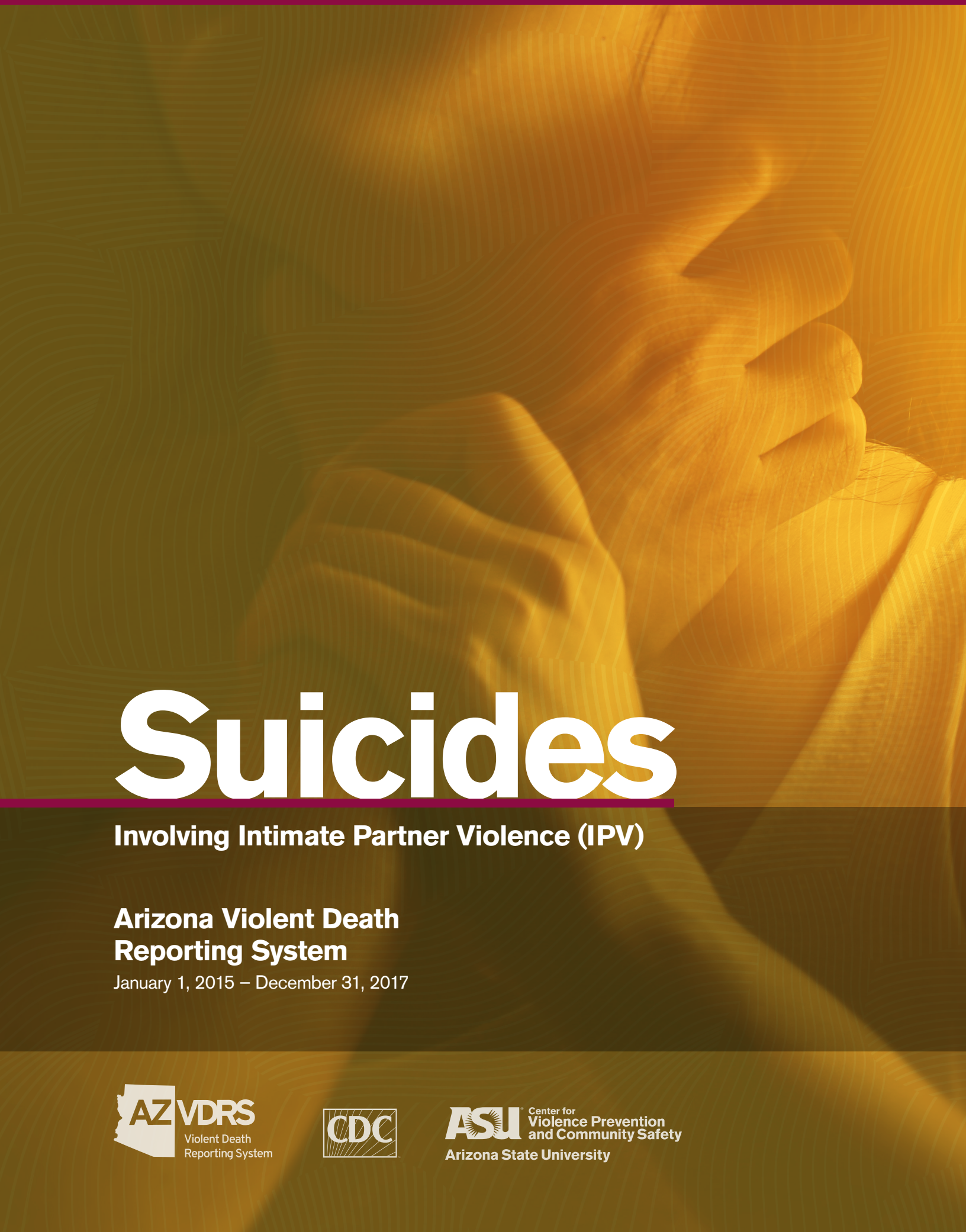


Suicides

Involving Intimate Partner Violence (IPV)

Arizona Violent Death Reporting System

January 1, 2015 – December 31, 2017

AZVDRS Violent Death Reporting System

CDC

ASU Center for Violence Prevention and Community Safety
Arizona State University

AZ VDRS
Violent Death Reporting System

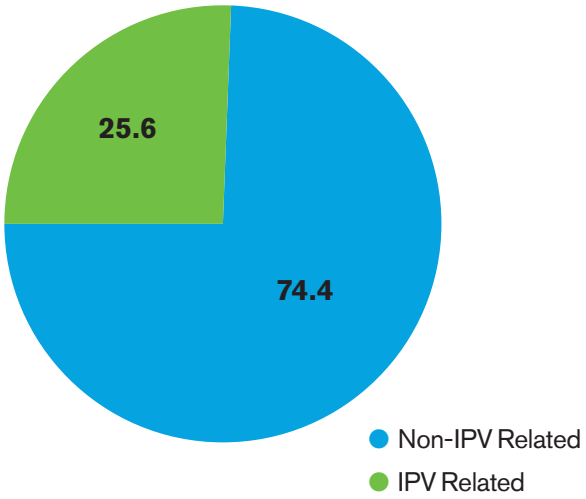
The Arizona Violent Death Reporting System (AZ-VDRS) collects violent death data from multiple sources: death certificates issued by the Arizona Department of Health Services, police reports obtained from investigating agencies, and autopsy reports from medical examiner offices. The purpose of this project is to assist stakeholders with strategic planning and prevention efforts aimed towards reducing the number of violent deaths that occur each year in Arizona. The data used for this report – *Suicides Involving Intimate Partners* – were drawn from a compilation and analysis of three years of AZ-VDRS data, from January 1, 2015 through December 31, 2017.

AZ-VDRS recorded a total of 5,711 violent deaths for this period; circumstance data were available for 5,362 (93.9%) of the decedents. From these, we excluded homicides (n=1046; 19.5%) and deaths with undetermined or unintentional causes (n=638; 11.9%), after which our sample consisted of 3,678 (68.6%) suicides for which circumstance data were available.

We determined that suicides were related to IPV when one or more of the following indicators were present: (1) the decedent was known to have experienced intimate partner relationship problems near the time of death; (2) the decedent was known to have experienced intimate partner violence near the time of death; (3) the decedent had a history of victimization by intimate partner violence; and/or (4) the decedent had a history of perpetrating intimate partner violence. This approach is consistent with prior work by other NVDRS states (e.g., North Carolina, Utah). This definition of IPV within the NVDRS data is consistent with prior research.[1]

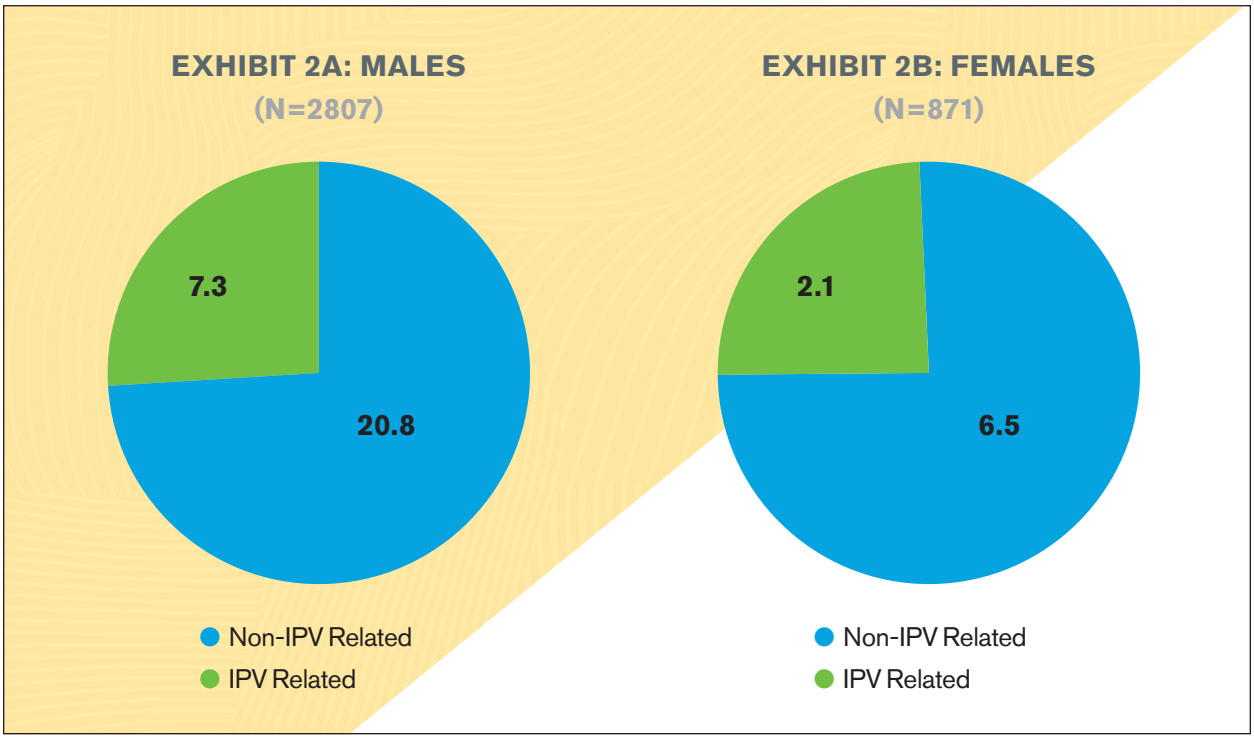
For population estimates, we relied on the American Community Survey (US Census) 5-year estimates for 2015, 2016, and 2017,to compute crude rates where presented. Note that in all of the exhibits below, data and analyses represented are for the State of Arizona, 2015–2017, unless otherwise indicated.

EXHIBIT 1:
PERCENTAGE OF SUICIDES INVOLVING IPV, 2015–2017 (N=3678)



- For 2015-2017, in Arizona, intimate partner violence (IPV) was associated with 1 in every 4 suicides (25.6%).

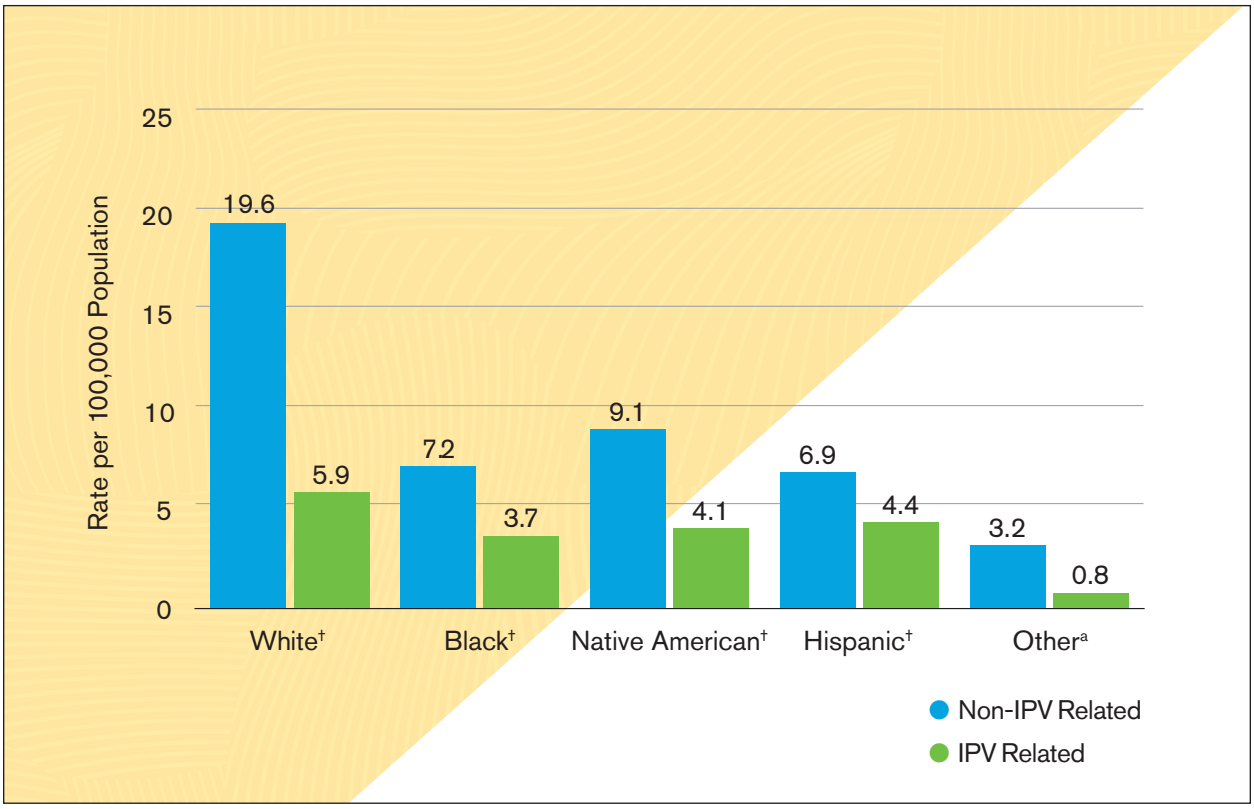
EXHIBIT 2A & 2B:
SUICIDE RATES PER 100,000 POPULATION BY SEX* AND IPV, 2015–2017 (N=3678)



* Statistically significant at p ≤ .05

- In 2015-2017, Arizona's overall suicide rate per 100,000 population was higher for males than for females (28.1 vs. 8.6; AZ-VDRS data, not shown).
- For both sexes, about 1 in 4 suicides was associated with IPV.

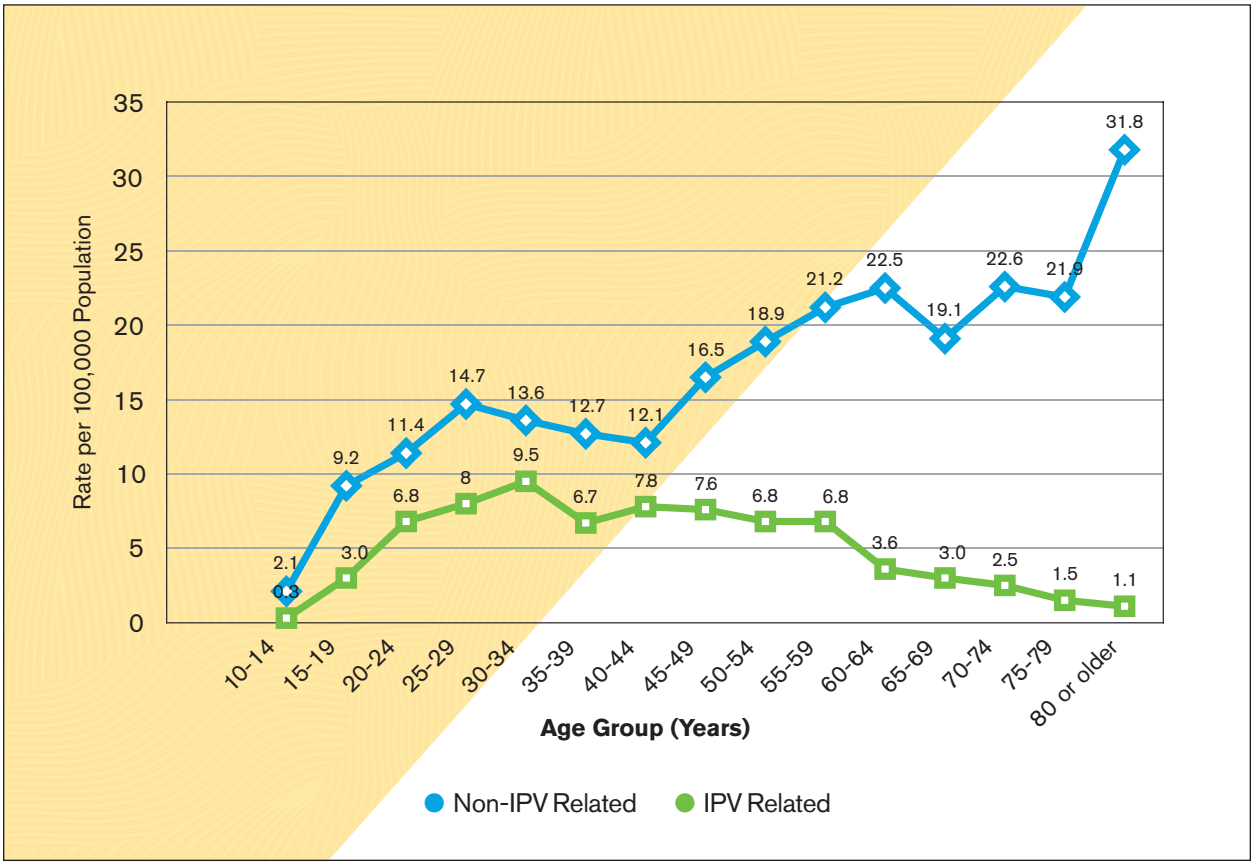
EXHIBIT 3:
SUICIDE RATES PER 100,000 POPULATION BY RACE/ETHNICITY* AND IPV STATUS, 2015–2017 (N=3678)



* Statistically significant at $p \leq .05$
† Non-Hispanic/Latino
[a] Includes Asian, Native Hawaiian, Pacific Islander, Other, and Unspecified

- Hispanic victims accounted for a significantly higher proportion of IVP-related suicides (about 2 in 5), followed by Black (about 1 in 3) and Native American victims (about 3 in 10), and White/non-Hispanic (1 in 4) and Other (about 1 in 5) victims (not shown).
- The lowest suicide rates, both IPV-related and non-IPV-related, were found among those in the Other racial/ethnic category (0.8, 3.2).

EXHIBIT 4:
SUICIDE RATES PER 100,000 POPULATION BY AGE GROUP* AND IPV STATUS, 2015–2017 (N=3678)



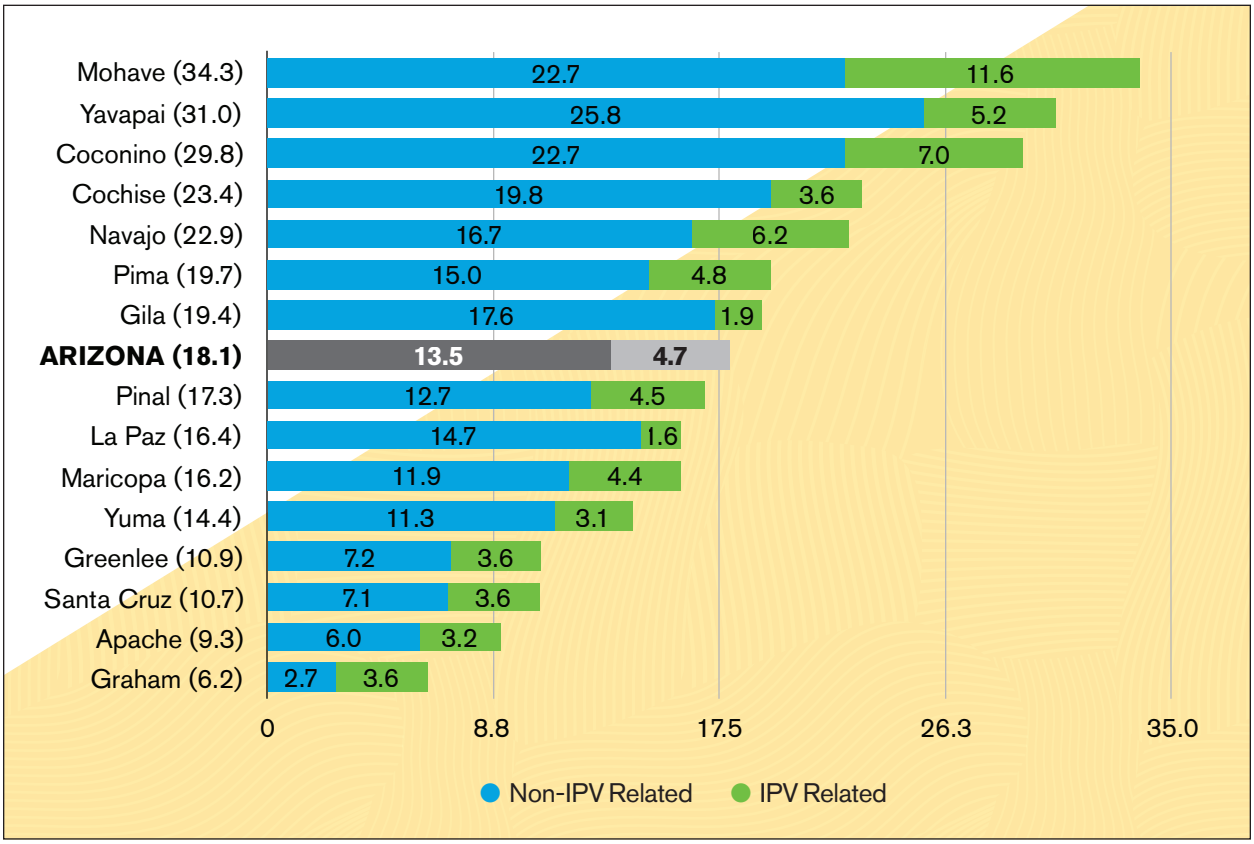
* Statistically significant at $p \leq .05$

Note: Online readers can rollover data points to view age and rate values.
Visit: cvpcs.asu.edu/projects/arizona-violent-death-reporting-system

Note: The data points above represent a snapshot of each age group within a specific time period (2015-2017); they should not be interpreted as a longitudinal study of the homicide-depression relationship over a lifetime.

- Rates per 100,000 population of non-IPV-related suicide were higher than rates for IPV-related suicide across age groups; both rates increased gradually, more or less in parallel, for ages 15 through 29, then declined slightly for ages 30-44.
- For those ages 45-49 and older, the rate of non-IVP-related suicide continued to rise, while the rate of IPV-related suicide decreased with age.
- For those ages 80 and older, the rate of non-IPV-related suicide peaked at 31.8, while the rate of IPV-related suicide dropped to only 1.1 per 100,000 population.

EXHIBIT 5:
SUICIDE RATES PER 100,000 POPULATION BY COUNTY* AND IPV STATUS, 2015–2017



* Statistically significant at $p \leq .05$

- Overall rates of suicide per 100,000 population were highest for Mohave (34.3), Yavapai (31.0), and Coconino (29.8) counties; the overall suicide rates for those counties and for Cochise (23.4), Navajo (22.9), Pima (19.7), and Gila (19.4) counties were all higher than the statewide rate, 18.1.
- Mojave County recorded the highest rate of IPV-related suicide (11.6), followed by Coconino (7.0), Navajo (6.2) and Yavapai (5.2) counties.
- Cochise (3.6), Greenlee (3.6), Santa Cruz (3.6), Graham (3.6), Yuma (3.1), Gila (1.9), and La Paz (1.6) counties had the lowest IVP-related suicide rates.
- Graham County had the lowest overall suicide rate (6.2), as well; however, only in Graham County did the rate of IPV-related suicide exceed the rate of non-IPV-related suicide (3.6, 2.7).

EXHIBIT 6:

COMPLETED EDUCATION, MARITAL STATUS, VETERAN STATUS AND BIRTHPLACE AMONG SUICIDE VICTIMS AGED 18 OR OLDER BY IPV STATUS, 2015–2017 (N=3559)

	NON-IPV		IPV-RELATED		TOTAL	
	n	%	n	%	n	%
Completed Education*						
<= 8th grade	73	2.8	19	2.1	92	2.6
9th – 12th grade	237	9.0	117	12.7	354	9.9
High school or GED grad	887	33.6	357	38.8	1244	35.0
Some college credit	561	21.3	193	21.0	754	21.2
Associate or bachelor's degree	591	22.4	174	18.9	765	21.5
Advanced degree	201	7.6	49	5.3	250	7.0
Unknown	89	3.4	11	1.2	100	2.8
Marital Status*						
Never married	884	33.5	295	32.1	1179	33.1
Married	721	27.3	305	33.2	1026	28.8
Married, but separated	57	2.2	107	11.6	164	4.6
Divorced	698	26.4	200	21.7	898	25.2
Widowed	225	8.5	7	0.8	232	6.5
Single, unspecified	7	0.3	<5	na	7	0.3
Unknown	47	1.8	<5	na	21	1.4
Veteran Status*						
Non-veteran	1949	73.9	773	84.0	2722	76.5
Veteran	627	23.8	134	14.6	761	21.4
Unknown	63	2.4	13	1.4	76	2.1
Birthplace*						
Arizona	574	21.8	267	29.0	841	23.6
Other US state or territory	1791	67.9	551	59.9	2342	65.8
Foreign country	198	7.5	92	10.0	290	8.1
Unknown	76	2.9	10	1.1	86	2.4

* Statistically significant at $p \leq .05$

Note: CDC reporting requirements require that counts less than 5 not be shown for reasons related to data reliability and identity protection. These counts can, however, be included in totals. Therefore, totals in each row may include values represented here only as <5.

- For 2015-2017, with respect to completed education, marital status, veteran status, and birthplace, Arizona's victims of IPV-related suicide differed statistically from the state's victims of suicide unrelated to IPV.

Victims of IPV-related suicide, compared with other victims, were:

Less likely to have earned some college credit or a degree (45.2% vs. 51.3%)

Less likely to have been veterans (14.6% vs. 23.8%)

More likely to have been married (including married but separated) (44.8% vs. 29.5%)

More likely to have been born in Arizona (29.0% vs. 21.8%)

Victims of IPV-related suicides were also slightly more likely than other suicide victims to have been born somewhere other than in the US (10.0% vs. 7.5%).

EXHIBIT 7:
LOCATION OF INJURY BY IPV STATUS, 2015–2017 (N=3678)

	NON-IPV		IPV-RELATED		TOTAL	
	n	%	n	%	n	%
Location*						
House or apartment	1996	72.9	697	74.1	2693	73.2
Street/road, sidewalk, alley	97	3.5	48	5.1	145	3.9
Motor vehicle (excluding school bus, public transportation)	143	5.2	44	4.7	187	5.1
Commercial establishment (e.g., bar, store, service station)	19	0.7	12	1.3	31	0.8
Parking lot/public parking garage	56	2.0	24	2.6	80	2.2
Jail, prison, group home, shelter, other supervised residential facility	57	2.1	<5	na	57	1.6
Park, playground, public use area	46	1.7	12	1.3	58	1.6
Natural area (e.g., field, river, beaches, woods)	139	5.1	44	4.7	183	5.0
Hotel/motel	84	3.1	26	2.8	110	3.0
Other	84	3.1	28	3.0	112	3.0
Unknown	16	0.6	<5	na	16	0.5

* Statistically significant at $p \leq .05$

Note: CDC reporting requirements require that counts less than 5 not be shown for reasons related to data reliability and identity protection. These counts can, however, be included in totals. Therefore, totals in each row may include values represented here only as <5.

- In 2015-2017, nearly three-quarters of all IPV-related and all non-IPV-related suicides occurred in a private house or apartment (74.1% and 72.9%).
- IPV-related suicides occurred next most often in streets and walkways (5.1%), and in motor vehicles and natural areas (4.7% each). Non-IPV-related suicides occurred next most frequently in motor vehicles and natural areas (5.2% and 5.1%).
- Types of locations where suicides occurred did not differ significantly by IPV status.

EXHIBIT 8:
METHOD OF DEATH BY IPV STATUS, 2015–2017 (N=3678)

	NON-IPV		IPV-RELATED		TOTAL	
	n	%	n	%	n	%
Method						
Firearm	1607	58.7	564	59.9	2171	59.0
Sharp instrument	54	2.0	<5	na	55	1.5
Blunt instrument	78	2.8	25	2.7	103	2.8
Hanging, strangulation, suffocation	555	20.3	244	25.9	799	21.7
Poisoning	414	15.1	99	10.5	513	13.9
Other[a]	29	1.1	8	0.9	37	1.0
Unknown	0	0.0	0	0.0	0	0.0

* Statistically significant at $p \leq .05$
[a] Including, but not limited to falls, fire/burns, motor vehicles and drowning.

Note: CDC reporting requirements require that counts less than 5 not be shown for reasons related to data reliability and identity protection. These counts can, however, be included in totals. Therefore, totals in each row may include values represented here only as <5.

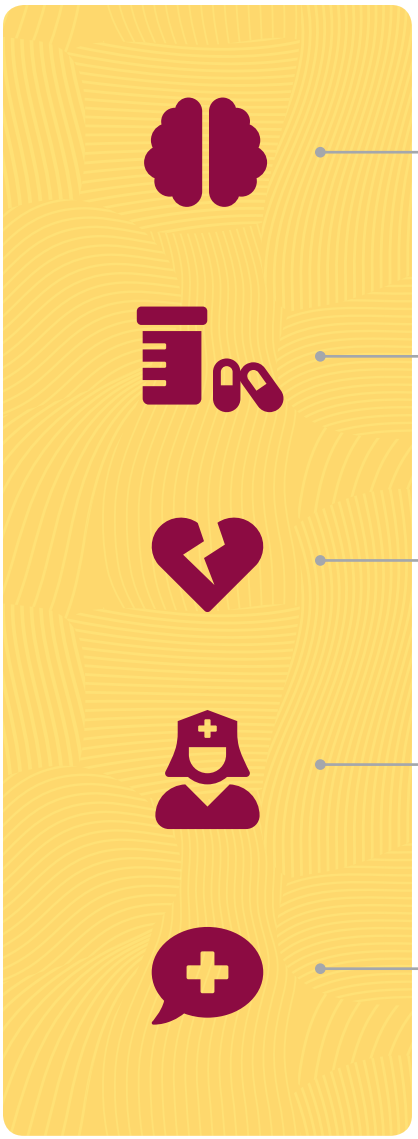
- For 2015-2017, in Arizona, firearms were the weapons most used by suicide victims, for both IVP-related suicides and all other (non-IPV-related) suicides (59.9% and 58.7%).
- Hanging, strangulation or suffocation was the method next most often used by suicide victims, although the proportion of victims choosing it was greater for IPV-related suicide than for non-IPV-related suicide (25.9% vs. 20.3%).
- Poisoning was the third most-used method for committing suicide. The proportion of victims using poison was smaller for IPV-related suicide than for non-IPV-related suicides (10.5% vs. 15.1%).

EXHIBIT 9:
CIRCUMSTANCES OF VICTIMS RELATED TO SUICIDE, BY IPV STATUS, 2015–2017 (N=3678)

	NON-IPV		IPV-RELATED		TOTAL	
	n	%	n	%	n	%
Mental Health						
Current mental health problem	1228	44.9	409	43.5	1637	44.5
Current depressed mood*	956	34.9	426	45.3	1382	37.6
Ever treated for mental Illness or substance misuse	742	27.1	279	29.6	1021	27.8
Current treatment for mental Illness or substance misuse	561	20.5	190	20.2	751	20.4
Total victims w/ one or more mental health factors*	1677	61.3	626	66.5	2303	62.6
Substance Abuse / Addiction						
Alcohol problem*	420	15.3	233	24.8	653	17.8
Other substance problem*	453	16.6	206	21.9	659	17.9
Other addiction (gambling, sexual, etc.)	17	0.6	8	0.9	25	0.7
Total victims w/ one or more addiction factors*	746	27.3	377	40.1	1123	30.5
Interpersonal Issues						
Family relationship problem	234	8.5	100	10.6	334	9.1
Intimate partner problem*	0	0.0	908	96.5	908	24.7
Other relationship problem	47	1.7	22	2.3	69	1.9
Perpetrator of interpersonal violence in past month*	0	0.0	90	9.6	90	2.4
Victim of interpersonal violence in past month*	0	0.0	17	1.8	17	0.5
Suicide of friend/family in past 5 years	54	2.0	13	1.4	67	1.8
Other death of friend/family*	168	6.1	36	3.8	204	5.5
*Total victims w/ one or more interpersonal factors**	480	17.5	941	100.0	1421	38.6
Life Stressor						
Physical health problem*	860	31.4	91	9.7	951	25.9
Job problem*	243	8.9	111	11.8	354	9.6
Recent criminal related legal problem*	158	5.8	94	10.0	252	6.9
Other legal problems*	33	1.2	46	4.9	79	2.1
Financial problem	244	8.9	100	10.6	344	9.4
School problem	35	1.3	9	1.0	44	1.2
Eviction or loss of home	103	3.8	35	3.7	138	3.8
*Total victims w/ one or more life stressor factors**	1367	49.9	362	38.5	1729	47.0
Suicidal History						
*Previous attempts**	585	21.4	252	26.8	837	22.8
*Disclosed Intent to commit**	732	26.7	379	40.3	1111	30.2
*Suicidal thoughts**	1187	43.4	522	55.5	1709	46.5
*Total victims w/ one or more historical factors**	1542	56.3	638	67.8	2180	59.3

* Statistically significant at $p \leq .05$

Note: Circumstance characteristics are not mutually exclusive, and any particular victim may have any number of circumstances present.



- With respect to mental health diagnoses and treatment, the differences between victims of suicides that were and were not IPV-related were not significant.
- Victims of IPV-related suicides had a significantly higher likelihood of having an alcohol and/or other substance abuse history than victims of non-IPV-related suicides (40.1%, 27.3%, respectively).
- As would be expected, interpersonal problems were significantly more common among IPV-related suicide victims; one or more interpersonal issues were reported for all victims of IPV-related suicides, compared to slightly less than 1 in 6 of victims of non-IPV-related suicides.
- Conversely, victims of about 1 in 3 of non-IPV-related suicides had a reported physical health problem, compared to victims of about 1 in 10 IPV-related suicides.
- Indications of being at risk for suicide had been quite common among both groups, with 67.8% of victims of IPV-related suicides and 56.3% of victims of non-IPV-related suicides having previously expressed the intent to commit suicide, attempted suicide, and/or reported having had suicidal thoughts.

Prevention Strategies for IPV and Suicide[3]

- Intimate Partner Violence (IPV) research suggests that IPV is an increased risk factor for suicide. Women experiencing IPV are 5 times more likely than others to attempt suicide. IPV has been shown to be a precipitating suicide factor in seven states (Colorado, New Mexico, Kentucky, Georgia, Maryland, New Jersey, and Massachusetts).[4]
- Prevention strategies include requiring suicide prevention training for medical personnel and anyone working with domestic violence survivors; instituting policies that promote victim help-seeking behavior (e.g., accessing mental health services), and increasing social service referrals for distressed and at-risk individuals and intimate partners.

Preventing Intimate Partner Violence
From: cdc.gov/violenceprevention/intimatepartnerviolence/prevention.html

Strategy	Approach
Teach safe and healthy relationship skills	■ Social-emotional learning programs for youth ■ Healthy relationship programs for couples
Engage influential adults and peers	■ Men and boys as allies in prevention ■ Bystander empowerment and education ■ Family-based programs
Disrupt the developmental pathways toward partner violence	■ Early childhood home visitation ■ Preschool enrichment with family engagement ■ Parenting skill and family relationship programs ■ Treatment for at-risk children, youth and families
Create protective environments	■ Improve school climate and safety ■ Improve organizational policies and workplace climate ■ Modify the physical and social environments of neighborhoods
Strengthen economic supports for families	■ Strengthen household financial security ■ Strengthen work-family supports
Support survivors to increase safety and lessen harms	■ Victim-centered services ■ Housing programs ■ First responder and civil legal protections ■ Patient-centered approaches ■ Treatment and support for IPV survivors, including TVD (teen dating violence) survivors

END NOTES

[1] Petrosky, E., Blair, J. M., Betz, C. J., Fowler, K. A., Jack, S. P., & Lyons, B. H., (2017), Racial and ethnic differences in homicides of adult women and the role of intimate partner violence—United States, 2003–2014, *MMWR: Morbidity and Mortality Weekly Report, 66*(28), 741; see also, Palladino, C. L., Singh, V., Campbell, J., Flynn, H., & Gold, K., (2011), Homicide and suicide during the perinatal period: Findings from the National Violent Death Reporting System, *Obstetrics and Gynecology,* 118(5), 1056; see also, Sanford, C., & Hedegaard, H. (eds), Deaths from Violence: A Look at 17 States–Data from the National Violent Death Reporting System, December 2008; see also, Karch, D. L., Logan, J., & Patel, N., (2011), Surveillance for violent deaths–National deaths reporting systems, 16 states, 2008, *Morbidity and Mortality Weekly Report: Surveillance Summaries, 60*(10), 1–49; see also, Karch, D. L., Barker, L., & Strine, T. W., (2006), Race/ethnicity, substance abuse, and mental illness among suicide victims in 13 US states: 2004 data from the National Violent Death Reporting System, *Injury Prevention,* 12(supp 2), ii22–ii27.

[2] US Census Bureau, American Fact Finder: 2013–2017 American Community Survey 5-Year Estimates. For purposes of this report, Arizona population is 6.81 million, and rates per 100,000 are based on 3-year incident counts and annual averages.

[3] Niolon, P. H., Kearns, M., Dills, J., Rambo, K., Irving, S., Armstead, T.L., & Gilbert, L., (2017), *Preventing intimate partner violence across the lifespan: A technical package of programs, policies, and practices,* Division of Violence Prevention National Center for Injury Prevention and Control Centers for Disease Control and Prevention, Atlanta, Georgia.

[4] Schiff, L. B., Holland, K. M., Stone, D. M., Logan, J., Marshall, K. J., Martell, B., & Bartholow, B., (2015), Acute and chronic risk preceding suicidal crises among middle-aged men without known mental health and/or substance abuse problems, *Crisis: The Journal of Crisis Intervention and Suicide Prevention,* 36(5):1–12. DOI: 10.1027/0227-5910/a000329