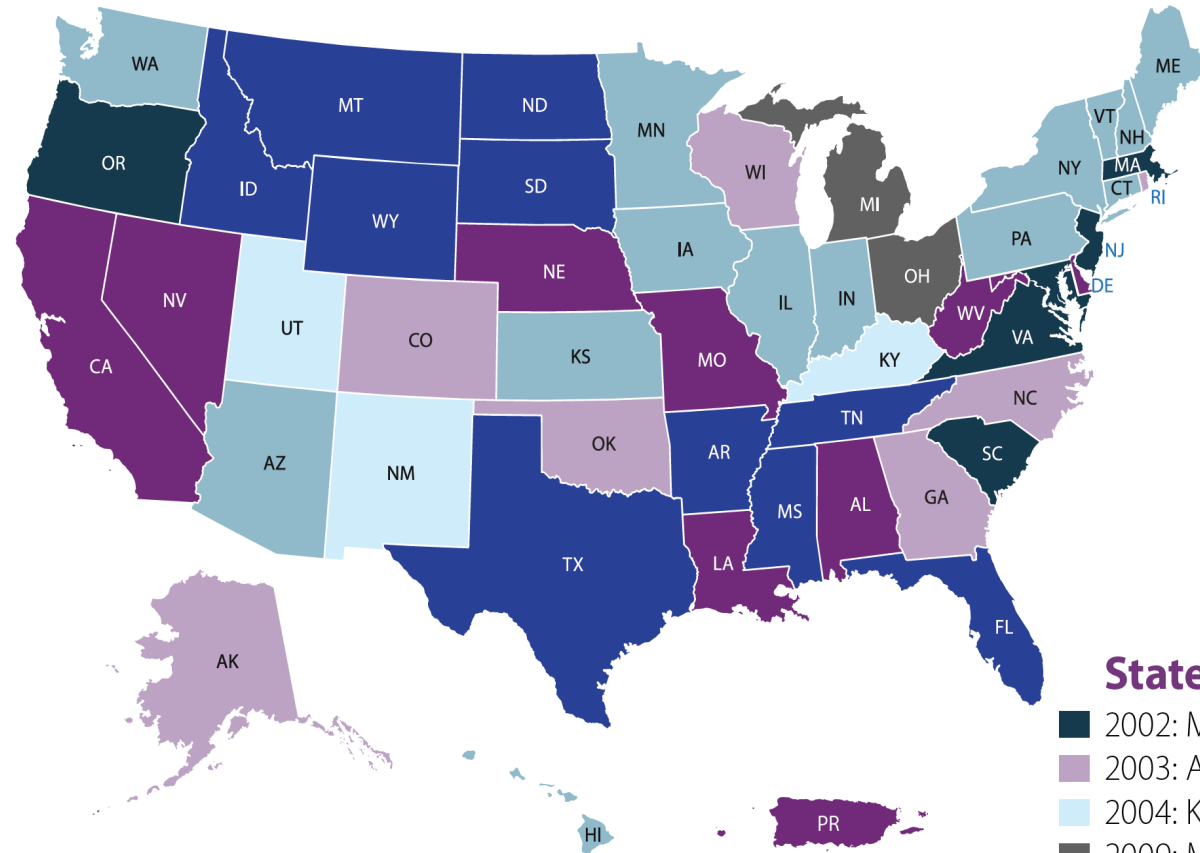


Arizona Violent Death Reporting System

AZ-VDRS

National Scope of NVDRS



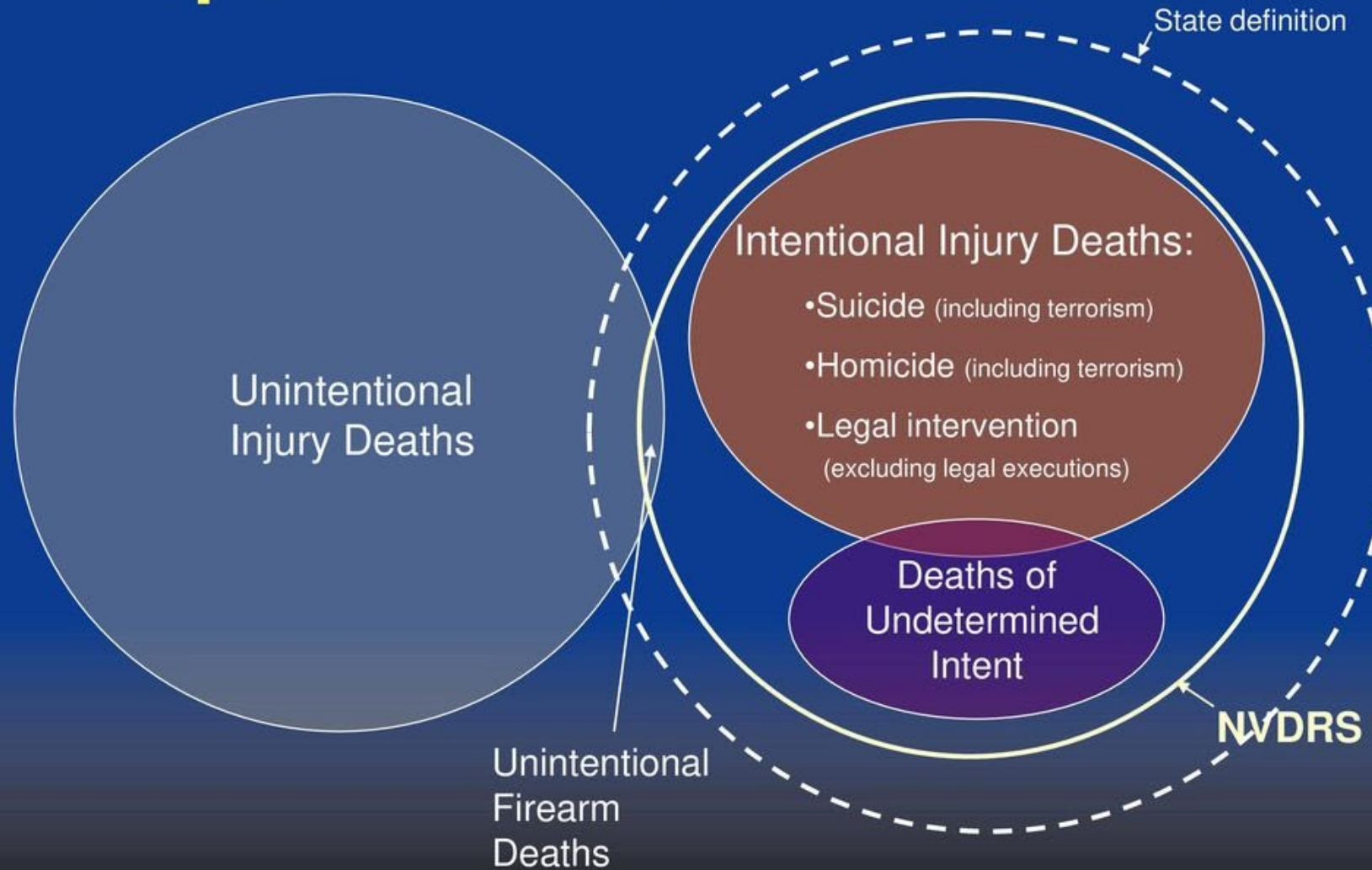
The Reach of NVDRS

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:

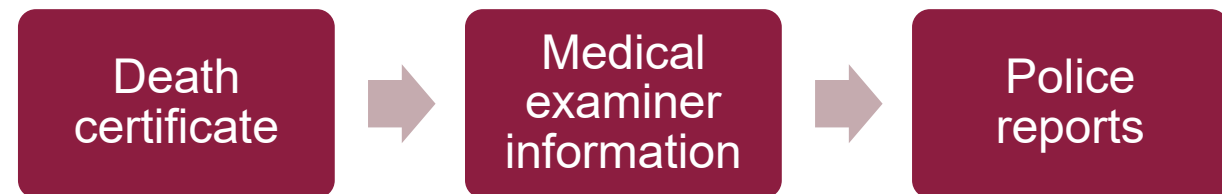
- 2002: MA, MD, NJ, OR, SC, VA
- 2003: AK, CO, GA, NC, OK, RI, WI
- 2004: KY, NM, UT
- 2009: MI, OH
- 2014: AZ, CT, HI, IA, IL, IN, KS, ME, MN, NH, NY, PA, VT, WA
- 2016: AL, CA, DE, DC, LA, MO, NE, NV, Puerto Rico, WV
- 2018: AR, FL, ID, MS, MT, ND, SD, TN, TX, WY

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
Gila Mortuary
New Mexico ME
- Law Enforcement Reports (80% 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.



AZ-VDRS Partner Agencies

| Police Departments (n=39) | | Arizona Department of Health Services |
|----------------------------------|--------------------------------|--|
| Apache Junction | Prescott | Bureau of Vital Records |
| Buckeye | Prescott Valley | |
| Bullhead City | Safford | |
| Casa Grande | Sahuarita | Medical Examiners (n=11) |
| Chandler | Scottsdale | Apache County ME |
| Chino Valley | Sedona | Coconino County ME |
| Clarkdale | Show Low | Gila Messinger Mortuary |
| Cottonwood | Sierra Vista | Maricopa County ME |
| Douglas | Snowflake-Taylor | Mohave County ME |
| Eloy | St. John's | Navajo County ME |
| Flagstaff | Surprise | New Mexico State ME |
| Gilbert | Tempe | Pima County ME |
| Glendale | Tucson | Pinal County ME |
| Kingman | Winslow | Yavapai County ME |
| Lake Havasu | Yuma | Yuma County ME |
| Marana | | |
| Maricopa | Sheriffs' Offices (n=8) | |
| Mesa | Cochise County SO | |
| Nogales | Coconino County SO | |
| Oro Valley | Mohave County SO | |
| Payson | Navajo County SO | |
| Peoria | Pima County SO | |
| Paradise Valley | Pinal County SO | |
| Phoenix | Yavapai County SO | |
| | Yuma County SO | |



Arizona State University

Major data collection gaps

- State Agencies

 - AZ DOC (22), AZ DPS (16) (in progress), FBI (16)

- Tribal Lands

 - BIA (17) Navajo Nation PD, Gila River PD (13), Salt River PD (7),

- Non-participating Sheriff's Departments

 - Apache (3), Gila (17), Greenlee (2), La Paz (6), **Maricopa (128)**, Santa Cruz (7)

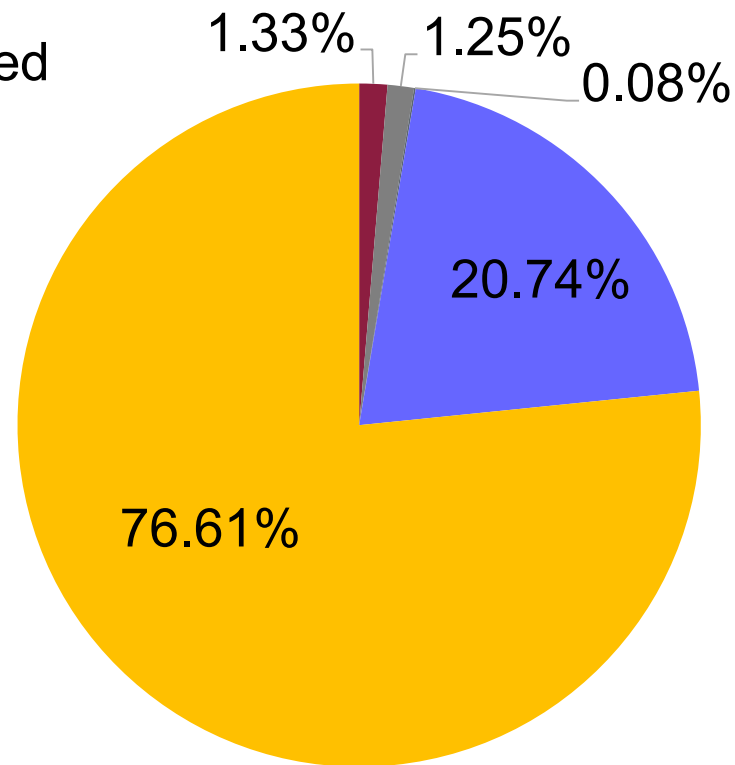
- Remaining Local Agencies

 - Goodyear (19) Avondale PD (14) (in progress), Globe (6)

Homicide and Suicide, 2015-2017

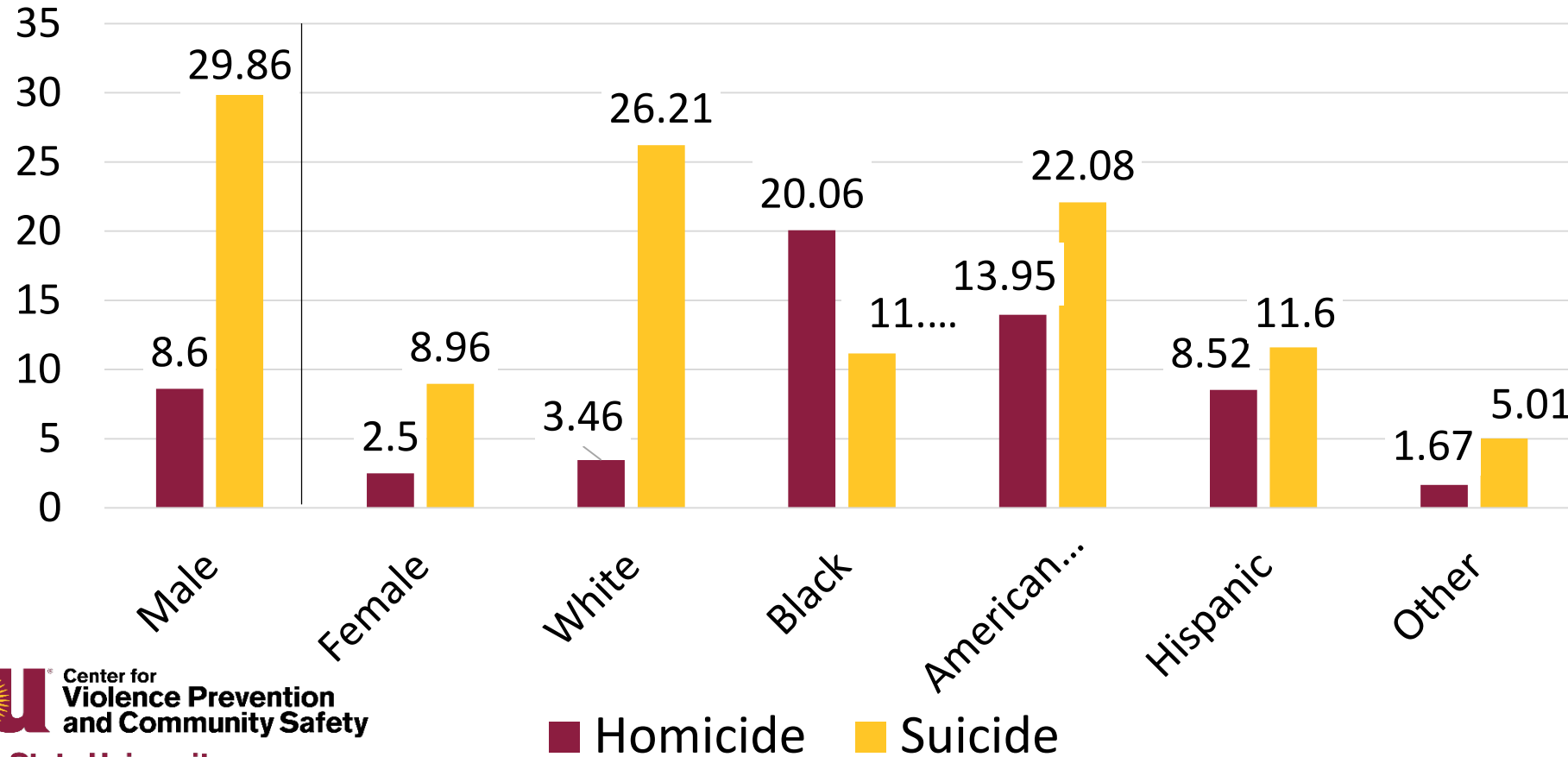
Homicide and Suicide by Incident Type, 2015-2017

- Homicide(s) followed by suicide(s)
- Multiple Homicide
- Multiple suicide
- Single homicide
- Single suicide



- 4,976 total homicide and suicide victims in the State of Arizona
- 76.61 percent were single suicide incidents
- 20.74 percent were single homicide incidents
- Approximately 2.66 percent were incidents of homicide(s) followed by suicide(s), multiple homicide, or multiple suicide

Homicide and Suicide Rates per 100,000 Population by Sex and Race/Ethnicity, 2015-2017



Homicide and Suicide by Age, 2015-2017

Homicide

- Median age: 33
- Mean age: 36
- Most common age group: 25-29
- Least common age group: 75-79

Suicide

- Median age: 49
- Mean age: 48
- Most common age group: 55-59
- Least common age group: 10-14

Homicide and Suicide by Method, 2015-2017

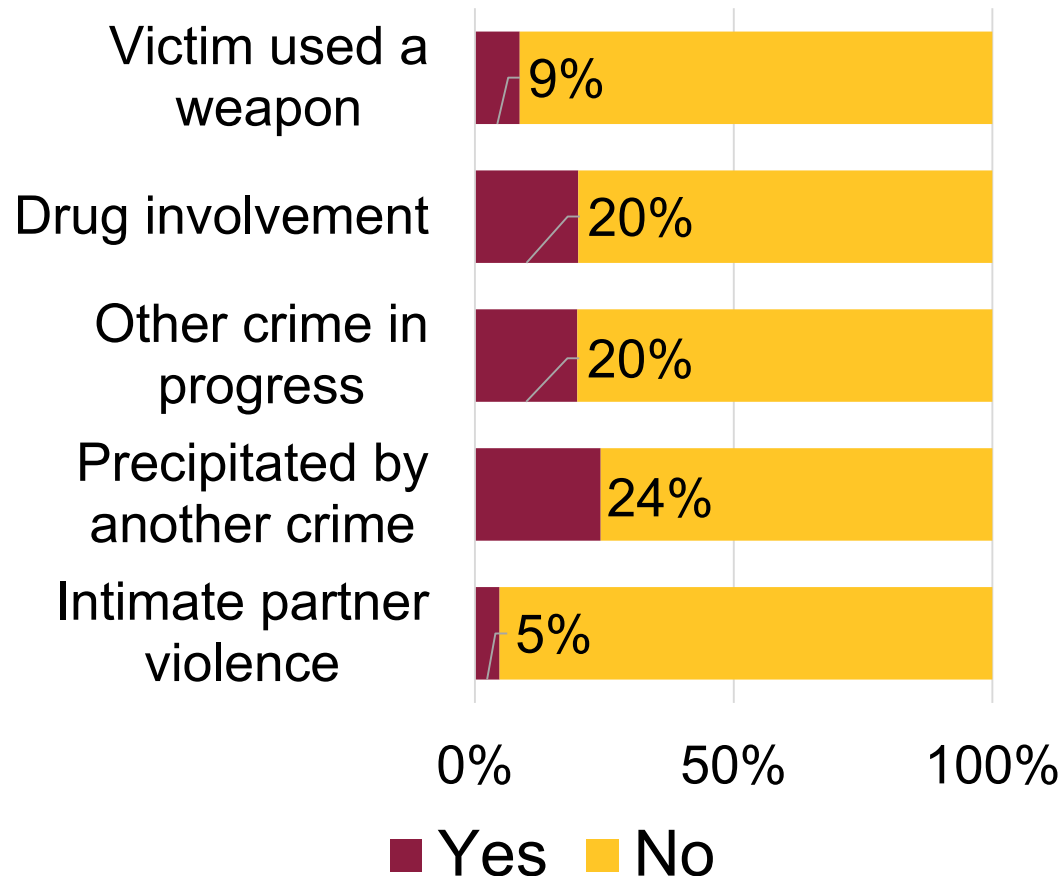
Homicide

| | |
|---------------------------------------|--------|
| Firearm | 69.05% |
| Sharp instrument | 12.80% |
| Blunt instrument | 11.56% |
| Hanging, strangulation or suffocation | 3.44% |
| Other | 2.39% |
| Unknown | 0.48% |
| Poisoning | 0.29% |

Suicide

| | |
|---------------------------------------|--------|
| Firearm | 59.02% |
| Hanging, strangulation or suffocation | 21.74% |
| Poisoning | 13.94% |
| Blunt instrument | 2.80% |
| Sharp instrument | 1.49% |
| Other | 1.01% |
| Unknown | 0% |

Homicide Circumstances, 2015-2017

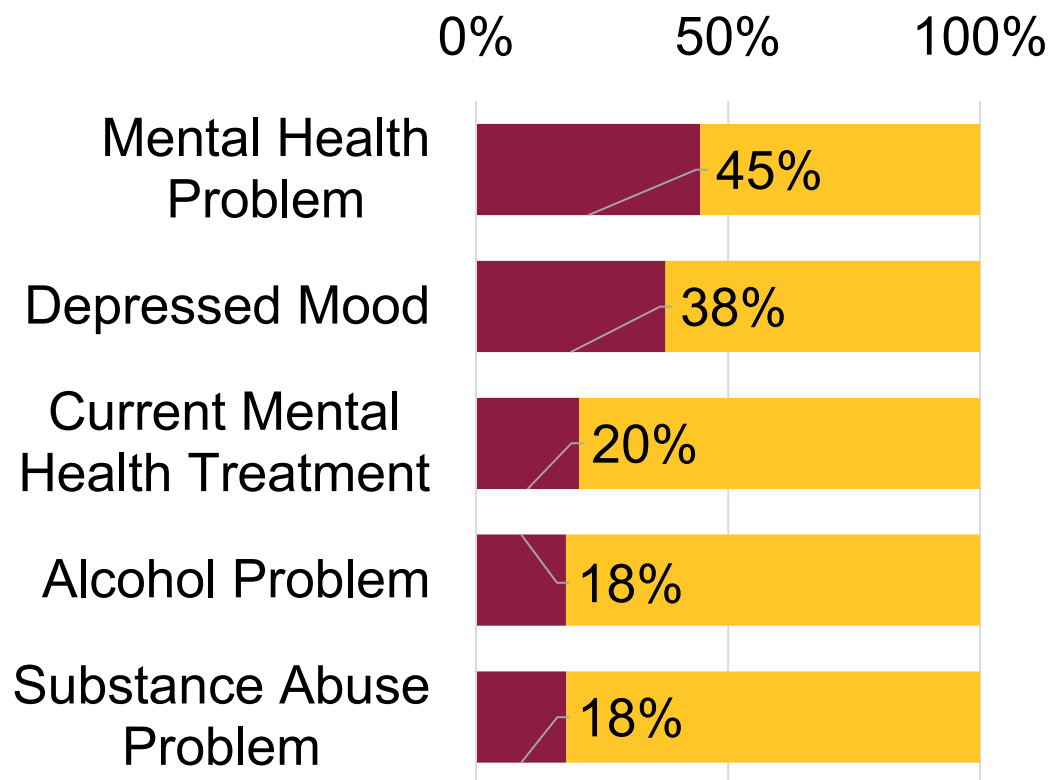


- Approximately 9 percent of homicide victims used a weapon
- One-fifth of homicides occurred while another serious crime was in progress and/or had drug involvement
- Nearly a quarter of homicides were precipitated by another crime
- About 5 percent of homicides were due to intimate partner violence

Homicide by Victim to Suspect Relationship, 2015-2017

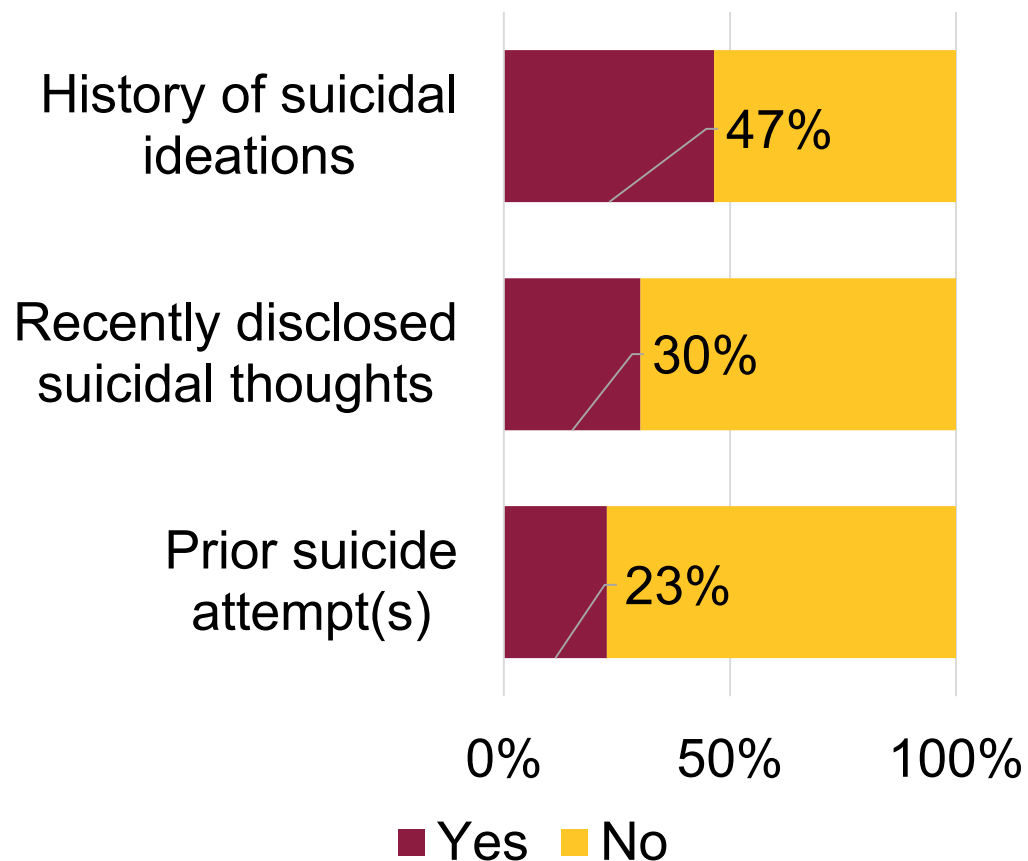
| | |
|---|-------|
| Unknown Relationship | 26.9% |
| Friend or Acquaintance | 20.9% |
| Stranger | 16.4% |
| Family members (e.g. parents, child, sibling, cousin) | 11.5% |
| Other person, known to victim* | 11% |
| Spouse | 5.7% |
| Current intimate partner | 5.1% |
| Former intimate partner or spouse | 2.36% |

Suicide Circumstances, 2015-2017



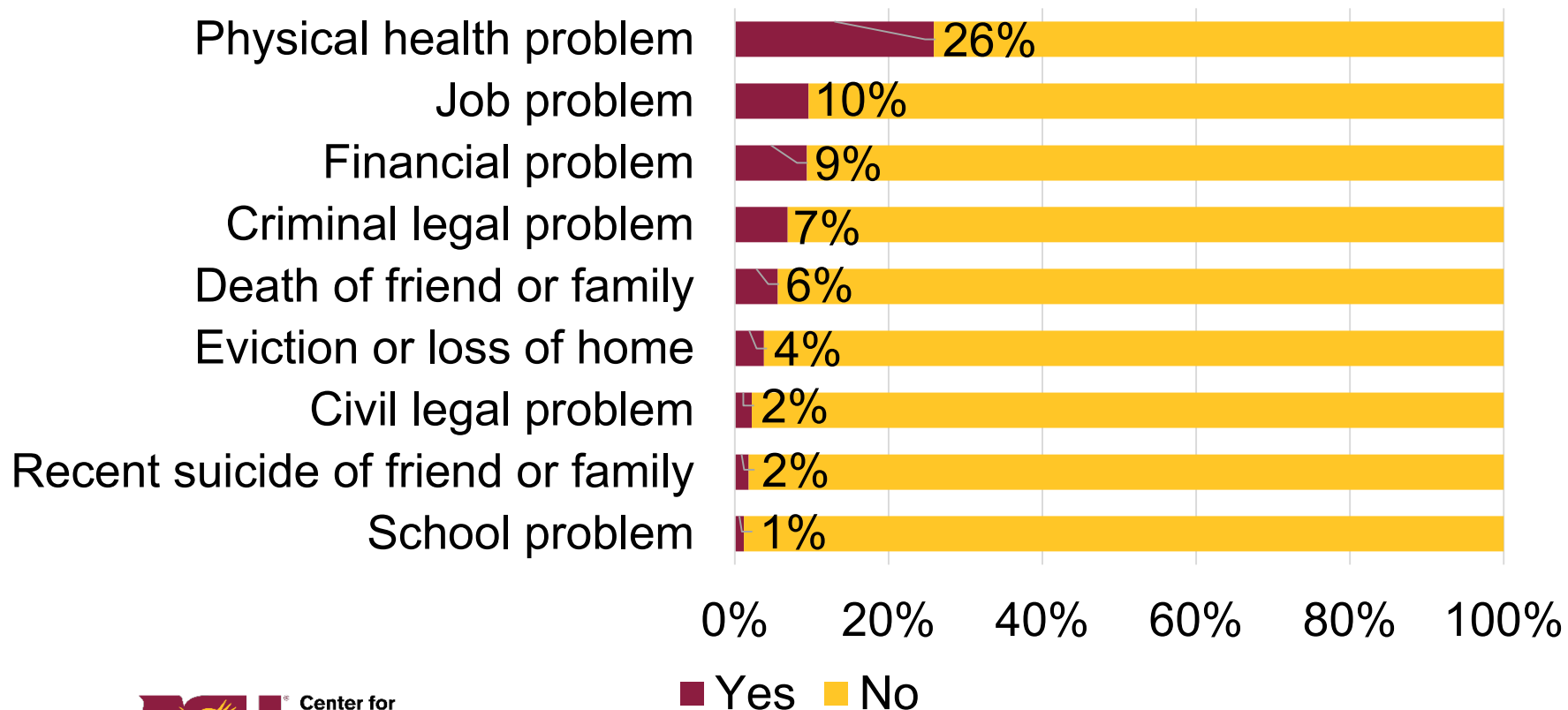
- Nearly half of all suicide victims suffered from a mental health problem
- About 38 percent of suicide victims had a depressed mood around the time of the incident
- Approximately 20 percent of suicide victims were receiving current mental health treatment
- Substance abuse problems and alcohol problems were equally present in suicide victims at around 18 percent

Suicide Circumstances, 2015-2017



- Nearly half of all suicide victims had a known history of expressing suicidal ideations
- Approximately 30 percent of all suicide victims disclosed suicidal thoughts within 30 days of the incident
- About 23 percent of suicide victims had a prior suicide attempt(s)

Suicide by Life Stressors, 2015-2017



- More than one-fourth of suicides were contributed to a physical health problem
- A job problem accounted for approximately 10 percent of suicides
- About 1 percent of suicides were due to a school problem

Accidental/Unintentional Firearm Deaths, 2015-2017

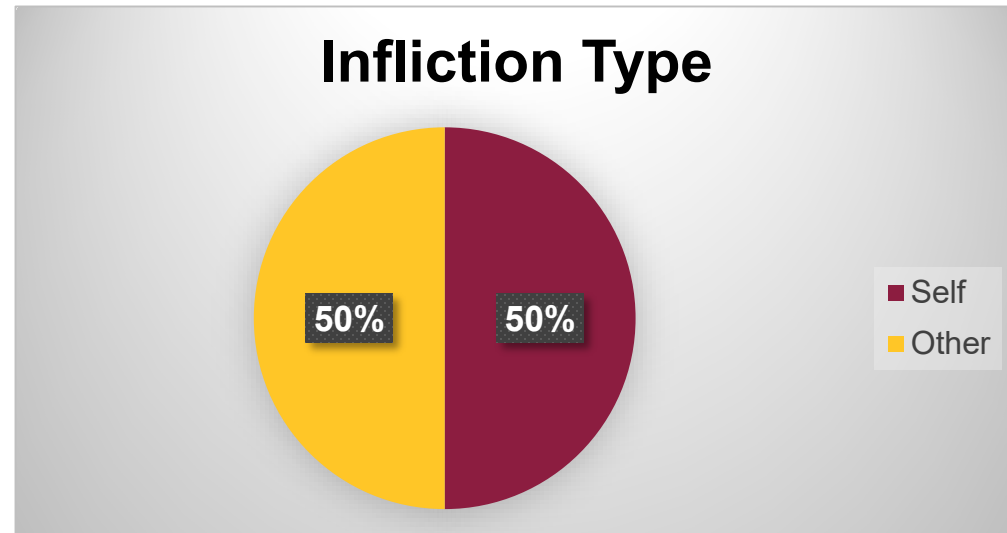
AZ-VDRS Data Analysis Results

Accidental and Unintentional Firearm Deaths among AZ-VDRS Data

- **42 unintentional firearm deaths in Arizona from 2015-2017**

- **Operationalization of terminology:**

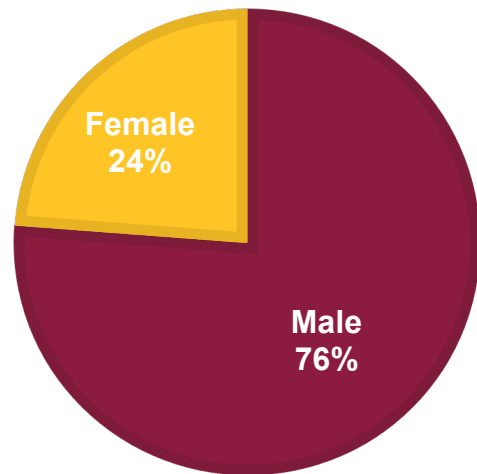
- NVDRS defines an unintentional firearm death as “a death resulting from a penetrating injury or gunshot wound from a weapon that uses a powder charge to fire a projectile when there is a preponderance of evidence that the shooting was not intentionally directed at the victim.”*
- Unintentional shootings that occur while attempting to use a firearm to intimidate or control are not considered to meet this definition.



Gender

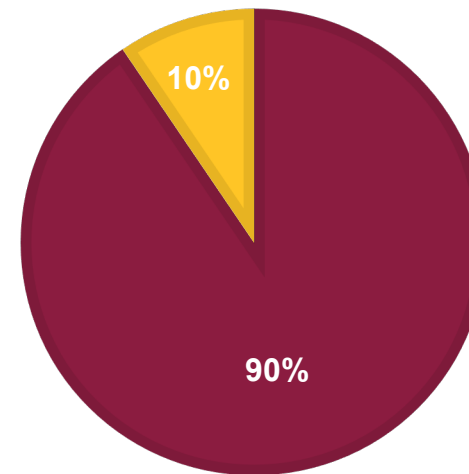
VICTIM GENDER

■ Male ■ Female



SHOOTER GENDER

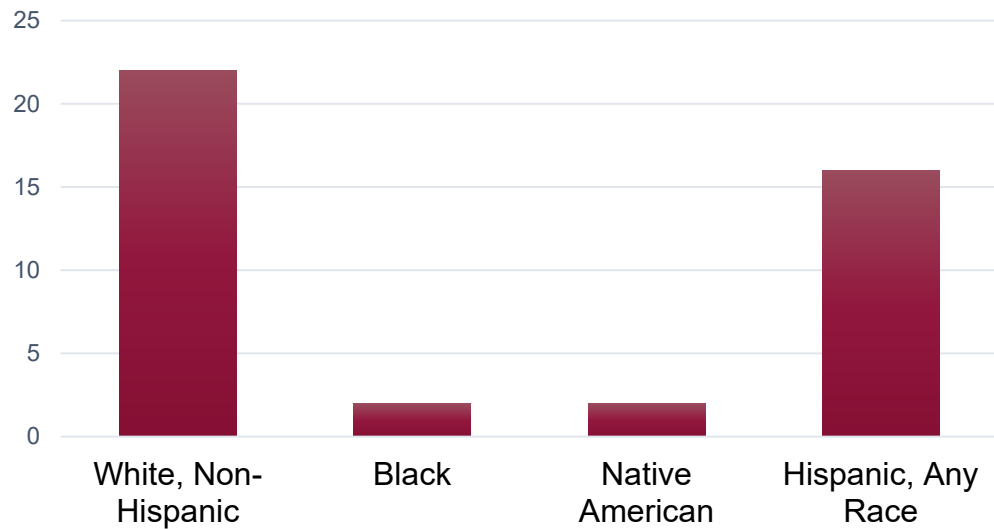
■ Male ■ Female



- Predominantly male for both victim and shooter

Age & Race/Ethnicity

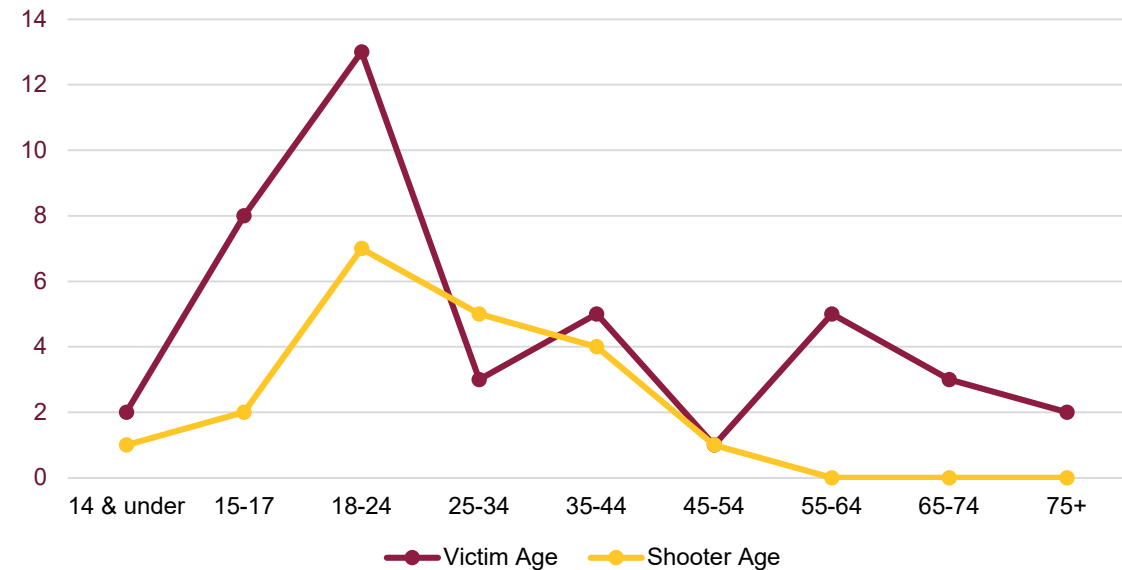
Number of Victims by Race/Ethnicity



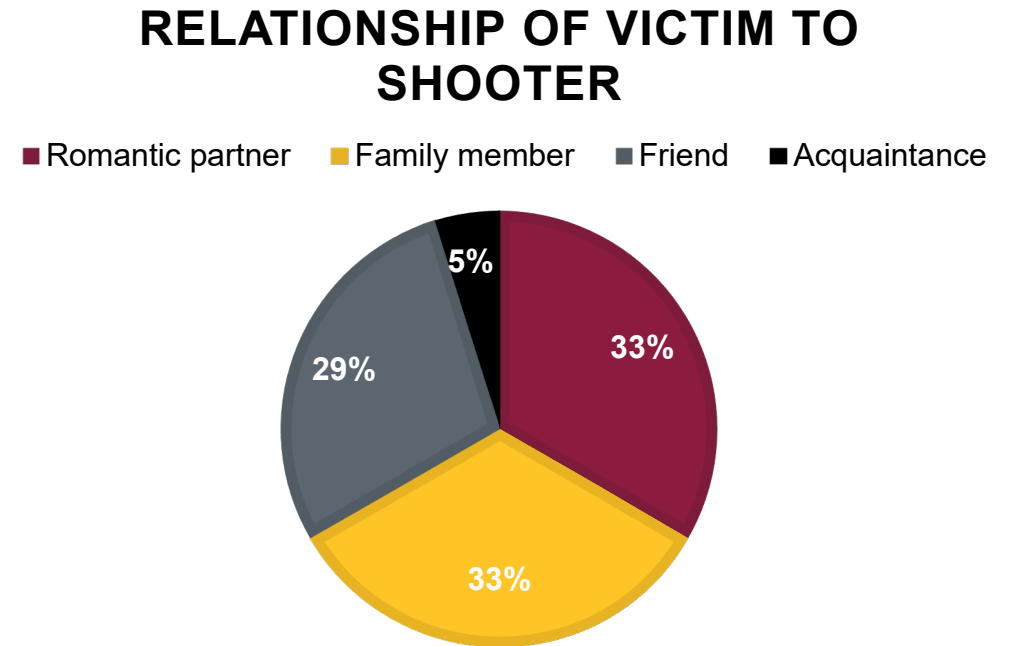
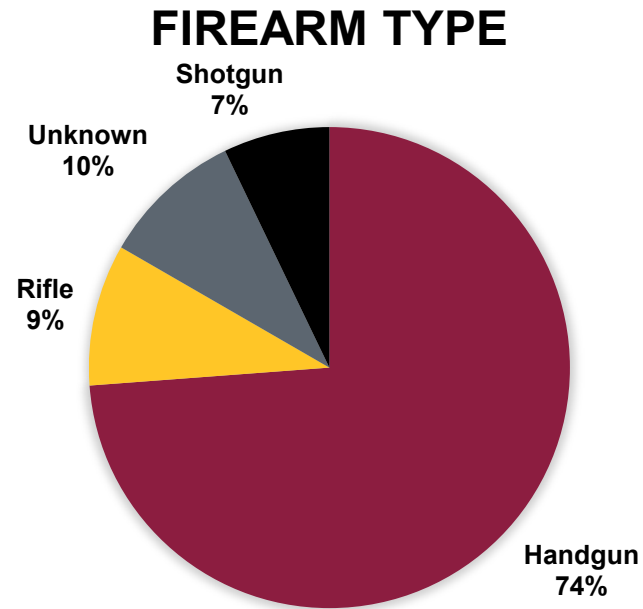
Median Ages of Victim and Shooter

| Individual | Median Age |
|------------|------------|
| Victim | 21.5 |
| Shooter | 24 |

Number of Victims/Shooters per Age Group



Firearm Type & Relationship of Victim to Shooter



Context and Mechanism of Shooting

(As many as applicable)

Context

| Context | Frequency | Percent |
|-------------------------|-----------|---------|
| Hunting | 1 | 2.4 |
| Target shooting | 0 | 0.0 |
| Self-defensive shooting | 0 | 0.0 |
| Celebratory firing | 0 | 0.0 |
| Loading/unloading gun | 1 | 2.4 |
| Cleaning gun | 8 | 19.0 |
| Showing gun to others | 4 | 9.5 |
| Playing with gun | 15 | 35.7 |
| Other | 15 | 35.7 |

Mechanism

| Mechanism | Frequency | Percent |
|-------------------------------------|-----------|---------|
| Thought safety was engaged | 0 | 0.0 |
| Thought gun was unloaded | 18 | 42.9 |
| Unintentionally pulled trigger | 22 | 52.4 |
| Bullet ricochet | 1 | 2.4 |
| Gun defect/malfunction | 1 | 2.4 |
| Fired while holstering/unholstering | 1 | 2.4 |
| Dropped gun | 2 | 4.8 |
| Fired while operating safety/lock | 1 | 2.4 |
| Gun mistaken for a toy | 0 | 0.0 |

Gang-Involved Homicides, 2015-2017

Gang Related or Motivated Homicides

- The NVDRS uses the following definition to identify cases that are gang-related or motivated:

Gang-related homicide can vary by law enforcement agency or coroner/medical examiner and tend to capture deaths that are classified as gang motivated (i.e., motive of the incident was gang related) or had suspected involvement of a gang member (i.e., a gang member was a suspect or victim in the incident). This variable captures both types of gang-related deaths reported by agencies.

Gang-Related and Gang-Like

In order to expand this narrow definition, nationally recognized gang experts were consulted to identify additional potential “gang-like” homicides, based on the following criteria.

Criteria used to classify a homicide as “gang-like”

1. Weapon (gun, knife or blunt object);
2. Victim-Suspect Relationship (stranger, acquaintance, rival gang member, other person known to victim or person missing) and:
3. Circumstances
 - LE or CME circumstance indicated victim was a bystander, involved in a drive-by shooting or was involved in a brawl
4. Location of where the homicide occurred (porch, street, parking lot)

Gang Homicides by Incident Type, 2015-2017

Gang-Involved Homicides in Arizona by Incident Type, 2015-17

| Incident Type | Gang-Related | | Gang-Like | | Non-Gang | |
|-------------------------------------|--------------|------------|------------|-------------|-------------|--------------|
| | n | % | n | % | n | % |
| Single homicide | 67 | 82.7 | 126 | 89.4 | 659 | 79.0 |
| Multiple homicide | 14 | 17.3 | 15 | 10.6 | 96 | 11.5 |
| Homicide(s) followed by suicide(s) | 0 | 0.0 | 0 | 0.0 | 72 | 8.6 |
| Other † | 0 | 0.0 | 0 | 0.0 | 7 | 0.8 |
| Total (of Gang/Non-Gang) | 81 | 7.7 | 196 | 13.4 | 1030 | 100.0 |

† "Other" cases include, but not necessarily limited to homicides followed by undetermined or legal intervention deaths of the homicide suspect(s).

Gang-Involved Homicides by Sex and Race/Ethnicity, 2015-2017

| Characteristics of Gang-Involved Homicides in Arizona, 2015-2017 | | | | | | |
|--|------------------------|------|----------------------|------|---------------------|------|
| Characteristic | Gang-Related (n=81) | | Gang-Like (n=141) | | Non-Gang (N=834) | |
| | n | % | n | % | n | % |
| Sex* | | | | | | |
| Male | 69 | 85.2 | 123 | 87.2 | 625 | 74.9 |
| Female | 12 | 14.8 | 18 | 12.8 | 209 | 25.1 |
| Race/Ethnicity* | | | | | | |
| White | 12 | 14.8 | 21 | 14.9 | 344 | 41.2 |
| Black or African-American | 21 | 25.9 | 40 | 28.4 | 118 | 14.1 |
| Native American | 9 | 11.1 | 13 | 9.2 | 71 | 8.5 |
| Hispanic/Latino | 38 | 46.9 | 66 | 46.8 | 272 | 32.6 |
| Other † | 1 | 1.2 | 1 | 0.7 | 16 | 1.9 |
| † Includes Asian/Pacific Islander, multi-racial and unspecified or unknown race/ethnicity. | | | | | | |
| * Statistically significant at $p \leq .05$ | | | | | | |

Gang-Involved Homicides, by Age and Age Group, 2015-2017

| Characteristic | Gang-Related (n=81) | | Gang-Like (n=141) | | Non-Gang (n=834) | |
|-------------------|---------------------|------|-------------------|------|------------------|------|
| | n | % | n | % | n | % |
| Age Group* | | | | | | |
| < 14 years | 0 | 0.0 | 1 | 0.7 | 44 | 5.3 |
| 15-24 years | 31 | 38.3 | 53 | 37.6 | 161 | 19.3 |
| 25-34 years | 30 | 37.0 | 48 | 34.0 | 212 | 25.4 |
| 35-44 years | 13 | 16.0 | 20 | 14.2 | 145 | 17.4 |
| 45-54 years | 4 | 4.9 | 14 | 9.9 | 121 | 14.5 |
| 55-64 years | 1 | 1.2 | 5 | 3.5 | 89 | 10.7 |
| 65-74 years | 1 | 1.2 | 0 | 0.0 | 34 | 4.1 |
| 75+ years | 1 | 1.2 | 0 | 0.0 | 26 | 3.1 |
| Unknown | 0 | 0.0 | 0 | 0.0 | 2 | 0.2 |
| | | | | | | |
| | mean | SD | mean | SD | mean | SD |
| Age (in years)* | 29.7 | 12.0 | 30.0 | 11.1 | 37.4 | 17.5 |

* Statistically significant at $p \leq .05$

Gang-Involved Homicides, by County, 2015-2017

| Gang-Involved Homicides in Arizona by County, 2015-2017 | | | | | | |
|---|--------------|------------|------------|-------------|------------|-------------|
| County | Gang-Related | | Gang-Like | | Non-Gang | |
| | n | % | n | % | n | % |
| Apache | 2 | 2.5 | 1 | 0.7 | 5 | 0.6 |
| Cochise | 1 | 1.2 | 0 | 0.0 | 13 | 1.6 |
| Coconino | 1 | 1.2 | 1 | 0.7 | 26 | 3.1 |
| Gila | 1 | 1.2 | 1 | 0.7 | 6 | 0.7 |
| Graham | 0 | 0.0 | 0 | 0.0 | 3 | 0.4 |
| Greenlee | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| La Paz | 0 | 0.0 | 0 | 0.0 | 3 | 0.4 |
| Maricopa | 52 | 64.2 | 104 | 73.8 | 545 | 65.3 |
| Mohave | 0 | 0.0 | 2 | 1.4 | 22 | 2.6 |
| Navajo | 1 | 1.2 | 0 | 0.0 | 15 | 1.8 |
| Pima | 17 | 21.0 | 24 | 17.0 | 117 | 14.0 |
| Pinal | 6 | 7.4 | 5 | 3.5 | 39 | 4.7 |
| Santa Cruz | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| Yavapai | 0 | 0.0 | 0 | 0.0 | 18 | 2.2 |
| Yuma | 0 | 0.0 | 2 | 1.4 | 13 | 1.6 |
| Unknown county † | 0 | 0.0 | 1 | 0.7 | 9 | 1.1 |
| Total (of Gang/Non-Gang) | 81 | 7.9 | 141 | 13.7 | 834 | 81.0 |

† Actual county where fatal injury occurred is unknown.

AZ-VDRS Missing Data, 2015-2017

The Missing Data Problem

- Two chief reasons for missing data on decedents:
 1. Non-participating agencies; and
 2. Poor data collection and recording protocols by responsible agencies.

Non-Participating LE Agencies

- From 2015-2017, there were 805 violent deaths that occurred in non-participating law enforcement jurisdictions.
- These represented about 14.1% of the 5,711 violent deaths that occurred in Arizona in that time.
- 13 agencies are responsible 61.1% (n=492) of missing data.

Non-Participating LE Agencies

- Currently, two of these previously top 13 non-participating agencies have agreed, or are in-process, of participating totaling 74 deaths.
- Unsuccessful recruitment attempts have been made with the others – most pronounced among these is the Maricopa County Sheriff (n=186).

Non-Participating LE Agencies

| Deaths | Agency |
|--------|-------------------------|
| 186 | Maricopa County Sheriff |
| 38 | Avondale PD * |
| 36 | Gila River Tribal PD |
| 36 | Gila County Sheriff * |
| 34 | Navajo Nation PD |
| 33 | AZ-DOC |
| 29 | AZ-DPS |

| Deaths | Agency |
|--------|---------------------------|
| 21 | Bureau of Indian Affairs |
| 21 | Goodyear PD |
| 16 | La Paz County Sheriff |
| 15 | Graham County Sheriff |
| 14 | Camp Verde Marshall |
| 13 | Santa Cruz County Sheriff |
| | |

- Denotes an agency that currently is in the process of signing an AZ-VDRS partnership MOU.

Data Collection Quality/Completeness

- Data quality and completeness is the second critical component to resolving the AZ-VDRS missing data problem.
- Among participating agencies, some of the reports generated are very sparse on details, especially regarding the circumstance variables that are so critical.
- AZ-VDRS codes circumstances based on the details provided primarily in report narratives, and protocol requires explicit information to be present in the source document in order to endorse the specific circumstance.

Data Collection Quality/Completeness

| Medical Examiner Circumstances Known | | | | | | |
|--------------------------------------|---------|-----|----------|------|-------|-------|
| Manner | Missing | | Endorsed | | Total | |
| | n | % | n | % | n | % |
| Suicide | 210 | 5.7 | 3468 | 94.3 | 3678 | 68.6 |
| Homicide | 91 | 8.7 | 955 | 91.3 | 1046 | 19.5 |
| Other | 32 | 5.0 | 606 | 95.0 | 638 | 11.9 |
| Total | 333 | 6.2 | 5029 | 93.8 | 5362 | 100.0 |

Data Collection Quality/Completeness

| Law Enforcement Circumstances Known | | | | | | |
|-------------------------------------|---------|------|----------|------|-------|-------|
| Manner | Missing | | Endorsed | | Total | |
| | n | % | n | % | n | % |
| Suicide | 912 | 24.8 | 2766 | 75.2 | 3678 | 68.6 |
| Homicide | 276 | 26.4 | 770 | 73.6 | 1046 | 19.5 |
| Other | 256 | 40.1 | 382 | 59.9 | 638 | 11.9 |
| Total | 1444 | 26.9 | 3918 | 73.1 | 5362 | 100.0 |

Conclusion

- AZ-VDRS data offers an important contribution to understanding violent deaths in Arizona.
- Improving the program depends first on greater partner participation.
- Better and more thorough report completion is needed to improve understanding and guidance regarding suicides and homicides across Arizona.

10 Recommendations for reducing gun violence (Draft)*

1

National Integrated Ballistics Identification Network

Police agencies should participate and sustain best practices associated with ballistic imaging programming to identify and target guns used in multiple crimes

2

Focused deterrence

Deter gun crime by increasing the swiftness, severity and certainty of punishment by targeting violent offenders for suppression, intervention, and prevention programming

3

Operation Peacekeeper

Youth outreach workers serve as mentors for youth in violent neighborhoods

4

Hot spot policing

Focus police resources in small geographic areas that have high levels of gun violence

5

Homicide review commission

A program that reduces homicides and non-fatal shooting through a multidisciplinary and multiagency homicide review process

6

Education campaigns and clinical interventions for promoting safe storage

Clinicians should counsel families to store guns safely and provide free gun locks

7

Child-access prevention laws

Child-access prevention (CAP) laws allow prosecutors to bring charges against adults who intentionally or carelessly allow children to have unsupervised access to firearms

8

Background checks

Require background checks for all dealers, private sellers, restraining orders, mental illness, NCIS

9

Revoke stand-your-ground laws

Arizona is one of about 20 states that have stand your ground laws. Stand your ground laws remove the duty to retreat. The legislature should revoke Arizona's stand your ground law

10

Research on the prevalence of violent deaths among American Indians

Policy makers should focus on understanding the prevalence of violent deaths among American Indians in the context of ethnicity, tribal membership, and place of residency