

# Suicides among Older Arizonans

Presented to the Arizona Governor's Council on Aging

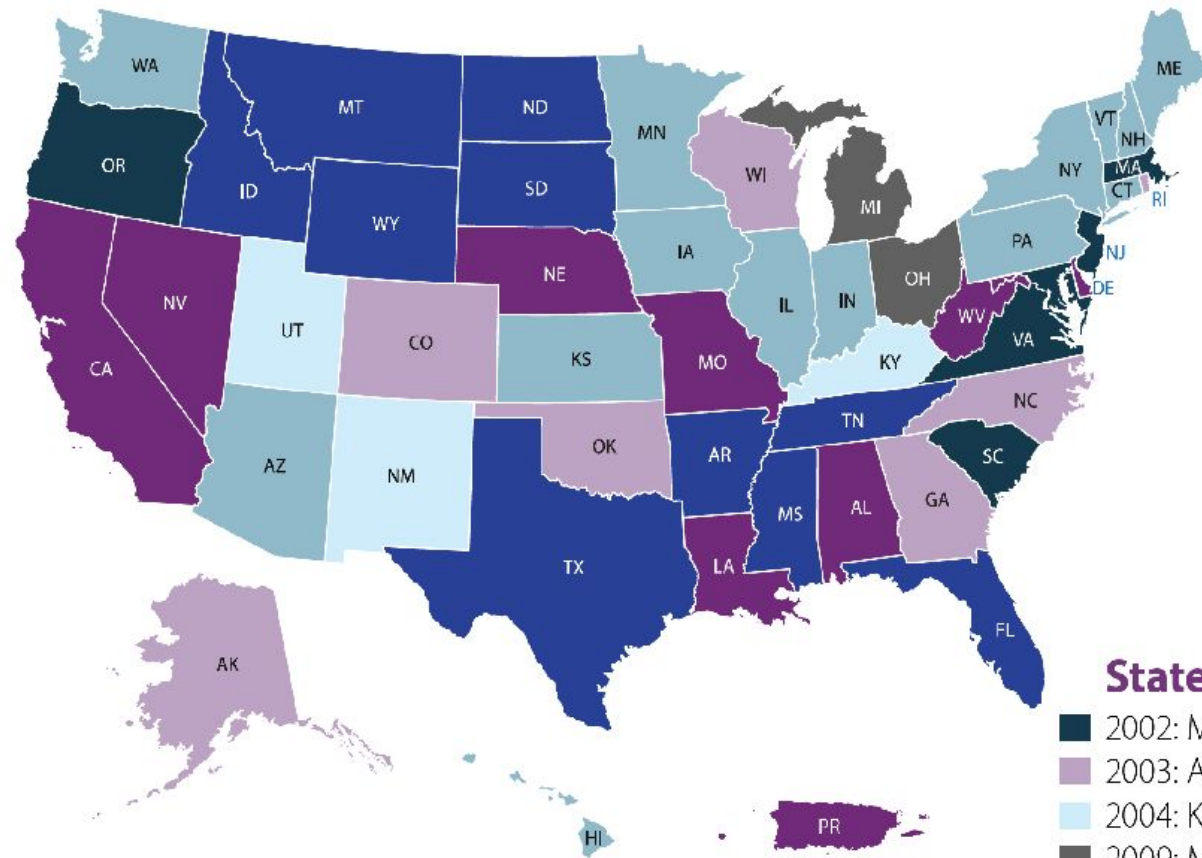
December 15, 2021

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# Background

- NVDRS: The National Violent Death Reporting System
  - CDC-sponsored surveillance system primarily for homicides and suicides
- AZ-VDRS: Arizona Violent Death Reporting System
  - Arizona has been collecting data as part of the NVDRS since 2015
  - Comprehensive statewide collection of violent death data

# National Expansion of NVDRS



## The Reach of NVDRS

NVDRS began collecting data on violent deaths from six states in 2002, followed by progressive additions to the system over several years. **In 2018, NVDRS was expanded to include data collection from all 50 states, Puerto Rico, and the District of Columbia.** This expansion brings NVDRS closer to the goal of providing a complete picture of violent deaths across the nation

### States added by year:

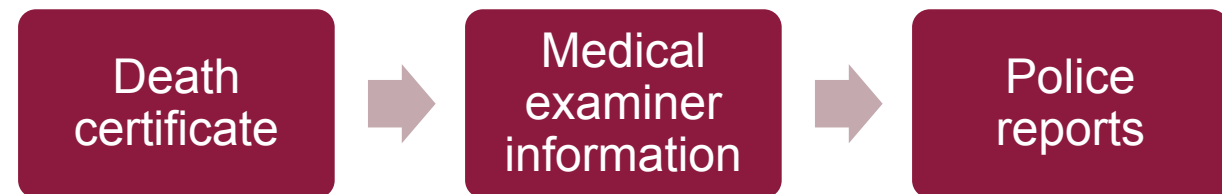
- 2002: MA, MD, NJ, OR, SC, VA
- 2003: AK, CO, GA, NC, OK, RI, WI
- 2004: KY, NM, UT
- 2009: MI, OH
- 2014: AZ, CT, HI, IA, IL, IN, KS, ME, MN, NH, NY, PA, VT, WA
- 2016: AL, CA, DE, DC, LA, MO, NE, NV, Puerto Rico, WV
- 2018: AR, FL, ID, MS, MT, ND, SD, TN, TX, WY

# Scope of NVDRS



# Un-redacted sources of data contributing to AZ-VDRS

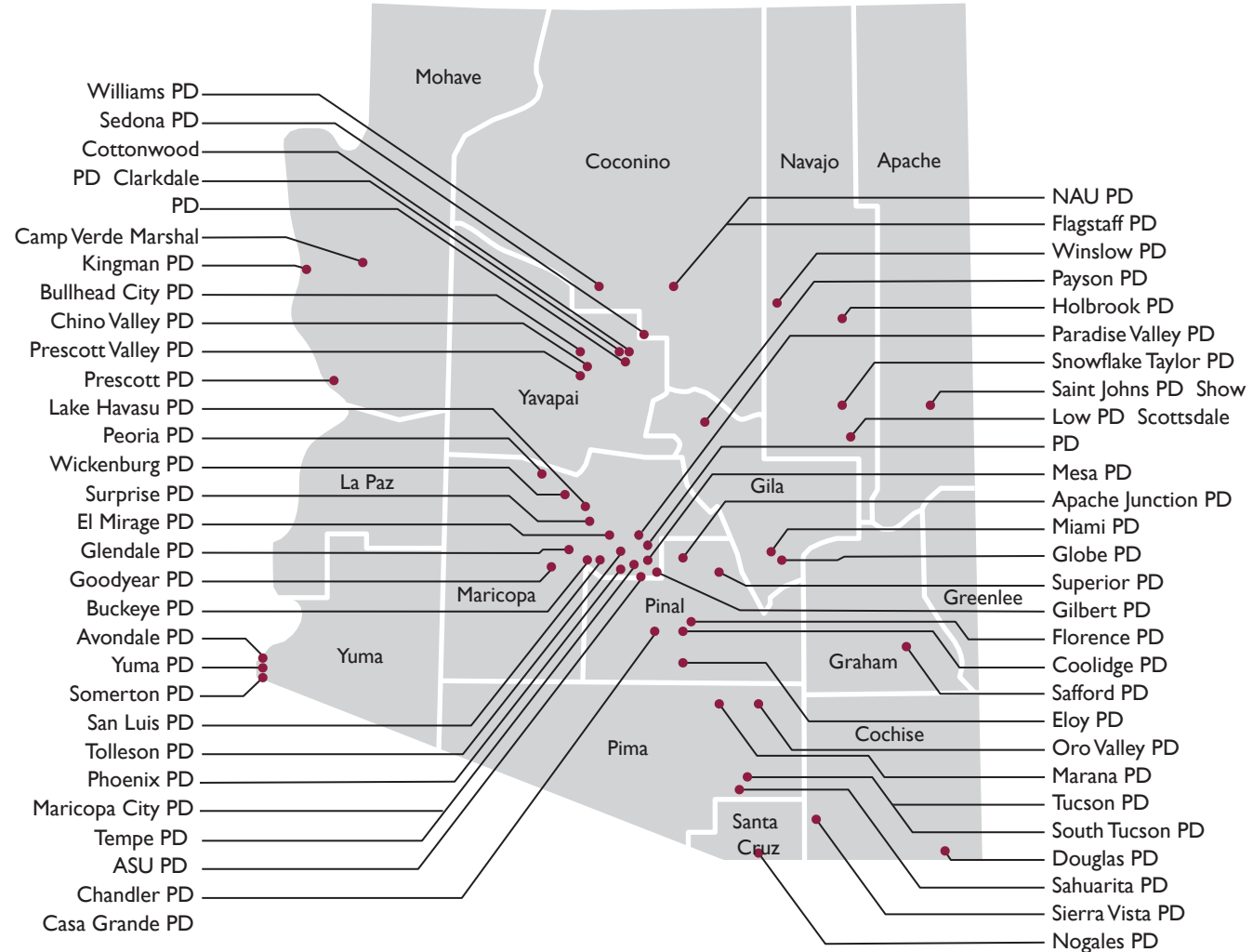
- Death Certificates (100% coverage)  
Arizona Department of Health Services
- Medical Examiner Reports (90% coverage)  
All medical examiners offices in AZ  
New Mexico ME
- Law Enforcement Reports (87% coverage)  
City police  
Sheriffs departments
- Other sources  
Hospital data, MOU in place, IRB approved



# Examples of types of data

- Demographics
  - e.g., age, sex, education, occupation, etc.
  - Suspect information
- Cause & manner of death
  - Homicide or suicide
  - ICD-10 codes and descriptions
- Toxicology data
- Weapon type
- Circumstance information
  - Incident-level (e.g., time & place, wounds, etc.)
  - Individual-level (e.g., criminal history, relationship & life stressors, etc.)
- Mental & physical health issues
  - e.g., substance abuse, history of suicide attempts or ideation, terminal illness, etc.

# Participating Municipal Law Enforcement Agencies



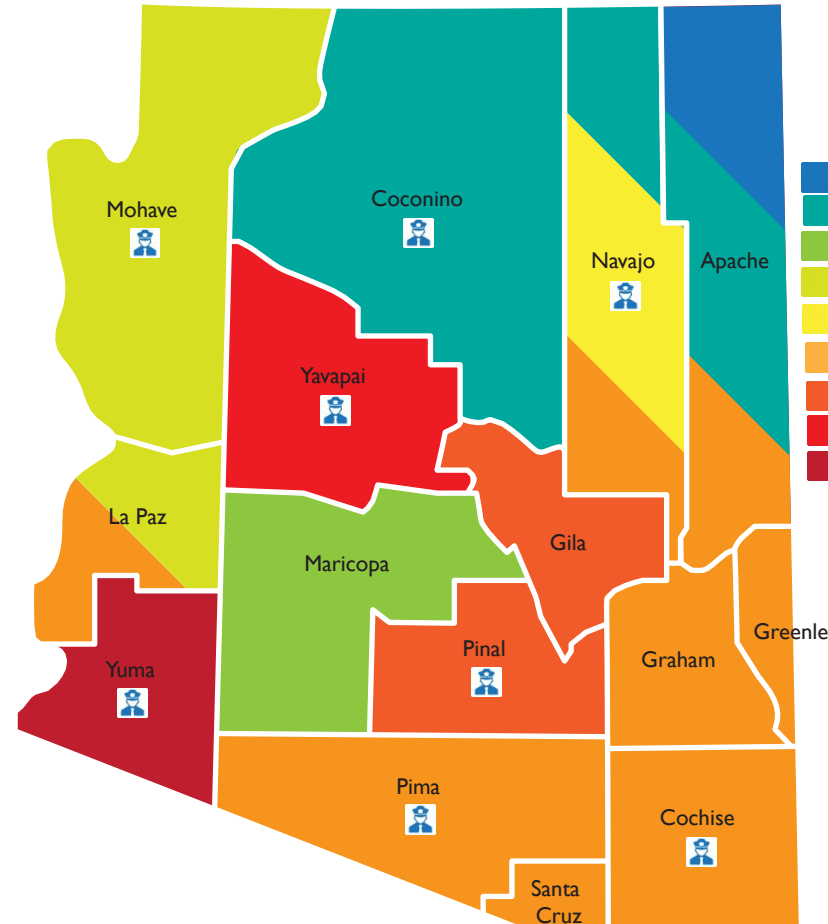
# Medical Examiner Data Providers and Participating Sheriffs' Offices



**Sheriffs Offices**  
 Cochise Coconino  
 Mohave  
 Navajo  
 Pima  
 Pinal  
 Yavapai  
 Yuma



**State & Federal Law Enforcement** Arizona Dept. of Public Safety (DPS)



## Medical Examiner & Data Partners:

- Apache County ME: Apache
- Coconino County ME: Coconino, Apache & Navajo
- Maricopa County ME: Maricopa
- Mohave County (Contracted Pathologist) Mohave & La Paz
- Navajo County ME: Navajo
- Pima County ME: Pima, Apache, Cochise, Graham, Greenlee, La Paz, Navajo, & Santa Cruz
- Pinal County ME: Pinal & Gila
- Yavapai County ME: Yavapai
- Yuma County ME: Yuma



**Arizona State University**

We thank and acknowledge the cooperation and support of the Arizona Department of Health Services (ADHS), the Bureau of Vital Records, and the many local law enforcement agencies and medical examiner offices throughout the State of Arizona that have provided information to the AZ-VDRS. Without our partners, the AZ-VDRS would not be possible.

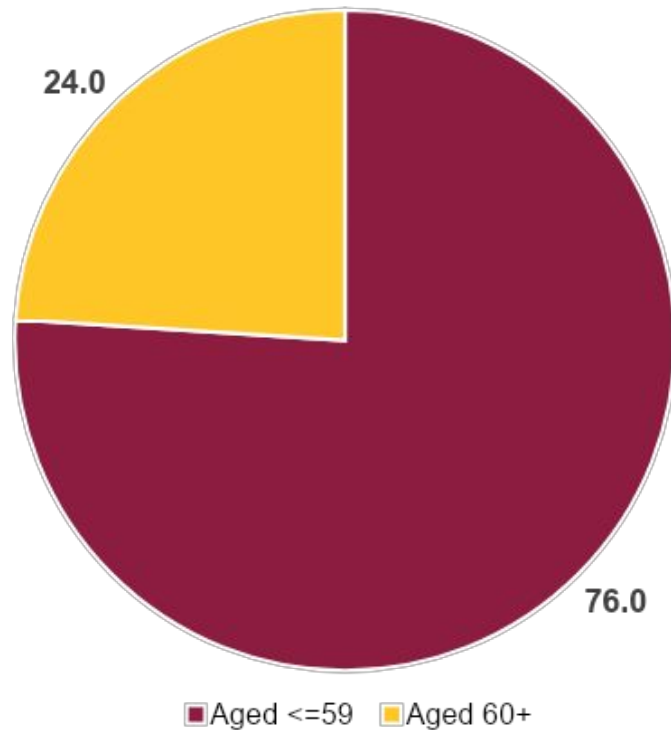


# Definitions for analyses

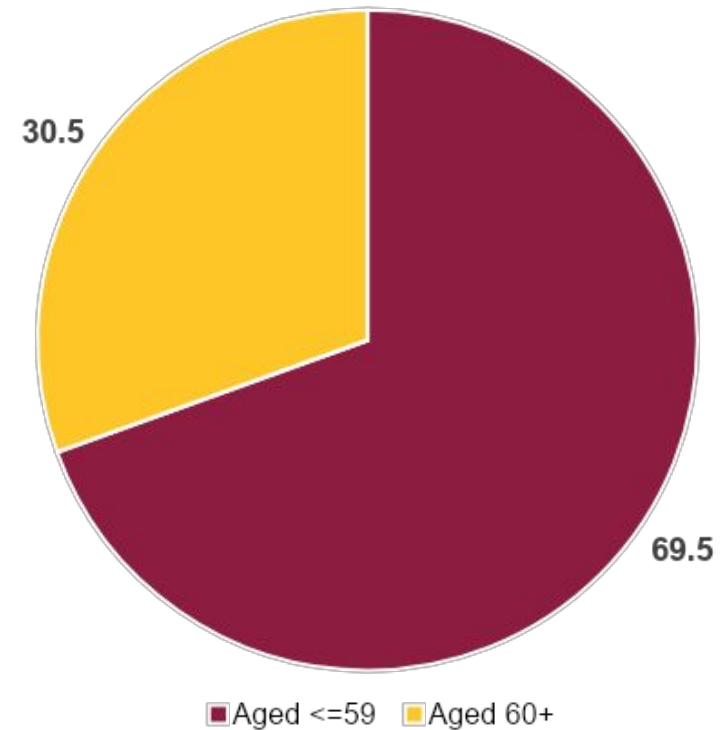
- We defined those victims aged 60 and older as “older adults”.
- Age 60 was chosen as the cutoff for our category of “Older Adults” following guidance from the federal *Older American’s Act* and the *Elder Justice Act*.
- We then compared our older adult victims with the remainder of suicide victims (those aged 59 years and younger).

# Proportion of older adults by Arizona population and number of suicides

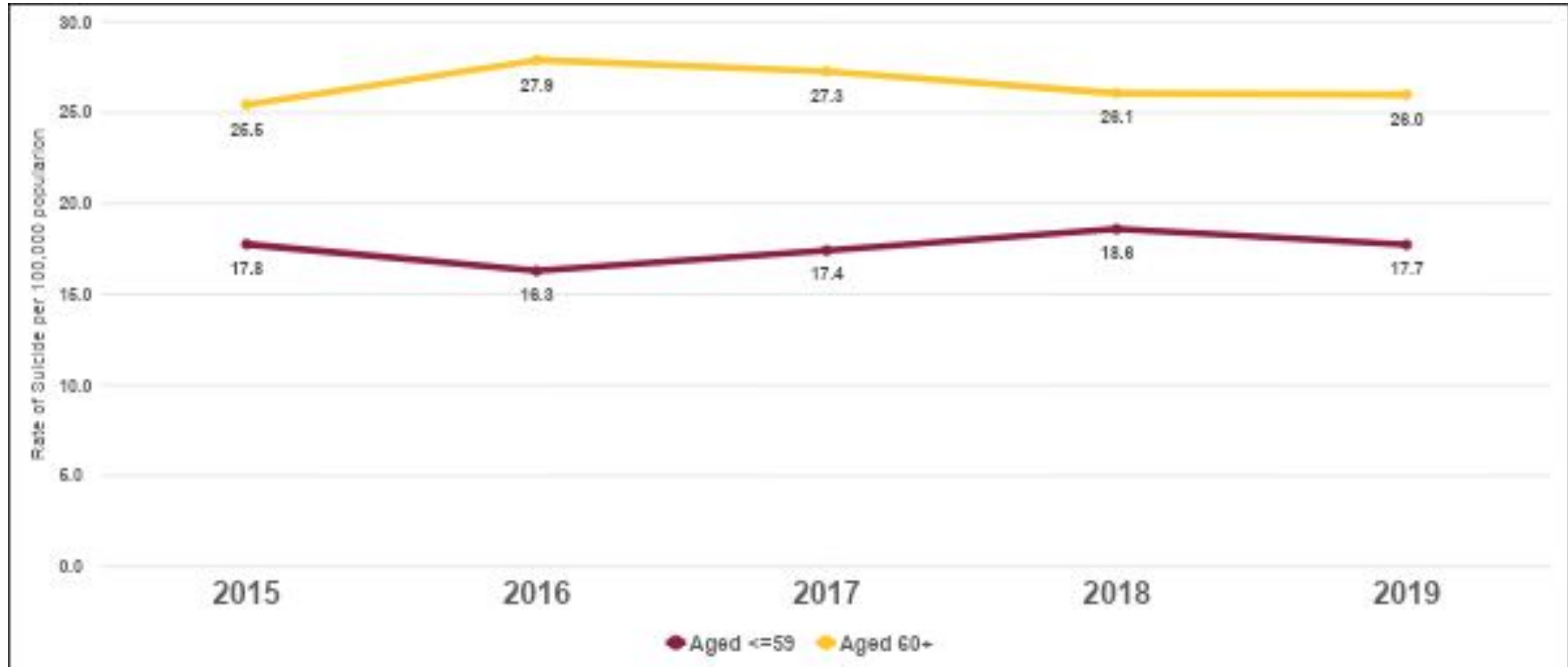
Arizona Population by Older Adult Status (N=7,278,717)



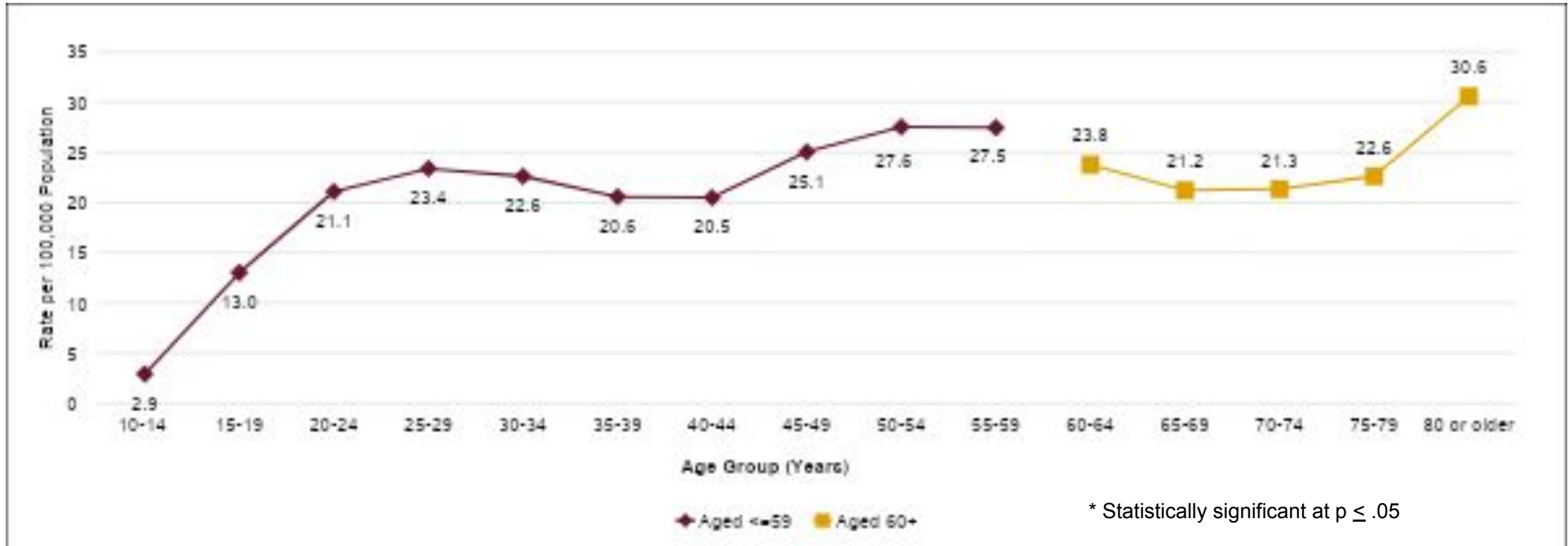
Suicides by Older Adult Status (n=6,781)



# Suicide rates by year and age, 2015-2019 (n=6,781)

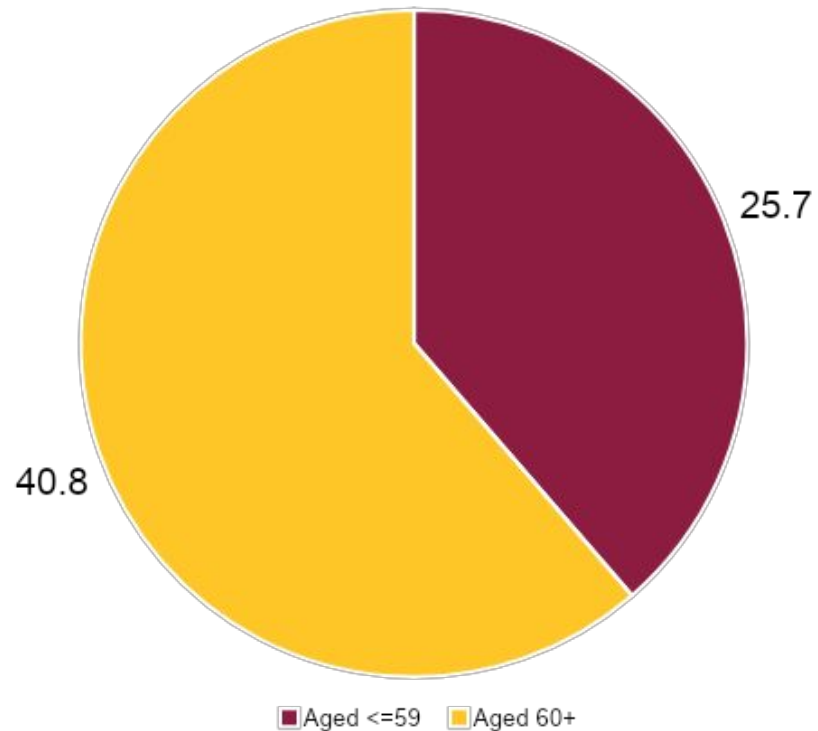


# Suicide rates by age group, 2015-2019\* (n=6,781)

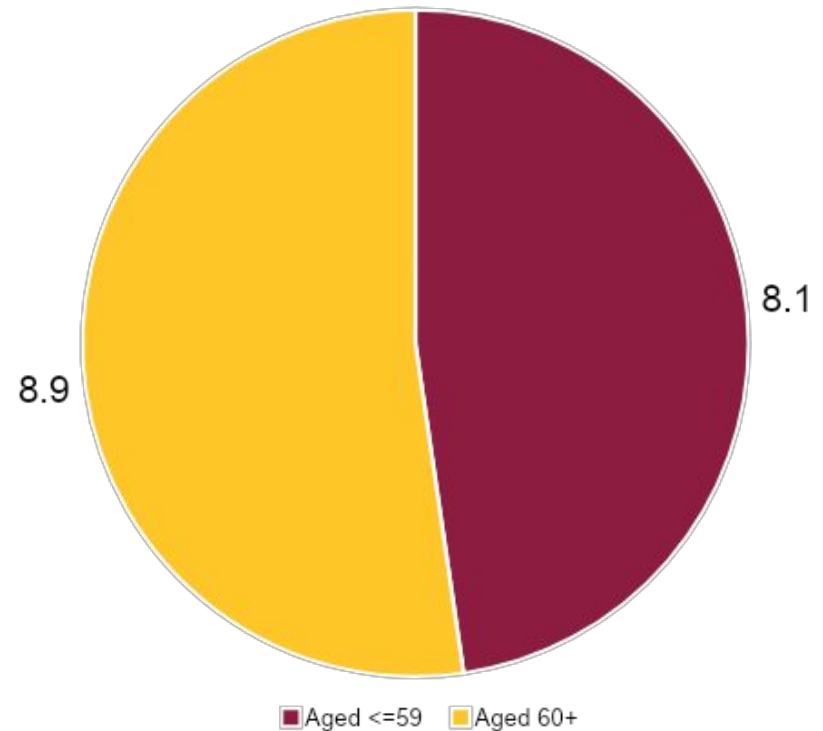


# Comparison of suicide rates by sex and age

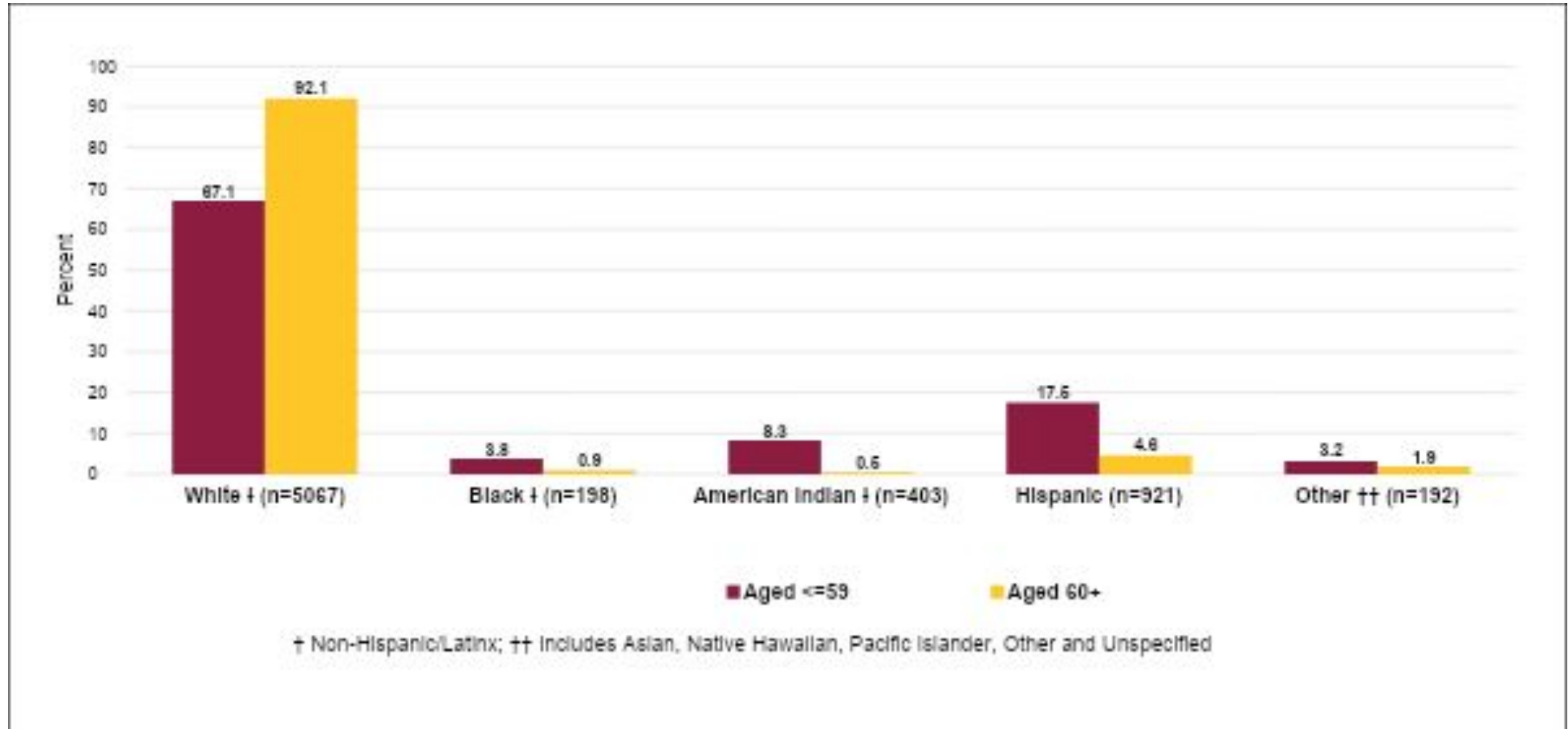
Male suicide rates (n=5,265)



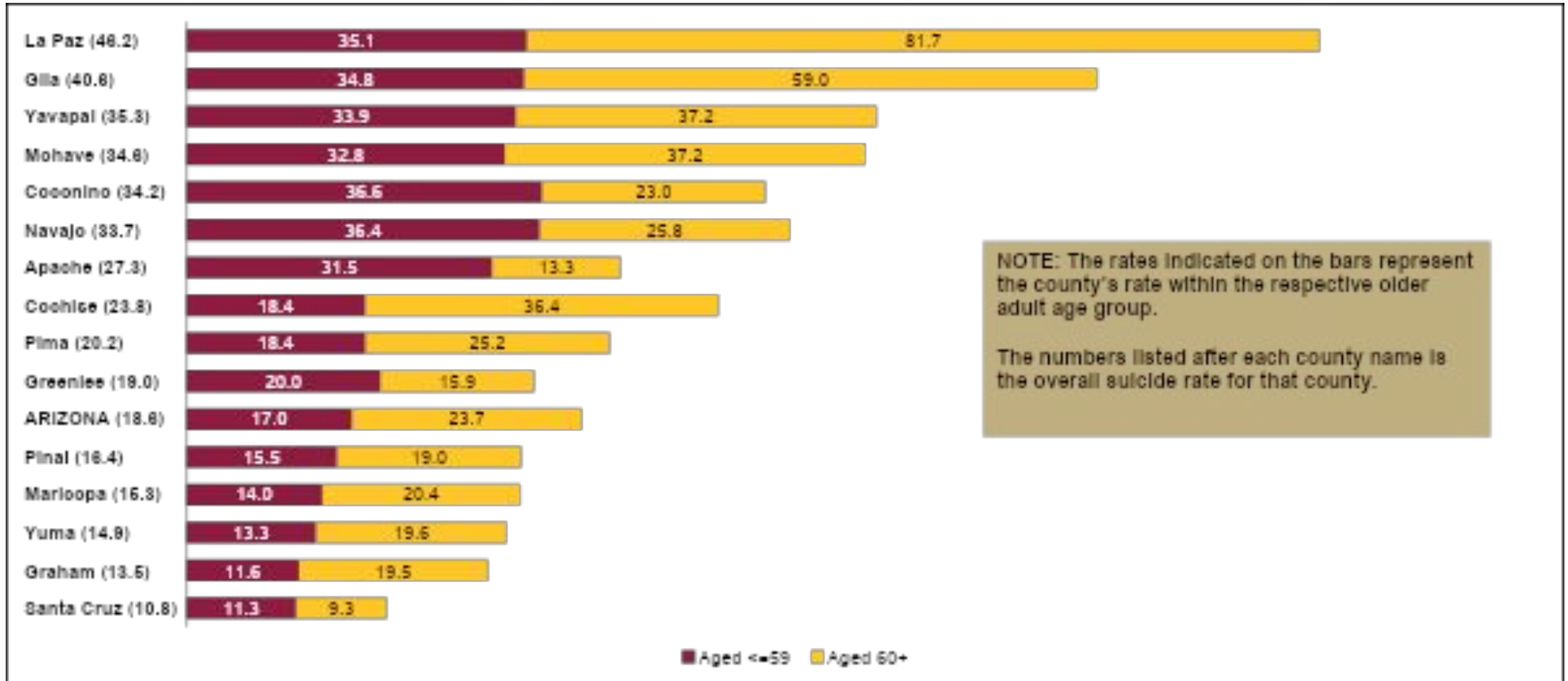
Female suicide rates (n=1,516)



# Percentage of suicides by race/ethnicity and age



# Suicide rates by county and older adult status

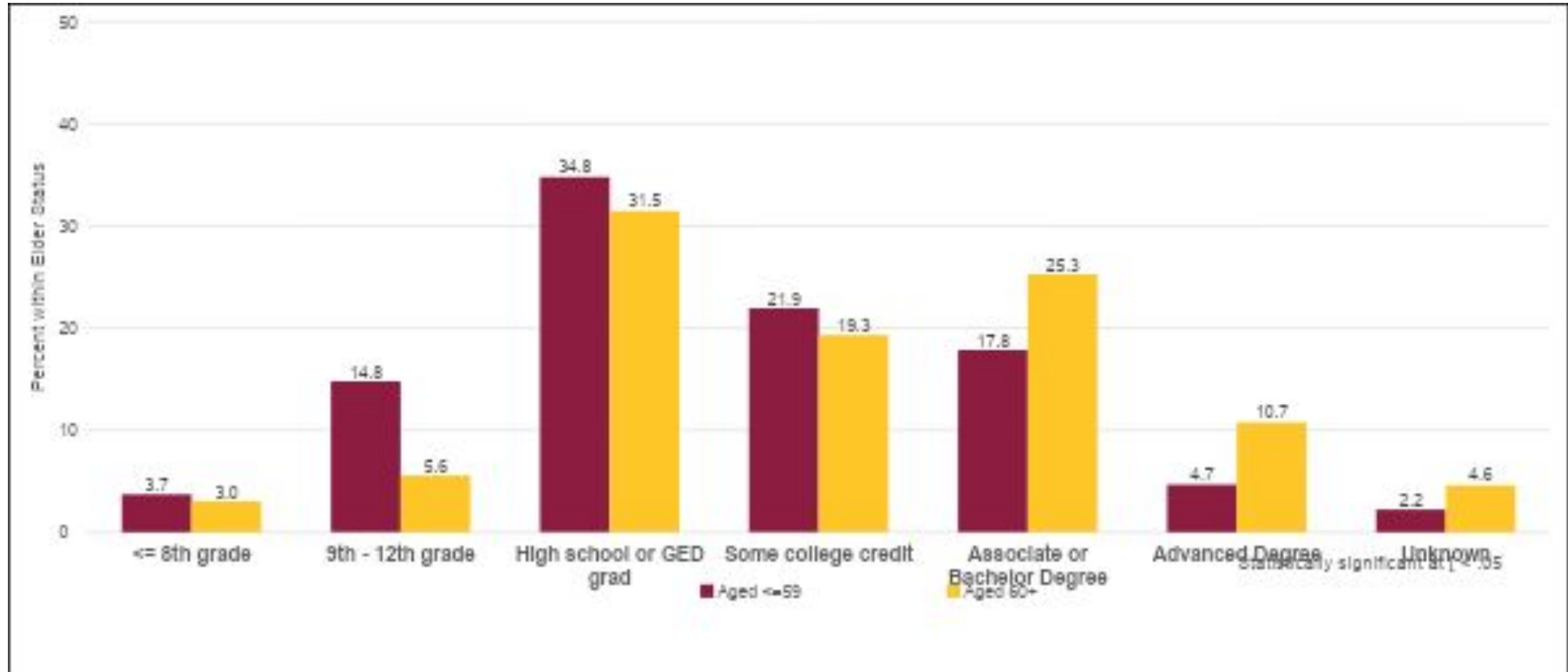


# Top ten zip codes for older adult suicide by injury zip code (n=2,069)

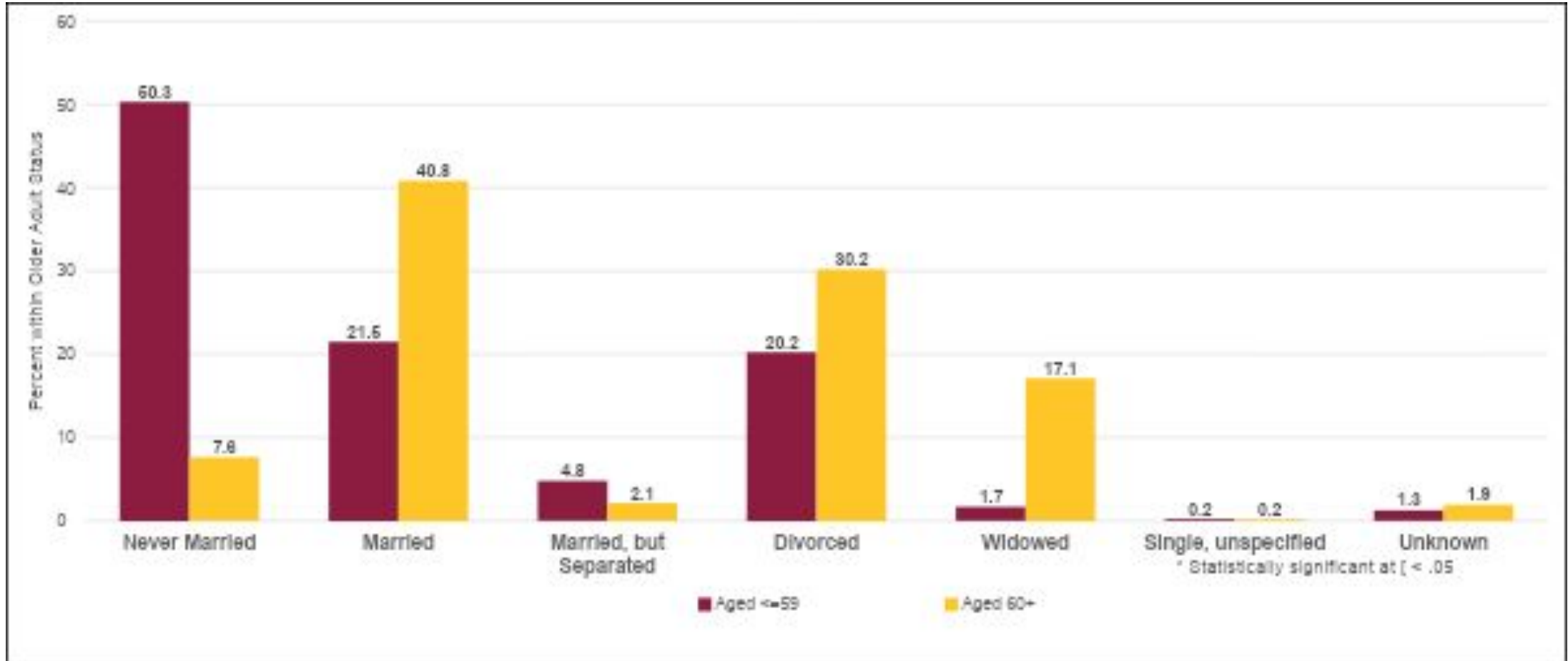
<u>ZIP</u>	<u>Region (County)</u>	<u>N</u>	<u>% of state</u>	
85375	Sun City (Maricopa)	36	1.7	
85351	Sun City (Maricopa)	33	1.6	
85374	Sun City (Maricopa)	31	1.5	
85614	Green Valley (Pima)	31	1.5	
86401	Kingman (Mohave)	29	1.4	
85541	Payson (Gila)	23	1.1	
86314	Prescott Valley (Yavapai)		23	1.1
86442	Bullhead City (Mohave)		22	1.1
86409	Hualapai (Mohave)	21	1.0	
86301	Prescott (Yavapai)	20	1.0	
Total		269	13.0	



# Percent of suicide victims by educational attainment and age (n=6,781) \*



# Percent of suicide victims by marital status and (n=6,781) \*

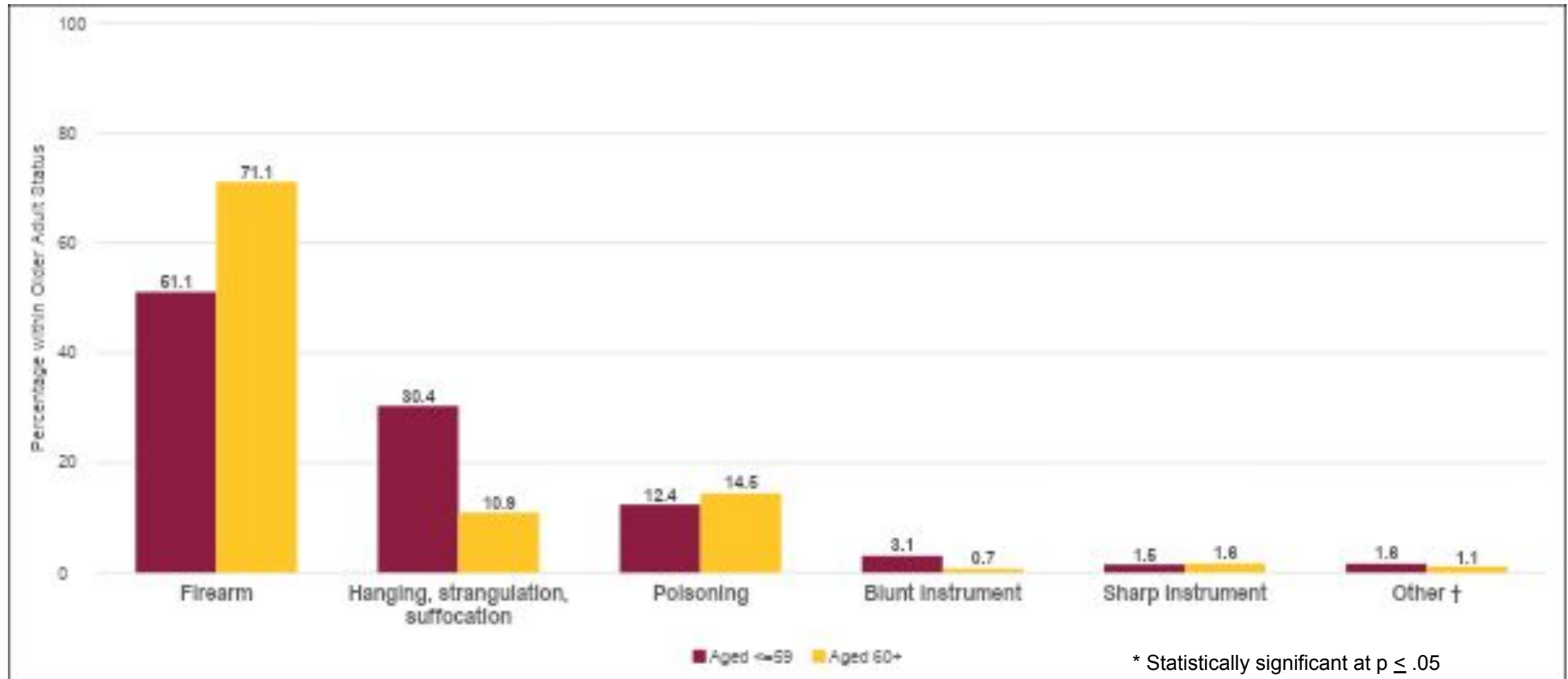


# Location of injury resulting in death among suicide victims by older adult status (n=6,781)

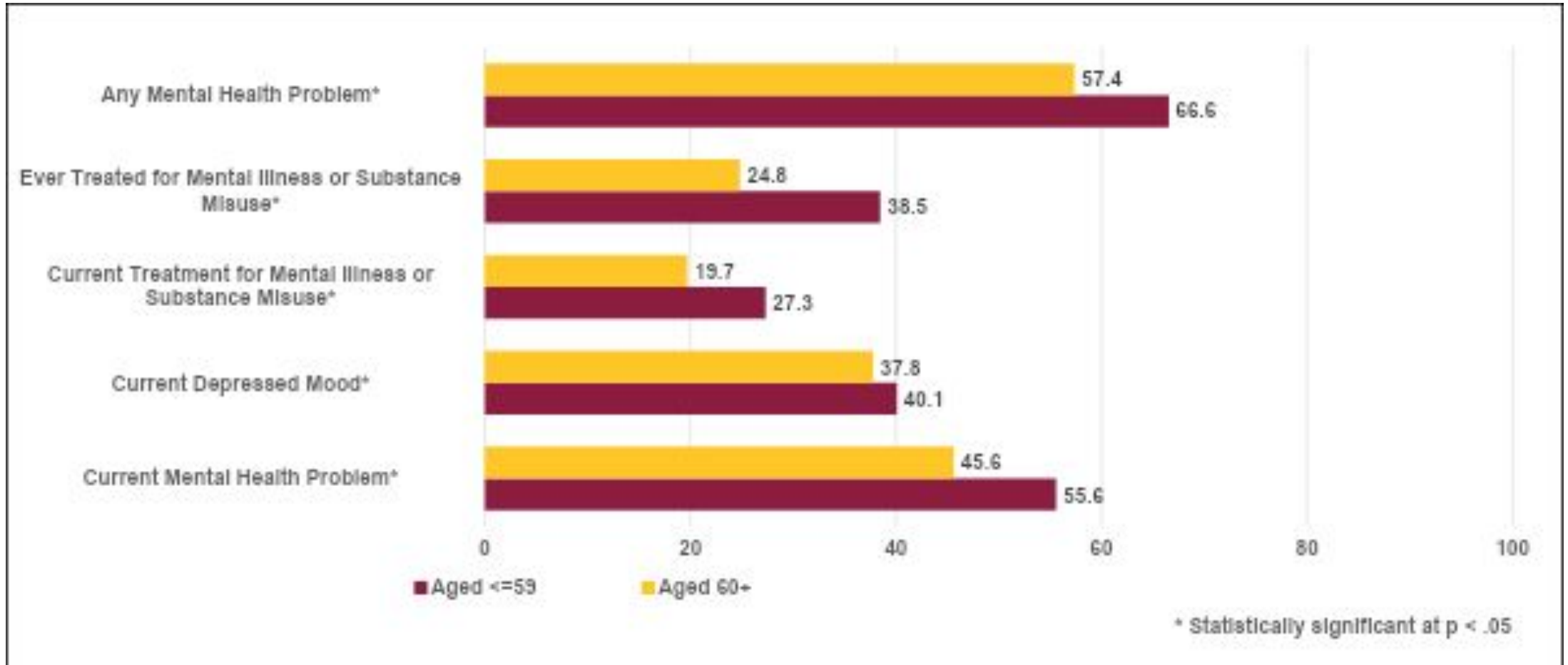
Location of Injury by Older Adult Status, 2015-2019 (N=6,781)

Location	Aged <=59		Aged 60+		Total	
	N	%	N	%	N	%
<b>House or Apartment</b>	<b>3246</b>	<b>68.9</b>	<b>1653</b>	<b>79.9</b>	<b>4899</b>	<b>72.2</b>
Street/road, sidewalk, alley	171	3.6	61	2.9	232	3.4
Motor vehicle (excluding school bus and public transport)	308	6.5	93	4.5	401	5.9
Commercial establishment (e.g., bar, store, etc.)	38	0.8	7	0.3	45	0.7
Parking lot/public parking garage	95	2.0	37	1.8	132	1.9
Jail, prison, group home, shelter, other supervised res. facility	90	1.9	22	1.1	112	1.7
Park, playground, public use area	66	1.4	21	1.0	87	1.3
Natural area (e.g., field, river, beaches, woods)	273	5.8	72	3.5	345	5.1
Hotel/motel	146	3.1	43	2.1	189	2.8
Other	225	4.8	47	2.3	272	4.0
Unknown	54	1.1	13	0.6	67	1.0
<b>Total</b>	<b>4712</b>	<b>100.0</b>	<b>2069</b>	<b>100.0</b>	<b>6781</b>	<b>100.0</b>

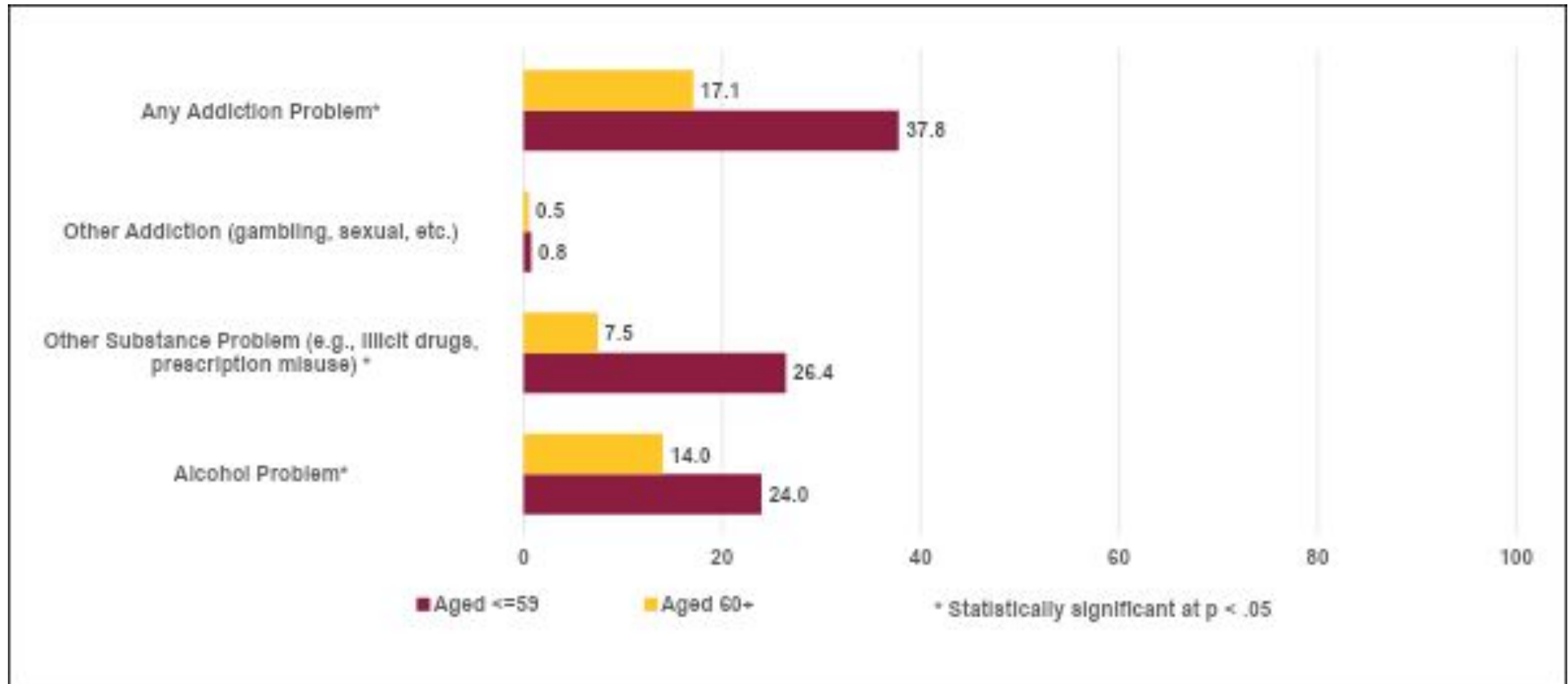
# Method of death by older adult status\*



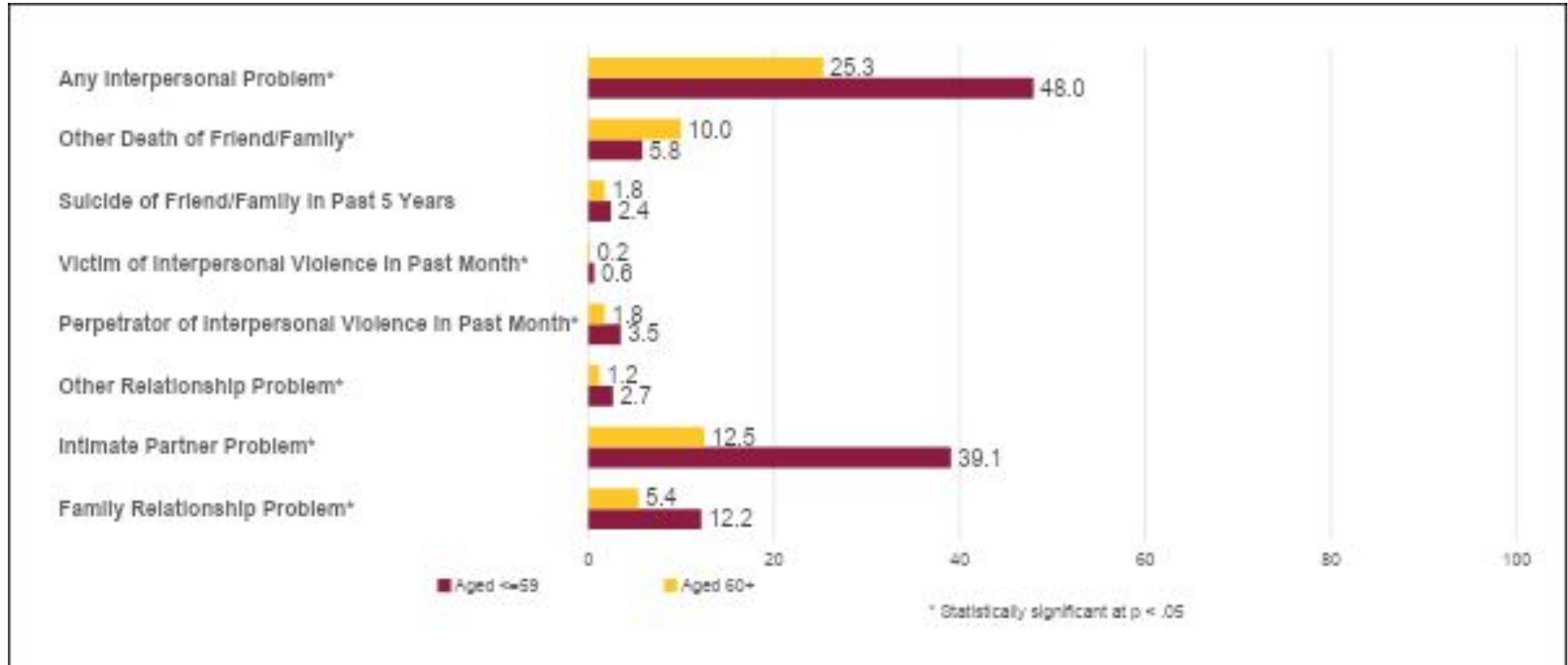
# Mental health circumstances present by older adult status



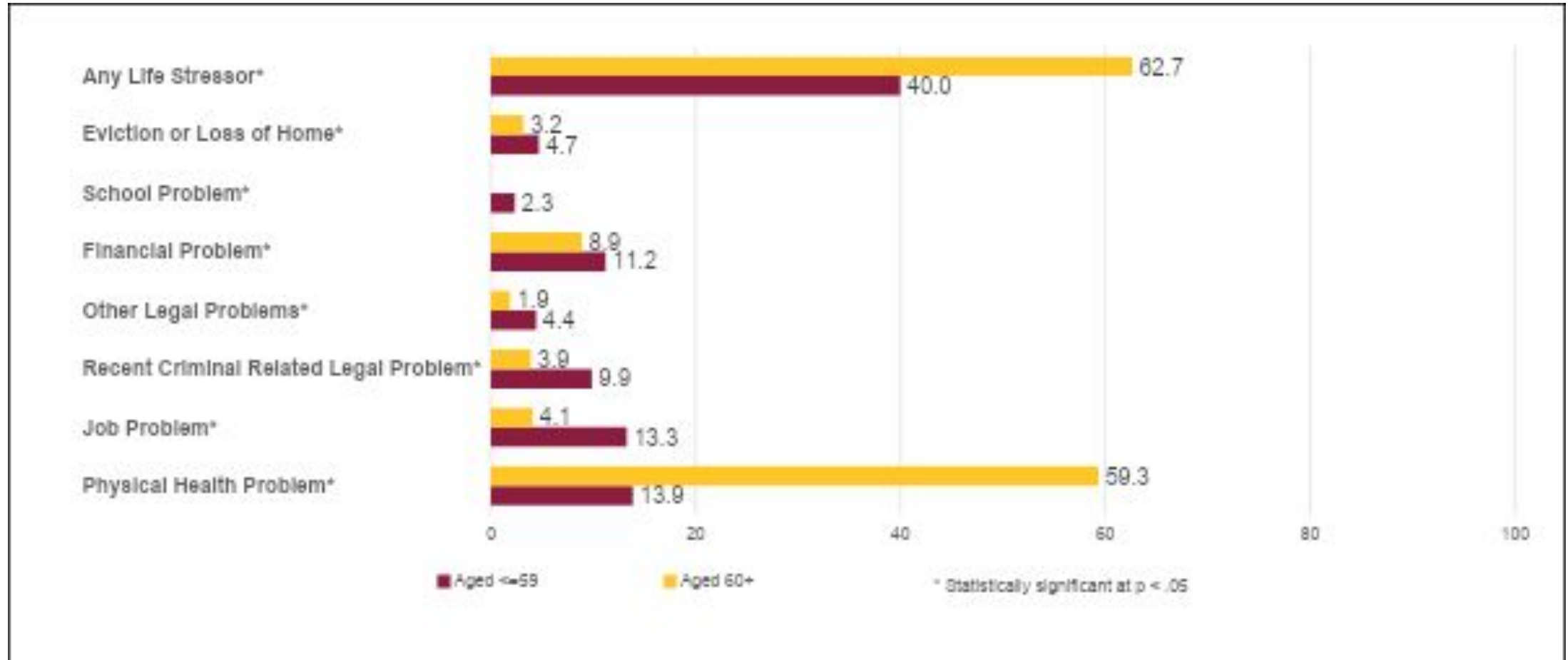
# Substance abuse / addiction circumstances present by older adult status



# Interpersonal problem circumstances present by older adult status

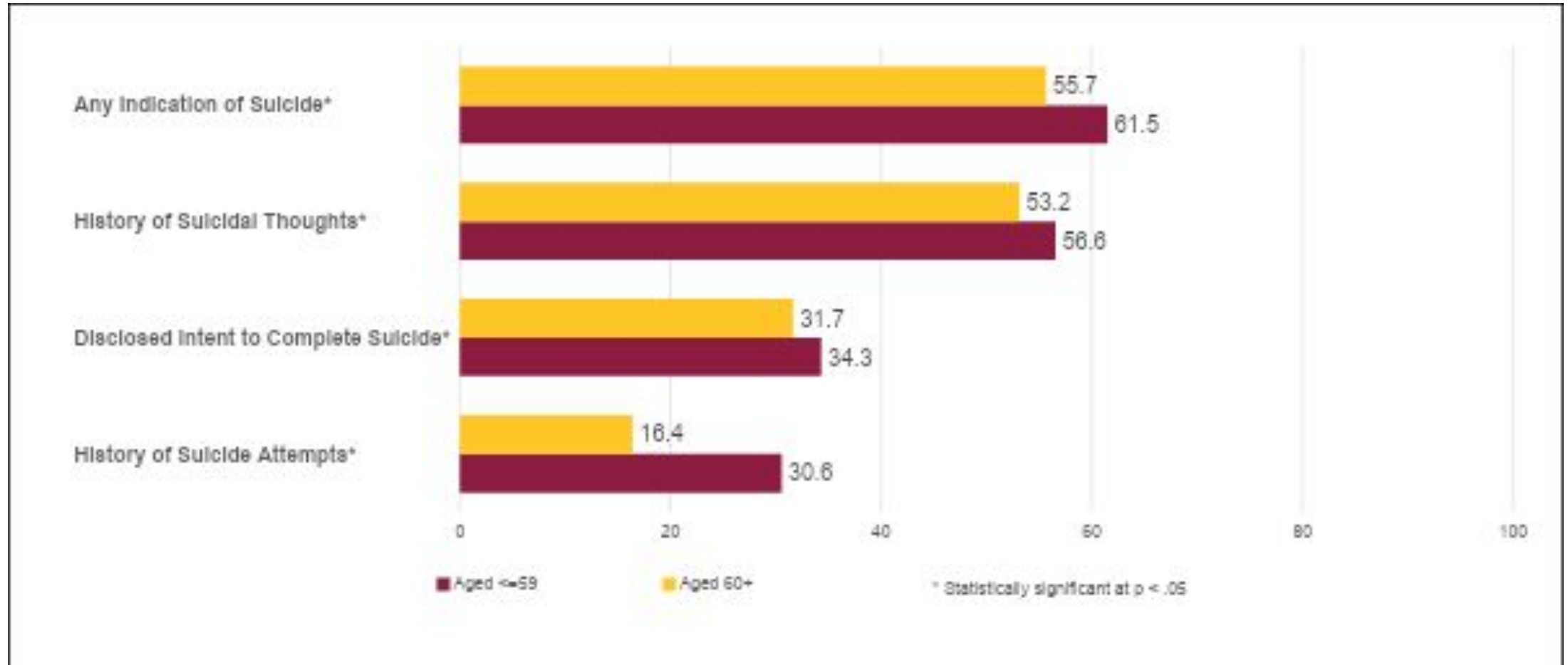


# Life stressor circumstances present by older adult status





# Suicide event circumstances present by older adult status



# Major Findings

- Older Arizonans are at greater risk for suicide (23.7 per 100,000 population vs. 17.0).
- Older adult **males** are at significantly higher risk for suicide.
- Older **white**, non-Hispanic/Latinx adults are at significantly higher risk for suicide.
- Older adult suicide rates are substantially higher in **Cochise** (36.4), **Gila** (59.0), **La Paz** (81.7), **Mohave** (37.2), and **Yavapai**(37.2), compared to the statewide rate (18.6).
- The top three zip codes for older adult suicide are in the **Sun City** area of Maricopa County. The sheriff's office, who is the principal law enforcement agency responsible for this area, is not a partner with AZ-VDRS. This is a limitation to our research.
- More than 7 in 10 older adult suicide victims used a **firearm**
- Older adult suicide victims were generally less likely to have any documented mental health problems
- Older adult suicide victims were significantly less likely to have interpersonal problems in general (25.3% vs. 48.0%)
- About 6 in 10 older adults were experiencing **physical health problems** that reportedly contributed to the suicide, compared to slightly more than 1 in 10 for the younger group.

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