SUICIDE IN COCONINO COUNTY 2017
An Overview of Suicide Trends from 2010-2016
Dear Community Members:

Suicide is an issue that affects all Coconino County residents. The human and economic costs of suicidal behavior to individuals, families, communities, and society makes suicide a serious public health problem.

The following report, *Suicide in Coconino County*, provides insightful statistics about suicide which help to highlight the problem on a local level and to assist in understanding the risk factors involved. Using this knowledge, work to strengthen suicide prevention practice can be successfully planned and implemented.

Moving forward, the Coconino County Public Health Services District (CCPHSD) plans to continue to monitor and track suicide trends and use these findings to work in collaboration with our public health partners to enhance and expand services in the areas of substance abuse, suicide prevention, and behavioral health.

The CCPHSD strives to bring together many different perspectives to strengthen prevention efforts. The public health approach to suicide prevention requires that the community work together to address system, community, family and personal factors that can lead to suicide.

Suicide is preventable and together we can ensure that suicide is prevented in Coconino County.

Marie Peoples, PhD
Chief Health Officer
Suicide affects people of all ages, races, and ethnicities. It is a critical and often preventable public health issue. Healthy People 2020 and other sources consider suicide to be among the factors that determine the health and wellness of a community.

As this report will show, suicide is a particularly critical problem in Coconino County, where the suicide rate is higher than in Arizona or the U.S. On average, one resident commits suicide every two weeks in Coconino County.

In 2017, a popular book and Netflix series called “13 Reasons Why” about a high school student who commits suicide sparked conversation across the nation about suicide and its impact. This moment of increased awareness as well as the threat suicide poses to the community’s health necessitates an evaluation of the risk and how it is expressed in Coconino County. A conversation must be started for prevention work to begin.
This report is based primarily on two data sources: death certificates and hospital records.

Death certificates include information about the cause of death as determined by the medical examiner, place of death, demographic information, and more.

Hospital discharges include emergency department and hospitalization records from facilities in the area. Discharge information from Indian Health Service facilities is not available.

Additional information about the data sources and other resources is available at the end of the report.

The cost of suicide in Coconino County 2010 to 2016

- Hospital emergency department visits and hospitalizations were over $25 million
- Autopsies and death investigations by the Medical Examiner cost more than $480,000
- Suicides in Coconino County during this period represent 6,912 years of life lost
- Grief and pain suffered by families and loved ones is incalculable
SUICIDE DEATHS
Suicide was the 6th leading cause of death in the county in 2015.

Suicide was the 2nd leading cause of death among 20-44 year olds in 2015.

There were 5 times more suicides than homicides in 2015.

An average of 26 residents committed suicide each year between 2010 and 2016.

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Suicide was the 2nd leading cause of death among 20-44 year olds in 2015.
The suicide rate in Coconino County is higher than the rate for Arizona and the U.S. Coconino County is ranked 7th of AZ counties.
In Coconino County 2010-16, residents who committed suicide were more likely to be men and were from all age groups.

Men (80%)  Women (20%)

The median age for suicide deaths was 39 years old.

Whites and American Indians made up most of the suicide deaths. These deaths were proportionate to Coconino County racial/ethnic demographics.
Although a third of residents have a high school diploma or less, these residents accounted for one-half of the suicide victims.

Veterans' risk for suicide was 3 times higher than for non-veterans.

When looking at the marital status of suicide victims:

- 50% were never married
- 26% were married

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**Surveyed teens said they:**

<table>
<thead>
<tr>
<th>LGBT</th>
<th>Other Teens</th>
</tr>
</thead>
<tbody>
<tr>
<td>Felt sad or <strong>hopeless everyday</strong></td>
<td>60%</td>
</tr>
<tr>
<td>Made suicide plan in last year</td>
<td>38%</td>
</tr>
<tr>
<td>Made a suicide attempt in last year</td>
<td>29%</td>
</tr>
<tr>
<td></td>
<td>6%</td>
</tr>
</tbody>
</table>
In Coconino County 2010-16, the most common manner of suicide was gunshot wounds, followed by hanging, and drug overdoses.

Drugs were a contributing cause of death in 11% of the suicide deaths and alcohol contributed to death in 4% of the suicides.
3 of 4 suicides among county residents occurred at home.
SUICIDE-RELATED HOSPITAL VISITS
This section focuses on hospital visits and hospitalizations by Coconino County residents who attempted suicide between 2010-2015. It does not include attempts that did not involve a hospital visit.

There were 1800 suicide-related hospital visits between 2010 and 2015.

Aside from a slight peak in 2011, the number of suicide related visits have been about the same each year.
Suicide-related hospital visits were more common among residents who were younger or women.

At least 1 in every 3 suicide-related hospital visits was an American Indian.

Nearly 1 in every 2 suicide-related hospital visits were between 10 to 24 years old.

57% of visits were among females.
Suicide-related hospital visits most often peaked in 

The most common method of attempting suicide that ended in a hospital visit was

**drugs, alcohol, and/or some other form of poisoning**
NON-RESIDENTS WHO COMMIT SUICIDE IN COCONINO COUNTY
2 of every 5 suicides occurring in Coconino County (2010-2016) were residents of other counties and states.

38% of suicide victims were not residents.

62% of residents.

Most of the individuals who didn't live in Coconino County but committed suicide in Coconino were from Yavapai and Maricopa Counties.

- 37 lived in various cities and states outside of Arizona.
- 23 lived in Yavapai County.
- 9 lived in Navajo or Apache County.
- 7 lived in an Arizona County other than Coconino, Yavapai, Maricopa, Apache or Navajo.
- 39 lived in Maricopa County.
Individuals who lived in other counties and committed suicide in Coconino County between 2010 and 2016 were more likely to be male, White, and under 65 years old.

77% were White.

1 out of 8 non-resident suicide deaths were female.
Location of Death for Suicides Occurring in Coconino County, 2010-2016
Cases Who Were Not Residents of Coconino County

SUICIDE DEATHS - Non-Residents
There is no doubt that suicide is an important issue in Coconino County and that it affects individuals, families, and the entire community. The high rate of suicide in the county suggests that more can be done to prevent suicide.

**Watch for risk factors:**

- Family history of suicide
- Family history of child maltreatment
- Previous suicide attempt(s)
- History of mental disorders, particularly clinical depression
- History of alcohol and substance abuse
- Feelings of hopelessness or isolation, a feeling of being cut off from other people
- Impulsive or aggressive tendencies
- Local epidemics of suicide
- Cultural and religious beliefs (e.g., belief that suicide is noble resolution of a personal dilemma)
- Barriers to accessing mental health treatment and/or an unwillingness to seek help because of the stigma attached to mental health and substance abuse disorders or to suicidal thoughts
- Loss (relational, social, work, or financial)
- Physical illness
- Easy access to lethal methods

**Additional risk factors in Coconino County**

Additionally, this report has shown that in Coconino County:

- Males are at the greatest risk, although women also suffer suicidal thoughts and behaviors without completing suicides.

- Because males in the county complete suicides most often using guns, the CDC risk factor related to access to lethal methods should be considered when developing modes of prevention.

- American Indian and White residents are both groups with potential suicide victims. Cultural and/or religious beliefs surrounding suicide and getting help for suicidal thoughts should be considered in preventing suicides in these groups. For example, are there barriers to seeking care?
CONCLUSIONS

The Centers for Disease Control and Prevention (CDC) lists several modes of suicide prevention. These modes should be considered in efforts to reduce Coconino County’s suicide rate:

- Effective clinical care for mental, physical, and substance abuse disorders
- Easy access to a variety of clinical interventions and support for help seeking
- Family and community support (connectedness)
- Support from ongoing medical and mental health care relationships
- Skills in problem solving, conflict resolution, and nonviolent ways of handling disputes
- Cultural and religious beliefs that discourage suicide and support instincts for self-preservation

Source for CDC information: Suicide Risk and Protective Factors and resource for more information

https://www.cdc.gov/violenceprevention/suicide/riskprotectivefactors.html

- While all age groups are at risk, there may be a benefit to focusing on younger people when designing suicide prevention. This targeted intervention may reduce the number of suicide attempts and related hospital visits, potentially instilling lifelong norms and behaviors such as help-seeking for mental, emotional and physical setbacks.

- The slight increase in suicide-related hospital visits in September suggest that August may be an appropriate time for suicide prevention awareness.

- This report provided statistics on the who, what, and where of suicides in Coconino County based on the data that are available. Further research could focus more on why suicides occur here.

Modes of suicide prevention:

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This report was produced by the Coconino County Public Health Services District (CCPHSD) to better understand suicides and to promote efforts to prevent suicides.

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Page 1 - The Burden

Suicide Trends Among Persons Aged 10-24 Years – United States, 1994-2012, MMWR March 6, 2015/64(08):201-205. https://www.cdc.gov/mmwr/preview/mmwrhtml/mm6408a1.htm


Page 2 - The Cost

Cost of hospitalization is total cost listed in hospital discharge data. See next section for more information on this data source.

Cost to Office of the Medical Examiner for suicide deaths is an estimate that includes autopsy, death investigation, and transport.

Page 2 - The Data

This report includes only Coconino County residents and residents of other jurisdictions who committed suicide in Coconino County.

The focus of the report is primarily on Coconino County residents, as these are the individuals who could potentially be targeted by prevention efforts of the public health/behavioral health community in the county. However, some information about non-residents who committed suicide in Coconino County are included at the end of the report because these cases often attract public and media attention.

This report is based primarily on the most recent data that is collected on deaths and hospital visits as follows:

- Data from death certificates, which include information about the cause of death, as determined by the Medical Examiner, as well as the place of death, demographic information, and more. In some cases, it is difficult to determine if a death is a suicide. For example, it may be a homicide or an unintentional drug overdose. Many factors go into a final determination.

- Data from hospital discharges, which include emergency department and hospitalization records from facilities in the area. Indian Health Service facilities are not included. These represent visits that were determined to be self-inflicted injuries. It likely underestimates the number of suicide-related visits as some patients may deny a suicide attempt or not recollect the circumstances of the injury.

- As shown in the model to the left, this analysis is based on the top two tiers of the pyramid. There is likely much more suicidal behavior activity in the community that cannot be or is not collected as data; for example, unsuccessful suicide attempts that do not result in a hospital visit or suicidal ideation without an attempt.
The American Foundation for Suicide Prevention estimates that there are 25 suicide attempts for each completed suicide. (Source: American Foundation for Suicide Prevention, https://afsp.org/about-suicide/suicide-statistics/

Every effort has been made to protect confidentiality. Therefore, specific information is withheld when numbers are so low as to possibly identify an individual by his/her race, age, sex, residence city, or other factor.

Please note that not all cases handled by the Coconino County Medical Examiner’s Office (MEO) are included in this report. This is because the MEO has contracts with other jurisdictions and often investigates suicide, homicide, and other deaths in which the decedents were residents of locations other than Coconino County and the deaths took place outside of Coconino County.

Graphic is from Burden of Suicide in Wisconsin. https://www.dhs.wisconsin.gov/publications/p0/p00648-2014.pdf

Page 8 and Page 14 - Maps, Locations of Deaths

The size of each circle is proportional to the number of suicides in that area. The “Other” category includes unknown locations and cities that have fewer than 6 suicides. "GC" is an abbreviation for Grand Canyon.

Page 10 - Suicide Hospital Visits - Who

Lesbian, Gay, Bisexual, Transgender (LGBT). The sexual orientation of a decedent is not collected on a death certificate in Arizona so there are no data on the sexual orientations of suicide victims in Coconino County. However, there is reason to believe that gay, lesbian, bisexual, and transgender individuals may be at higher risk for suicide. Data shown are from a study of students in grades nine through twelve in the U.S. which included students who self-identified as “gay, lesbian, or bisexual.”


Veterans. It is important to note that these rates represent those who have served in the military in the past or present. Studies show that individuals in current military service are no more likely to commit suicide than are individuals not currently in the military. (Source: Armed Forces Health Surveillance Branch, Deaths by suicide while on active duty, active and reserve components, U.S. Armed Forces, 1998-2011. Medical Health Surveillance Monthly Report 2012 Jun;19(6):7-10. https://www.ncbi.nlm.nih.gov/pubmed/22779434)
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<th>Coconino County Population (Used to Calculate Rates)</th>
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<td>1 to 24</td>
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<td>25-34</td>
<td>18129</td>
<td>18101</td>
<td>18319</td>
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<td>35-44</td>
<td>15499</td>
<td>15479</td>
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<tr>
<td>White non-Hispanic</td>
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<td>74778</td>
<td>76165</td>
<td>76701</td>
<td>77998</td>
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<td>Black or African American</td>
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<tr>
<td>American Indian or Alaska</td>
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<td>38790</td>
<td>37449</td>
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<td>39430</td>
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<td>Native</td>
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<td>2120</td>
<td>1964</td>
<td>2012</td>
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<tr>
<td>Male</td>
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<td>66560</td>
<td>66585</td>
<td>67259</td>
<td>68907</td>
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<td>67728</td>
<td>68436</td>
<td>70465</td>
<td>71712</td>
<td>72116</td>
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<td><strong>Served in Military</strong></td>
<td>9,727</td>
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### Leading Causes of Death, Arizona and Coconino County Residents, 2015

<table>
<thead>
<tr>
<th>Disease or Condition</th>
<th>Arizona</th>
<th>Coconino County</th>
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<tbody>
<tr>
<td></td>
<td>Rank</td>
<td>Number of Deaths</td>
<td>Number of Deaths</td>
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<tr>
<td>Malignant neoplasms</td>
<td>1</td>
<td>11,624</td>
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<tr>
<td>Diseases of heart</td>
<td>2</td>
<td>11,274</td>
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</tr>
<tr>
<td>Accidents</td>
<td>4</td>
<td>3,403</td>
<td>83</td>
</tr>
<tr>
<td>Chronic lower respiratory diseases</td>
<td>3</td>
<td>3,650†</td>
<td>49</td>
</tr>
<tr>
<td>Cerebrovascular diseases</td>
<td>6</td>
<td>2,460†</td>
<td>34</td>
</tr>
<tr>
<td>Suicide</td>
<td>8</td>
<td>1,230†</td>
<td>31</td>
</tr>
<tr>
<td>Symptoms, signs, abnormal findings</td>
<td></td>
<td>1,880†</td>
<td>30</td>
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<tr>
<td>Chronic liver disease and cirrhosis</td>
<td>9</td>
<td>1,120†</td>
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<tr>
<td>Alzheimer's disease</td>
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<td>2,940†</td>
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<td>Other disease of respiratory system</td>
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<td>600†</td>
<td>16</td>
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<td>Essential (primary) hypertension and hypertensive renal disease</td>
<td>10</td>
<td>900†</td>
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<tr>
<td>Diabetes</td>
<td>7</td>
<td>2,050†</td>
<td>15</td>
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</table>

† Total rounded to protect confidentiality of county data.
*Number suppressed to protect confidentiality.

### Top 3 Leading Causes of Death by Age Group

<table>
<thead>
<tr>
<th></th>
<th>15-19 yrs old</th>
<th>20-44 yrs old</th>
<th>45-64 yrs old</th>
<th>65 yrs old and older</th>
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<tr>
<td>Accidents</td>
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<tr>
<td>Cancer</td>
<td>*</td>
<td></td>
<td>1</td>
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<tr>
<td>Suicide</td>
<td>*</td>
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<td>2</td>
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<tr>
<td>Heart diseases</td>
<td>*</td>
<td></td>
<td>2</td>
<td>2</td>
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<tr>
<td>Chronic liver disease and cirrhosis</td>
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<td>3</td>
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<tr>
<td>Chronic lower respiratory disease</td>
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</tr>
<tr>
<td>Events of undetermined intent</td>
<td>*</td>
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*Number suppressed to protect confidentiality.