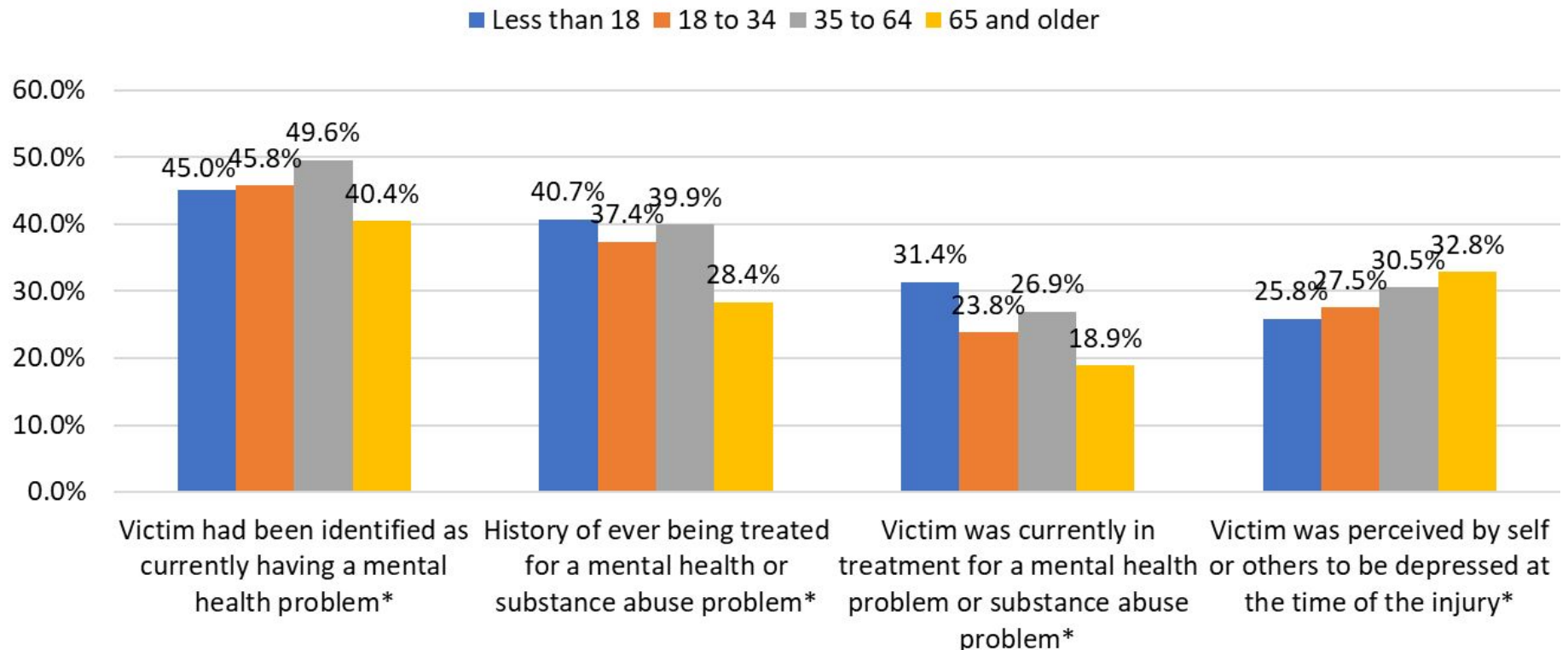
Key Takeaways: Weapons/means

- Firearms are most common means among:
 - Overall (total population)
 - NH White males
 - NH Black males
 - Older adults
 - More common in rural counties
- Suffocation is most common means among:
 - Youth (ages <18)
 - Hispanic (male, female)
 - NH Asian/PI (male, female)
 - NH Black females
 - Howard and Montgomery counties
- Poisoning is most common means among:
 - NH White females
 - 23% non-drug vs. 77% drug poisoning
 - Non-drug poisoning more common age <35

Data source: MVDRS

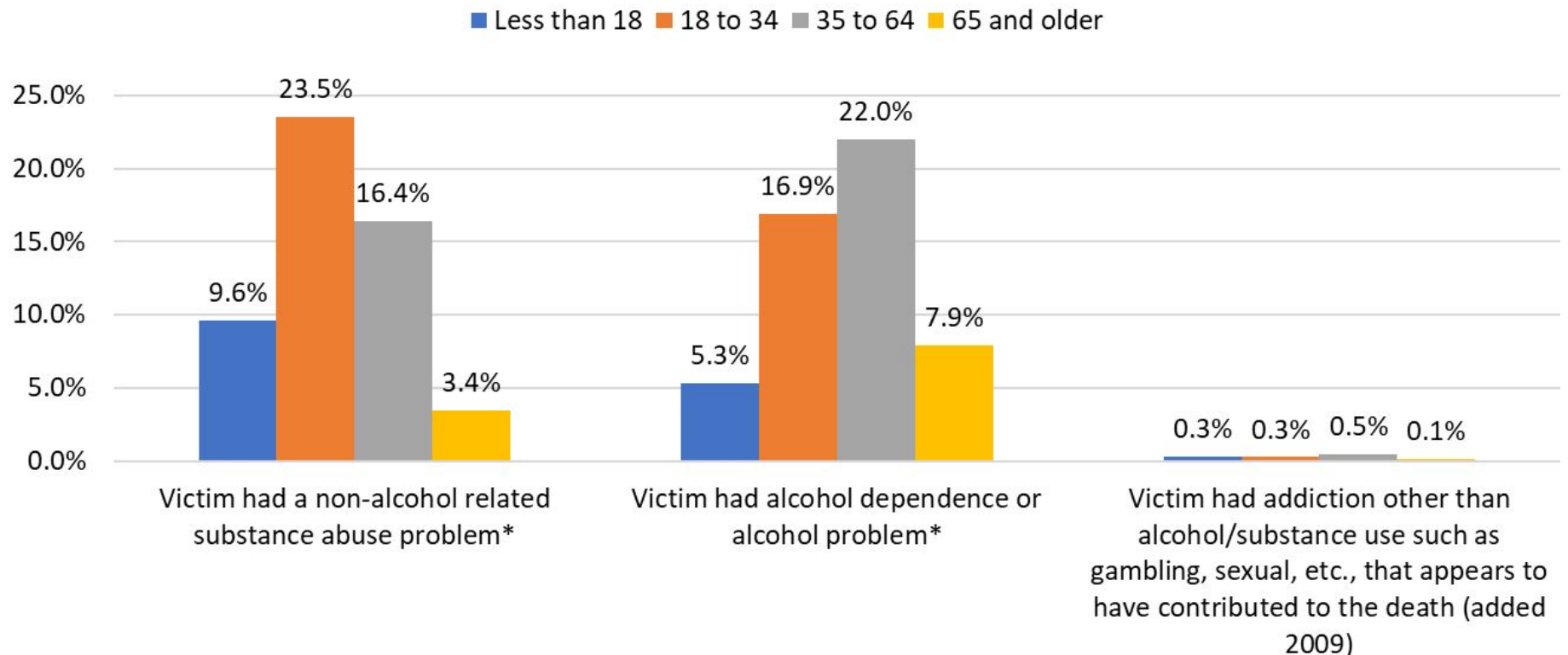
Circumstances

Mental health-related circumstances of suicide in Maryland



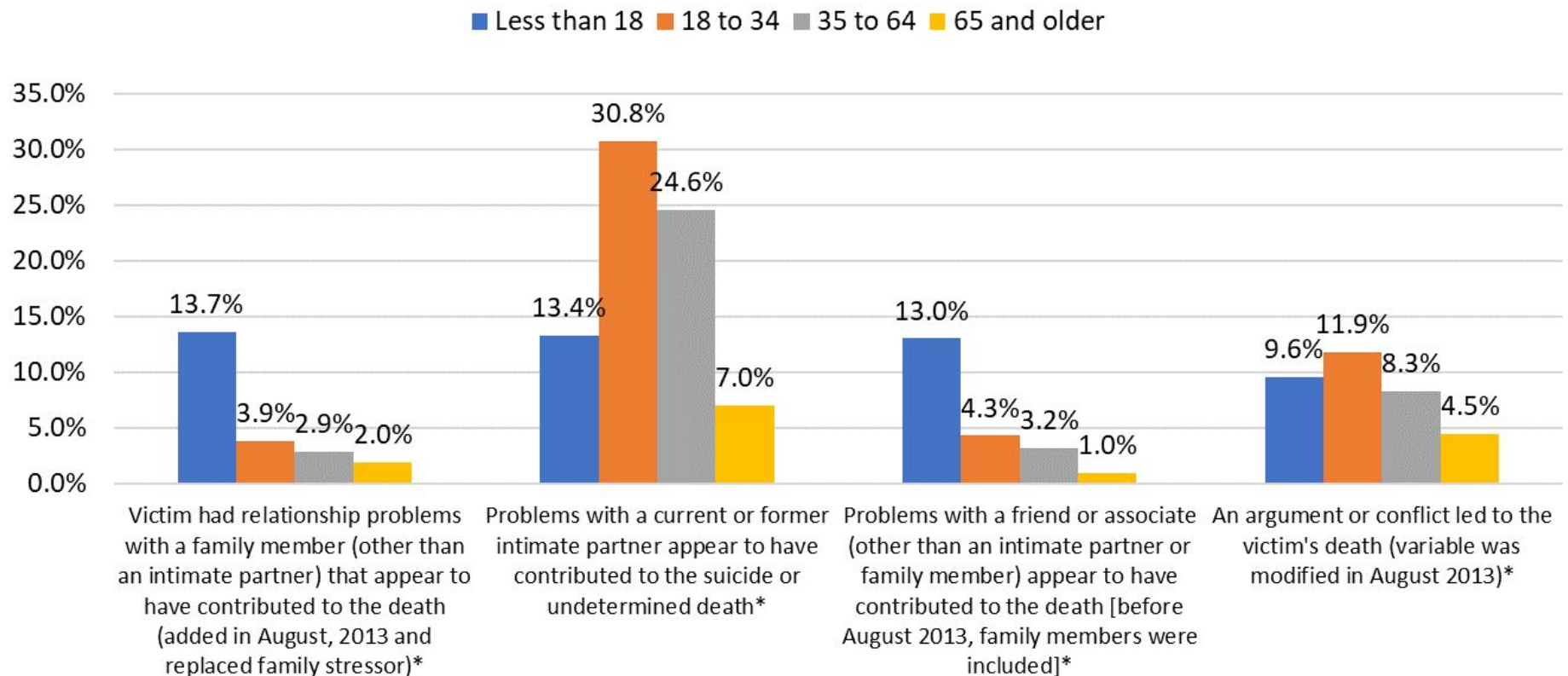
*Statistically significant at $p < 0.05$

Substance use and addiction-related circumstances of suicide in Maryland



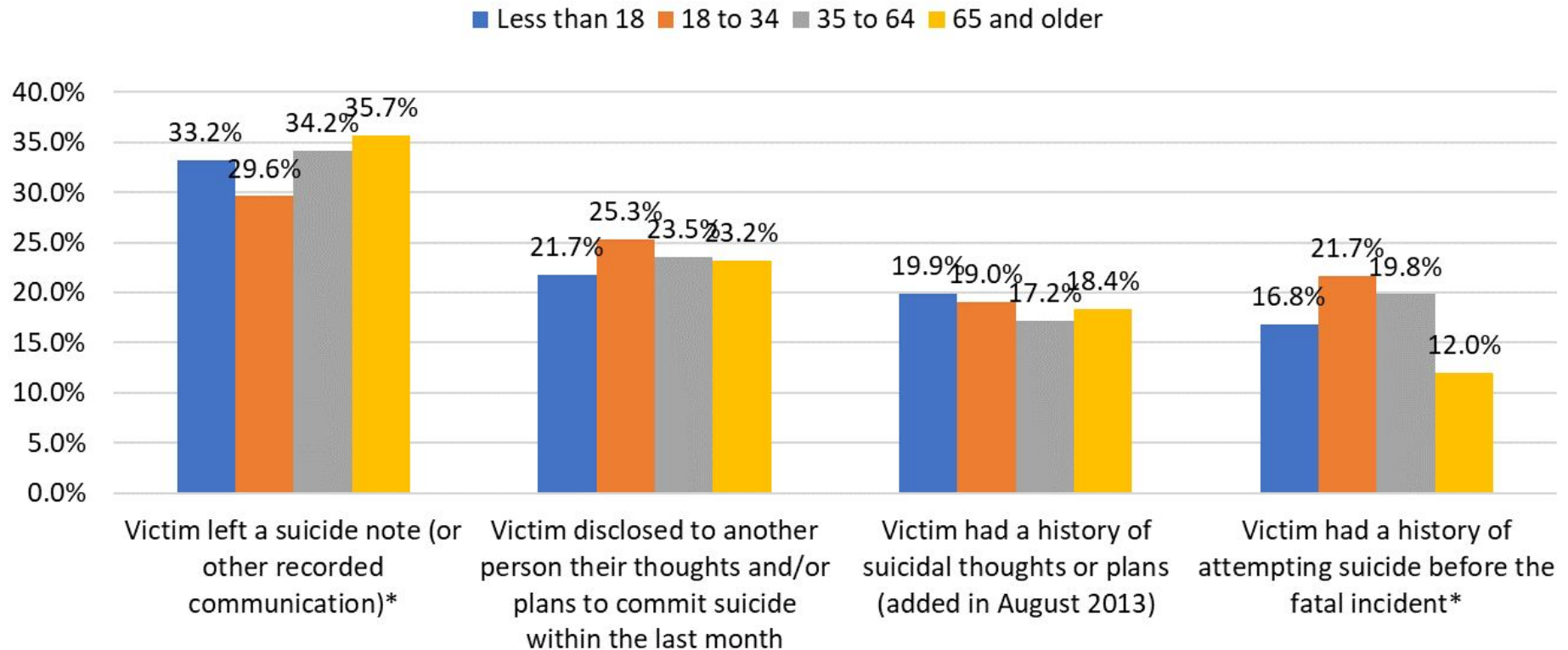
*Statistically significant at $p < 0.05$

Interpersonal circumstances of suicide in Maryland



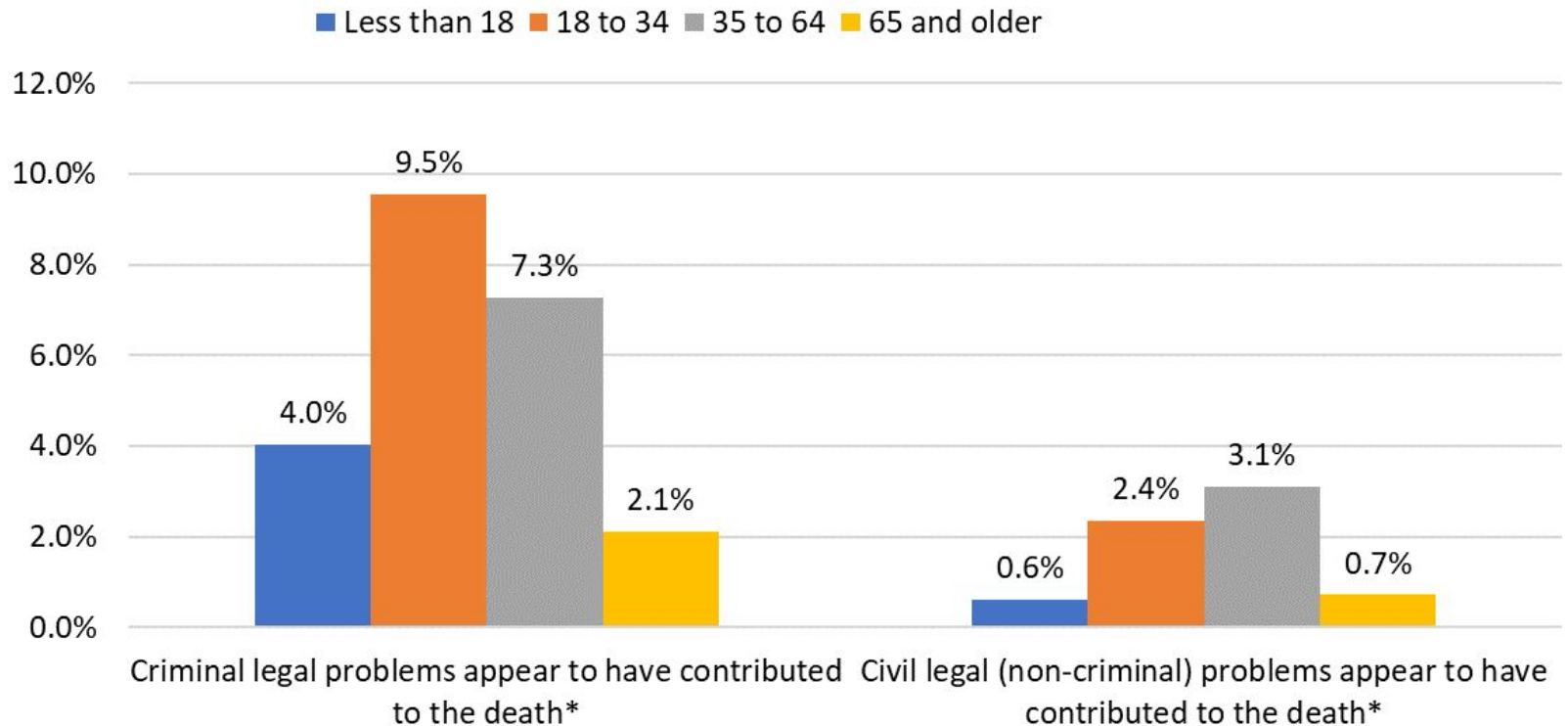
*Statistically significant at $p < 0.05$

Suicide-specific circumstances of suicide in Maryland



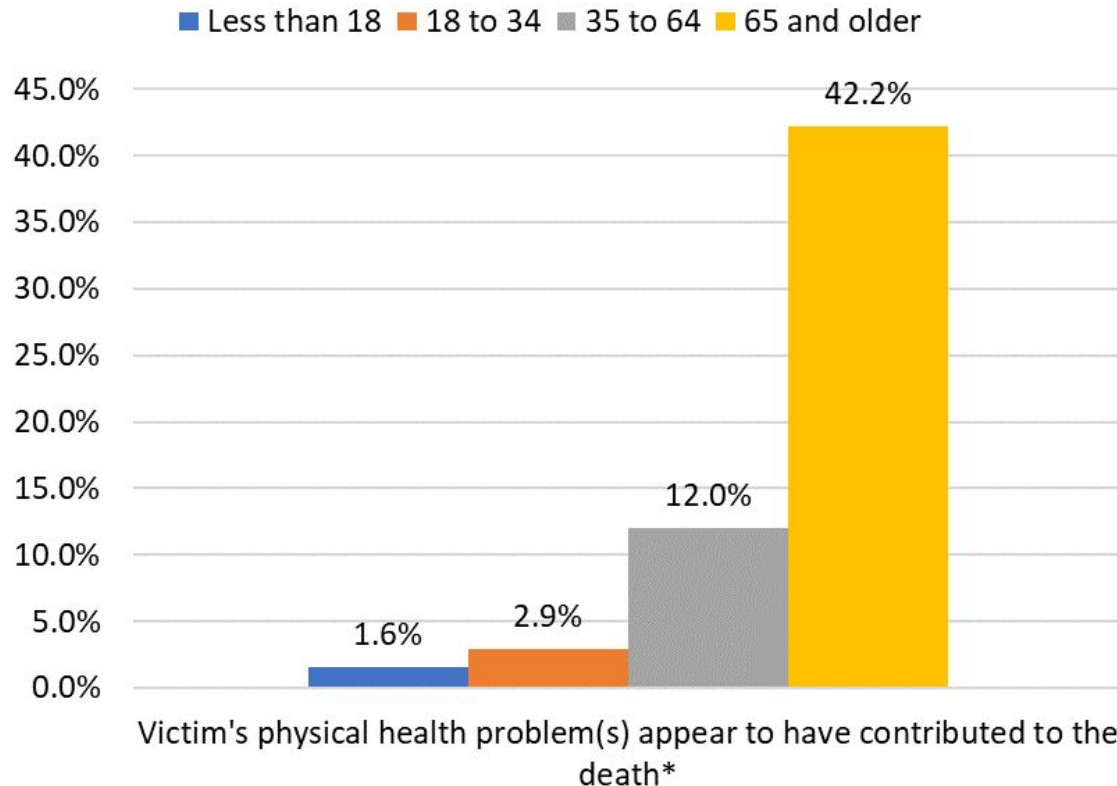
*Statistically significant at $p < 0.05$

Legal circumstances of suicide in Maryland



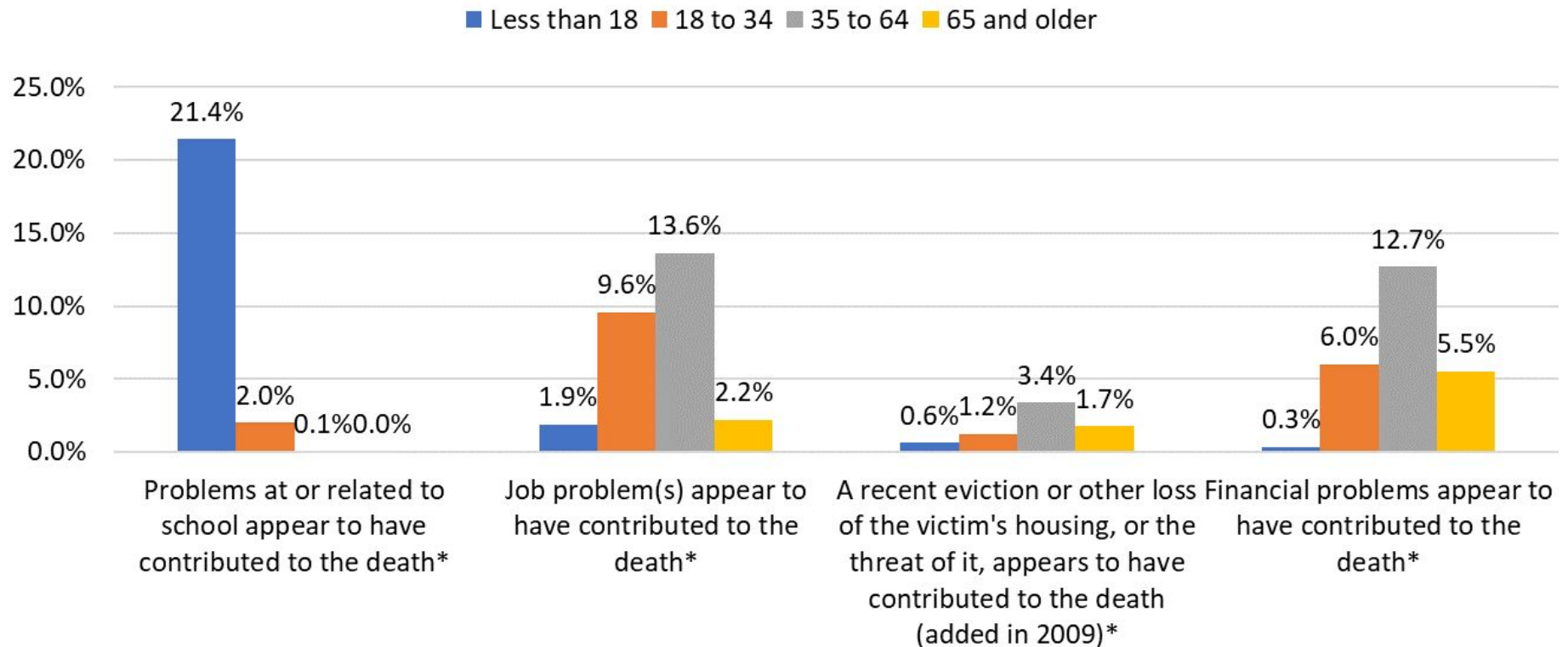
*Statistically significant at $p < 0.05$

Health-related circumstances of suicide in Maryland



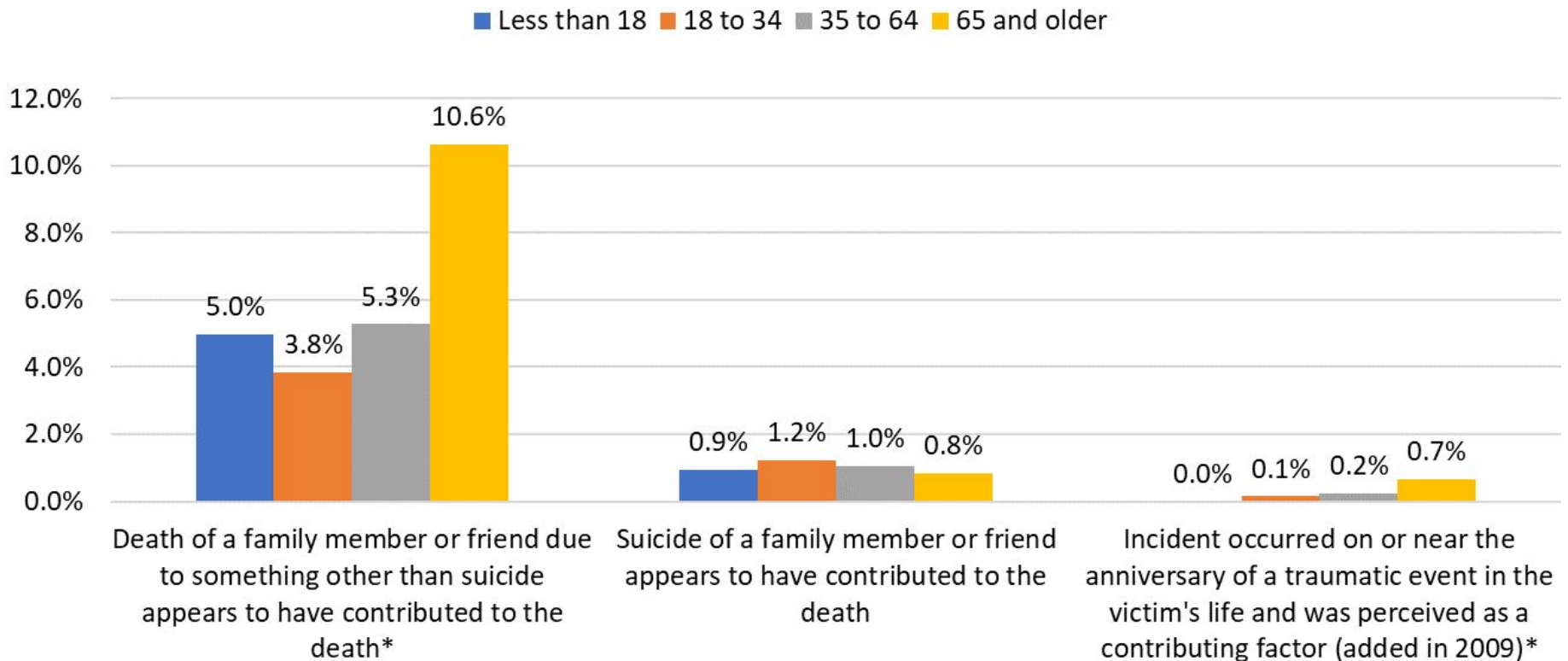
*Statistically significant at $p < 0.05$

School, work, and finance-related circumstances of suicide in Maryland



*Statistically significant at $p < 0.05$

Death and trauma-related circumstances of suicide in Maryland



*Statistically significant at $p < 0.05$

Key Takeaways: Circumstances

- Youth age <18
 - 31% current treatment for MH or SA (highest %)
 - 14% relationship problem with family (highest %)
 - 13% problem with friend or associate (other than family or intimate partner) (highest %)
 - 21% problems at or related to school (highest %)
- Adults age 18 to 34
 - 24% non-alcohol SA problem (highest %)
 - 31% problem with intimate partner (highest %)
 - 12% argument or conflict (highest %)
 - 22% history of suicide attempts (highest %)
 - 10% had criminal legal problems (highest %)
 - 14% job problem (highest %)

Key Takeaways: Circumstances

- Adults age 35 to 64
 - 50% current mental health problem (highest %)
 - 22% alcohol dependence or problem (highest %)
 - 3% civil legal (non-criminal) problems (highest %)
 - 3% recent eviction or other loss of housing or threat of it (highest %)
 - 13% financial problems (highest %)
- Adults age 65+
 - 28% history of treatment for MH or SA (lowest %)
 - 33% perceived to be depressed (highest %)
 - 36% left a suicide note (highest %)
 - 42% physical health problem appears to have contributed (highest %)
 - 11% death of family member (highest %)

For more information

Web-based Injury Statistics Query and Reporting System (WISQARS)

<https://www.cdc.gov/injury/wisqars/index.html>

National Violent Death Reporting System (NVDRS)

<https://www.cdc.gov/violenceprevention/datasources/nvdrs/index.html>

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>

