

**Arizona State University's  
2016 Annual Report on Suicide in Pima County**

Prepared by  
Center for Violence Prevention and Community Safety

Sponsored by  
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## **About the Center for Violence Prevention and Community Safety**

In order to become more committed to the Arizona community and to society as a whole, Arizona State University is setting a new standard for research universities through the model of the New American University. As a New American University, ASU is measured not by who we exclude, but by whom we include; our pursuit of research that considers the public good; and we assume major responsibility for the economic, social, and cultural vitality of our community. Social embeddedness is core to the development of ASU as the New American University. Social embeddedness is a university-wide, interactive, and mutually supportive partnership with the communities of Arizona.

Toward the goal of social embeddedness, Arizona State University established the Center for Violence Prevention and Community Safety in July 2005 to respond to the growing need of Arizona's communities to improve the public's safety and well-being. The Center for Violence Prevention and Community Safety is a research unit within the Watts Family College of Public Service and Community Solutions at Arizona State University. The Center's mission is to generate, share, and apply quality research and knowledge to create "best practice" standards. The center specifically evaluates policies and programs, analyzes and evaluates patterns and causes of violence, develops strategies and programs, develops a clearinghouse of research reports and "best practice" models, educates, trains and provides technical assistance, and facilitates the development of and construction of databases. For more information about the Center for Violence Prevention and Community Safety please contact us using the information provided below.

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## Acknowledgements

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We thank and acknowledge the cooperation and support of the Arizona Department of Health Services, 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. The agencies that provided data for this report are:

Apache County Medical Examiner's Office	Oro Valley Police Department
Coconino County Medical Examiner's Office	Paradise Valley Police Department
Gila Messenger Mortuary	Peoria Valley Police Department
Maricopa County Medical Examiner's Office	Phoenix Police Department
Mohave County Medical Examiner's Office	Prescott Police Department
Navajo County Medical Examiner's Office	Prescott Valley Police Department
New Mexico Office of the Medical Examiner	Safford Police Department
Pima County Medical Examiner's Office	Sahuarita Police Department
Pinal County Medical Examiner's Office	Scottsdale Police Department
Yavapai County Medical Examiner's Office	Sedona Police Department
Yuma County Medical Examiner's Office	Show Low Police Department
	Sierra Vista Police Department
Apache Junction Police Department	Snowflake Taylor Police Department
Buckeye Police Department	St. John's Police Department
Casa Grande Police Department	Surprise Police Department
Chandler Police Department	Tempe Police Department
Chino Valley Police Department	Tucson Police Department
Douglas Police Department	
El Mirage Police Department	Coconino County Sheriff Office
Flagstaff Police Department	Maricopa County Sheriff Office
Gilbert Police Department	Navajo County Sheriff Office
Glendale Police Department	Pima County Sheriff Office
Kingman Police Department	Pinal County Sheriff Office
Lake Havasu City Police Department	Yavapai County Sheriff Office
Marana Police Department	Yuma County Sheriff Office
Maricopa Police Department	
Mesa Police Department	ADHS, Bureau of Vital Records
Nogales Police Department	

During 2016, the AZ-VDRS Advisory Board provided input, advice and support. These individuals and their agencies were paramount to establishing and maintaining the program. We would especially like to thank Tomi St. Mars and Pam Goslar for their serving as the executive leaders of the steering committee. They have been our strongest champions and provided continuous leadership throughout the project. We would be remiss if we did not thank our CDC science officer Dr. Shane Davis-Jack and our CDC project officer Michele LaLand for their tireless support and answering all of our questions.

## **Introduction**

The National Violent Death Reporting System (NVDRS) is a state-based surveillance tool to improve our understanding of violent deaths. Given the magnitude of the suicide problem in the United States, improved data collection and research efforts are critical to finding and implementing better intervention and prevention efforts. Currently, 50 states, plus Puerto Rico and the District of Columbia participate in the National Violent Death Reporting System (NVDRS). NVDRS is a national state-based surveillance system for violent deaths developed by the Centers for Disease Control and Prevention (CDC).

Arizona began its partnership in the surveillance system with the collection of 2015 violent death data. Through the mechanisms of data integration and abstraction from death certificates, medical examiner reports, and law enforcement reports the Arizona Violent Death Reporting System (AZ-VDRS), as an NVDRS site, seeks to contribute to these efforts of reducing suicides in Arizona. By gaining a deeper understanding into the scope and nature of the suicide problem at state and local levels, local and state authorities, policymakers and other stakeholders are better able to assist in determining resource allocation and are able to find more effective or efficient strategies as a response to suicide. This report presents findings from the AZ-VDRS, which is sponsored by the Centers for Disease Control and Prevention (CDC) and describes suicide patterns and trends in Pima County in calendar year 2016. This report was auto-generated through a computer program. If you recognize errors in text or in the reporting of figures, please notify us so we can address the problem(s).

## **Data and Methods**

Data presented in this report are from the Arizona Violent Death Reporting System (AZ-VDRS), from January 1, 2016 through December 31, 2016. The violent death data are collected from three sources and are used to populate an aggregated, anonymous database. The three sources include death certificates, medical examiner reports, and law enforcement reports. AZ-VDRS contain data on victim/suspect demographics and specific circumstances about the incident including, but not limited to, mental health problems, recent problems with a job, finances, or relationships, and physical health problems. These original data sources are de-identified, abstracted and aggregated into a CDC-managed database.

Data collection and abstraction in Arizona begins with the death certificate. The Arizona Department of Health Services and its Division of Vital Records provide the AZ-VDRS with a comprehensive death certificate file containing year-to-date deaths defined by ICD-10 codes encompassing all manner of suicide, homicide, legal intervention, unintentional firearm injuries, and deaths of undetermined intent, on a monthly basis. Requests are then made to the responsible medical examiner for autopsy investigation and toxicology reports, and to the relevant law enforcement jurisdiction for all incident and investigation reports, for each decedent. This report primarily uses data gathered on all occurrent suicide decedents in the AZ-VDRS database with a date of death from January 1, 2016 through December 31, 2016. Most analyses are presented using rates. Rates for this report were calculated using incidence counts per 100,000 population, as estimated by the U.S. Census Bureau, specifically its 2016 American Community Survey 5-Year Estimates.

## Findings

### Suicides in Pima County, 2016

In 2016, there were a total of 176 suicide victims in Pima County. There were 175 victim(s) of single suicide (99.4%), and 1 victim(s) of homicide(s) followed by suicide(s) (0.6%).

### Suicide Victims Reported by Month, 2016

Month	Frequency	Percent
January	17	9.7
February	12	6.8
March	17	9.7
April	14	8.0
May	9	5.1
June	19	10.8
July	15	8.5
August	13	7.4
September	14	8.0
October	22	12.5
November	13	7.4
December	8	4.5
Unknown	3	1.7
Total	176	100.0

### Location Type of Injury Incident per Suicide Victim

<b>Location</b>	<b>Frequency</b>	<b>Percent</b>
House, apartment	136	77.3
At victim's home	133	75.6
Not at victim's home	3	1.7
Motor vehicle (excluding school bus and public transportation)	9	5.1
Natural area (e.g., field, river, beaches, woods)	6	3.4
Jail, prison, detention facility	4	2.3
Street/road, sidewalk, alley, highway, freeway	4	2.3
Parking lot/public parking garage	3	1.7
Park, playground, public use area, and commercial establishment (e.g., grocery store, retail outlet, etc.)	2	1.1
Other (i.e., Hospital or medical facility, hotel/motel, office building, public transportation or station, service station, farm, etc.)	12	6.8
<b>Total</b>	<b>176</b>	<b>100.0</b>

### **Weapon Type Used in Suicide**

<b>Weapon</b>	<b>Frequency</b>	<b>Percent</b>
Firearm	103	58.5
Hang/Strangle/Suffocate	42	23.9
Poison/Personal	23	13.1
Fall	3	1.7
Sharp instrument	3	1.7
Motor vehicle including buses, motorcycles	1	0.6
Other transport vehicle, eg, trains, planes, boats	1	0.6
Total	176	100.0

*Note: Multiple Firearms were used in several suicides. Personal weapons include fists, feet, and hands in actions such as punching, kicking or hitting.*

### **Victim Demographic Characteristics**

The next series of exhibits demonstrate the characteristics of victims involved in Arizona suicides including gender, age, race, and ethnicity.

*Sex*

#### **Sex of Suicide Victims**

<b>Sex</b>	<b>Frequency</b>	<b>Percent</b>
Male	128	72.7
Female	48	27.3
Total	176	100.0



*Age*

**Age of Suicide Victims**

<b>Age Range</b>	<b>Frequency</b>	<b>Percent</b>
0-14	0	.
15-24	26	14.8
25-34	23	13.1
35-44	18	10.2
45-54	37	21.0
55-64	30	17.0
65-74	26	14.8
75+	16	9.1
Total	176	100.0

*Race*

**Race of Suicide Victims**

<b>Race</b>	<b>Frequency</b>	<b>Percent</b>
White	157	89.2
Black	6	3.4
American Indian	6	3.4
Asian	5	2.8
Multi-Race	1	0.6
Pacific Islander	1	0.6
Total	176	100.0

*Ethnicity*

**Ethnicity of Suicide Victims**

<b>Ethnicity</b>	<b>Frequency</b>	<b>Percent</b>
Not Hispanic	138	78.4
Hispanic	37	21.0
Unknown	1	0.6
Total	176	100.0

*Marital status*

**Marital Status of Suicide Victims**

<b>Marital Status</b>	<b>Frequency</b>	<b>Percent</b>
Never Married	59	33.5
Married/Civil Union/Domestic Partnership	53	30.1
Divorced	46	26.1
Widowed	12	6.8
Married, but separated	3	1.7
Unknown	3	1.7
Total	176	100.0

*Education Level*

**Education Level of Suicide Victims**

<b>Education Level</b>	<b>Frequency</b>	<b>Percent</b>
<= 8th grade	5	2.8
9th - 12th grade	17	9.7
High school or GED graduate	51	29.0
Some college credit	40	22.7
Associate	14	8.0
Bachelor	27	15.3
Doctorate	7	4.0
Master	11	6.3
Unknown	4	2.3
Total	176	100.0

*Place of birth*

**Place of Birth of Suicide Victims**

<b>Place of Birth</b>	<b>Frequency</b>	<b>Percent</b>
Arizona	48	27.3
Other US States	109	61.9
Other countries	15	8.5
Unknown	4	2.3
Total	176	100.0

## Circumstance Characteristics of Suicide Victims

AZ-VDRS collects information about the circumstances and conditions surrounding all violent death events, with some specific variations for different manners of death (e.g. suicide event histories collected for suicides). The tables below presents our findings on the frequency of circumstances that surrounded decedents across five major dimensions: mental health; substance abuse and other addictions; interpersonal problems; life stressors; and prior suicide events. The frequencies are the total number of the event occurring and categories within each dimension are not mutually exclusive.

### *Mental health, substance abuse, and other addiction*

#### **Mental Health, Substance Abuse, and Other Addiction of Suicide Victims**

<b>Mental Health, Substance Abuse, and Other Addiction</b>	<b>Frequency</b>	<b>Percent</b>
Current Mental Health Problem	78	44.3
Depressed Mood	45	25.6
Current Treatment for Mental Health/Substance Abuse	35	19.9
Ever Treated for Mental Health/Substance Abuse	159	90.3
Alcohol Problem	162	92.0
Substance Abuse Other (not including alcohol)	16	9.1

### *Relationship and Life Stressors*

#### **Relationship and Life Stressors of Suicide Victims**

<b>Relationship and Life Stressors</b>	<b>Frequency</b>	<b>Percent</b>
Prior Exposure to Violence	176	100.0
Relationship Problems	176	100.0
Life Stressors	176	100.0

*Manner Specific Circumstances*

**Manner Specific Circumstances of Suicide Victims**

<b>Manner Specific Circumstances</b>	<b>Frequency</b>	<b>Percent</b>
History of Expressed Suicidal Thoughts or Plans	141	80.1
History of Suicide Attempts	161	91.5
Disclosed Suicidal Thoughts or Plans	152	86.4
Left a Suicide Note	133	75.6

*Toxicology Results*

**Toxicology Results of Suicide Victims**

<b>Toxicology Results</b>	<b>Total Testing Positive</b>	<b>Percent Testing Positive</b>
Toxicology Test Conducted	130	100.0
Tested Positive for at least One Drug	99	76.2
Alcohol	49	37.7
Amphetamine	7	5.4
Antidepressant	31	23.8
Cocaine	3	2.3
Opiate	28	21.5
Other Substance	47	36.2
Unknown/Not Applicable	77	.