

# Suicide

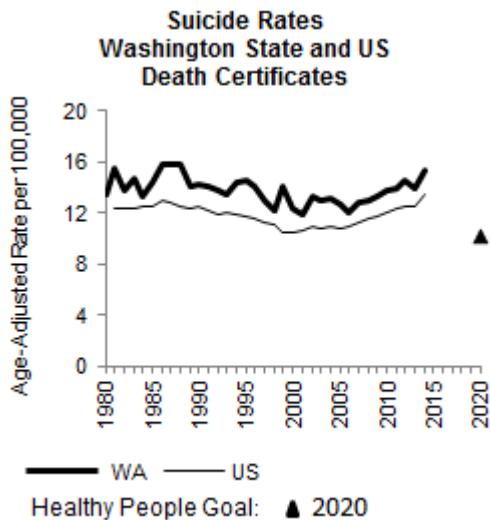
**Definition:** Suicide deaths are those resulting from an intentional injury, poisoning, or suffocation in which there is evidence that a self-inflicted act led to the person's death. Suicide deaths from 1999–2014 include records with ICD-10 codes of X60-X84 or Y87.0. Suicide deaths from prior years include all death records with an ICD-9 code including E950-E959.

This is a data update of the *Health of Washington State* chapter on [Suicide](#) published in 2013.

## Time Trends

From 1980 to 2006, suicide rates declined slightly from 14 per 100,000 Washington residents per year to 12 per 100,000. Rates have increased to 15 per 100,000 people per year since 2006. The national *Healthy People 2020* target is to reduce the suicide death rate to an [age-adjusted](#) rate of 10.2 per 100,000. If current trends continue, Washington will not meet this goal.

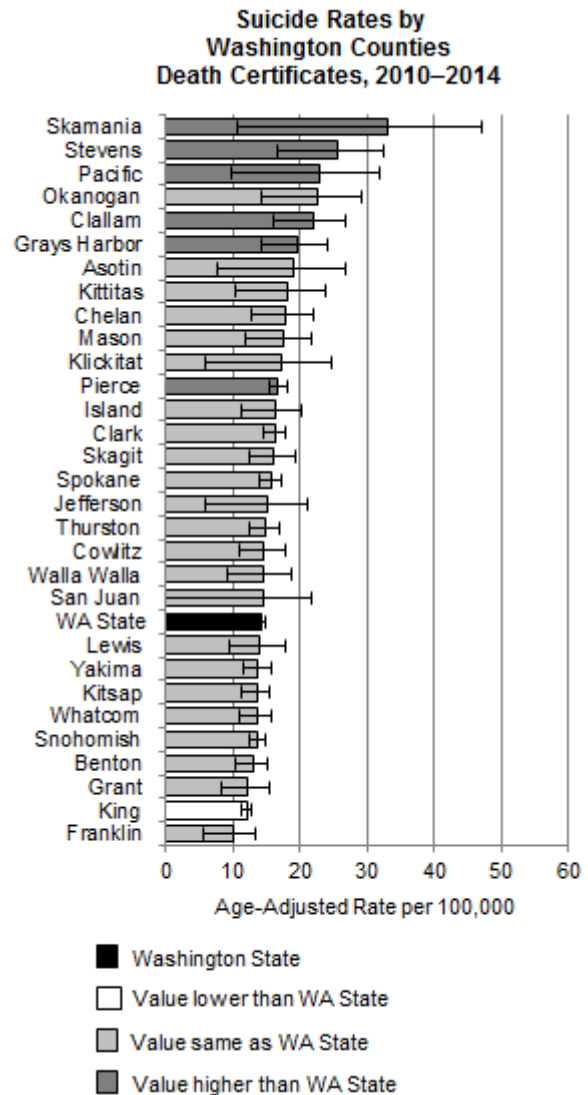
During 2012–2014, 49% of suicide deaths were caused by firearms, 23% by suffocation, 19% by poisoning, and 9% from other causes.



In 2014, the U.S. age-adjusted suicide rate was 13 per 100,000 people, lower than the Washington rate of 14 per 100,000. In 2010, age-adjusted suicide rates in Washington were the same as in the western region (14 per 100,000), which are higher than in other U.S. regions (Northeast – 9 per 100,000; Midwest – 12 per 100,000; and South – 13 per 100,000).<sup>1</sup>

## Geographic Variation

For 2010–2014<sup>2</sup> combined, Clallam, Grays Harbor, Pacific, Pierce, Skamania, and Stevens counties had age-adjusted suicide death rates higher than the overall state rate. King County was the only county with a suicide death rate lower than the overall state rate.

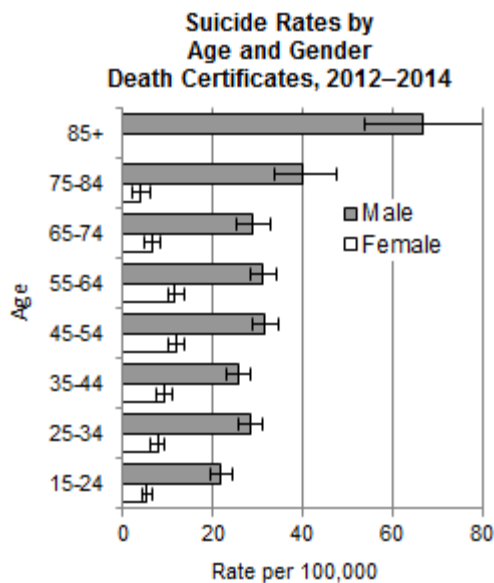


Community differences in suicide rates might be explained by lack of access to healthcare services, residential instability, unemployment, other factors that limit economic opportunity, or higher levels of mental illness, substance misuse, family dysfunction and violence victimization.<sup>3</sup>

The county chart does not include 9 counties in which [fewer than 20](#) Washington residents died of suicide during 2010–2014. Death rates for these counties fluctuate widely even when combining five years of data.

### Age and Gender

During 2012–2014, males in Washington accounted for 77% of suicide deaths. Men ages 75 and older had the highest suicide rates per population while men ages 45–64 had the highest number of suicides. Washington residents younger than age 15 and women ages 85 or older had fewer than 20 deaths over the three-year period. Suicide death rates for these two groups fluctuate widely even when combining three years of data, and so the figure does not include these groups.

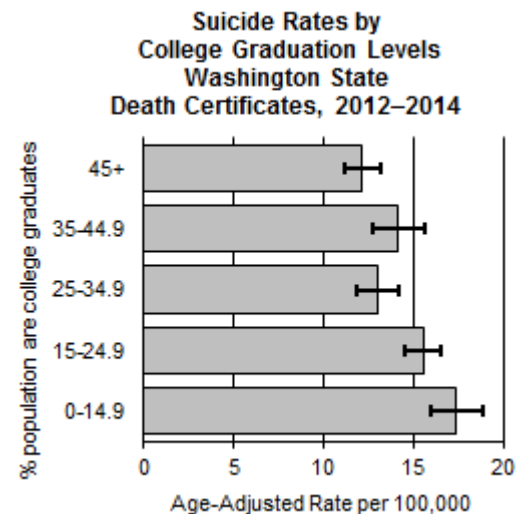
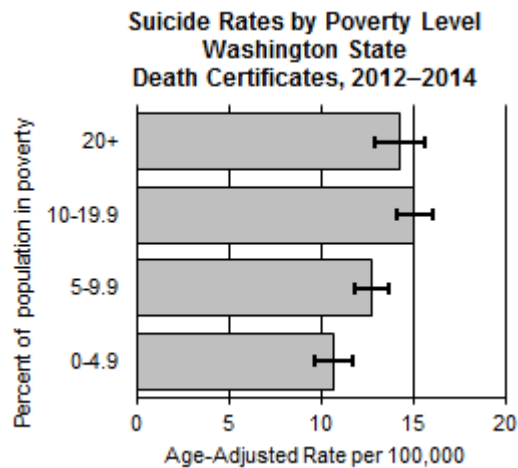


### Economic Factors and Education

Poverty and unemployment are linked with higher levels of suicidal thoughts and attempts.<sup>4,5</sup> One study found that unemployment was a stronger predictor of suicidal thoughts and attempts than either poverty or educational attainment.<sup>5</sup> In a recent national study, the

relationship between suicide and poverty was strongest for those with a mental disorder, suggesting that socioeconomic distresses may have stronger effects for those who are more susceptible to life's stressors.<sup>6</sup>

In Washington, suicide rates in 2012–2014 were about 25% higher in census tracts where 10% or more of the population lived in poverty compared to census tracts where less than 10% lived in poverty.

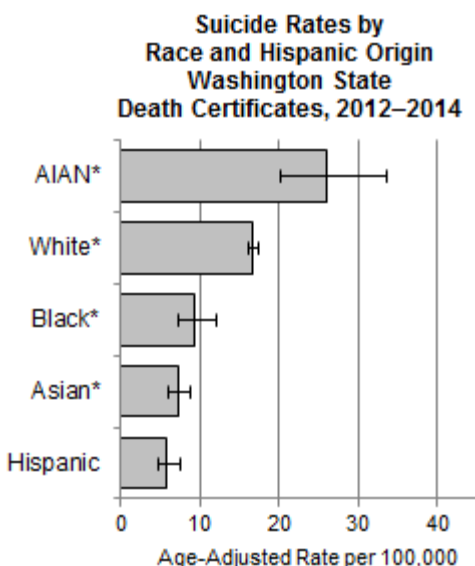


In 2012–2014, age-adjusted suicide rates increased as the percent of census tracts residents with a college education or more decreased. Rates in census tracts where less than 25% of adults ages 25 and older completed college were about 35% higher than rates in tracts with 45% or more of adults completing college. This pattern is consistent with national data showing that suicide rates increase as educational attainment decreases.<sup>7</sup>

## Race and Hispanic Origin

In Washington in 2012–2014 combined, age-adjusted suicide rates were highest for American Indians and Alaska Natives. Whites had the second highest rates. This is similar to patterns seen elsewhere in the United States.<sup>8</sup>

Nationally, the highest suicide rates among American Indians and Alaska Natives are for adolescents and young adults, while rates among whites are highest in older age groups,<sup>1</sup> suggesting that different risk factors might contribute to suicide in these groups.



\* Non-Hispanic, single race only  
AIAN: American Indian/Alaska Native  
Native Hawaiian/Other Pacific Islander not included due to unreliable rates due to small numbers.

### Data Sources (For additional detail, see [Appendix B](#).)

Washington State Death Certificate Data: Washington State Department of Health, Vital Registration System Annual Statistical Files, Deaths 1980–2014, released August 2015.

Washington State population counts: 2000 and 2010 U.S. Census and 2001–2009 intercensal and 2011–2014 post-censal estimates, Washington State Office of Financial Management, Forecasting Division (OFM), released January, 2015; 1990 U.S. Census and 1991–1999 OFM intercensal estimates, Vista Partnership and Krupski Consulting, released October 2007; 1980 U.S. Census and 1981–1989 OFM intercensal estimates.

National data: National Center for Injury Prevention and Control, National Centers for Health Statistics. Available on the Web-based Injury Statistics Query and Reporting System website at <http://www.cdc.gov/injury/wisqars/>.

### For More Information

Department of Health Injury and Violence Prevention Program, (360) 236-2800.

<http://www.doh.wa.gov/YouandYourFamily/InjuryandViolencePrevention.aspx>

Forefront: Innovations in Suicide Prevention,

<http://inthe forefront.org/>

Suicide Prevention Resource Center. <http://www.sprc.org>

U.S. Centers for Disease Control and Prevention Division of

Violence Prevention: Suicide Prevention Web Page,

<http://www.cdc.gov/violenceprevention/suicide/index.html>

Youth Suicide Prevention Program, <http://www.yspp.org>

### Technical Notes

This chapter uses death certificates to estimate suicide deaths. Several studies estimate that death certificates likely underestimate the 'actual' number of suicides by about 20%.<sup>9,10,11</sup>

### Acknowledgments

Author:

Jennifer Sabel, PhD

Washington State Department of Health

### Endnotes

<sup>1</sup> U.S. Centers for Disease Control and Prevention. *Fatal injury data, 2010*. Web-based Injury Statistics Query and Reporting System.

Atlanta, GA: U.S. Centers for Disease Control and Prevention; 2012. [http://www.cdc.gov/injury/wisqars/fatal\\_injury\\_reports.html](http://www.cdc.gov/injury/wisqars/fatal_injury_reports.html). Accessed September 27, 2012.

<sup>2</sup> Five years of data are being included on this chart to limit the number of counties that are excluded due to small numbers.

<sup>3</sup> Crosby AE, Han B, Ortega LAG, Parks SE, Gfroerer J. Suicidal thoughts and behaviors among adults aged  $\geq 18$  Years – United States, 2008-2009. *MMWR Morb Mortal Wkly Rep*. 2011;60(13):1-22.

<sup>4</sup> Bolton JM, Belik SL, Enns MW, Cox BJ, Sareen J. Exploring the correlates of suicide attempts among individuals with major depressive disorder: findings from the national epidemiologic survey on alcohol and related conditions. *J Clin Psychiatry*. 2008;69:1139-1149.

<sup>5</sup> Borges G, Angst J, Nock MK, Ruscio AM, Kessler RC. Risk factors for the incidence and persistence of suicide-related outcomes: A 10-year follow-up study using the National Comorbidity Surveys. *J Affect Disord*. 2008;105(1-3):25-33.

<sup>6</sup> Pan Y-J, Stewart R, Chang C-K. Socioeconomic disadvantage, mental disorders and risk of 12-month suicide ideation and attempt in the National Comorbidity Survey Replication. *Soc Psychiatry Psychiatr Epidemiol*. 2012; epub.

<sup>7</sup> Borges G, Angst J, Nock MK, Ruscio AM, Walters EE, Kessler RC. Risk factors for twelve-month suicide attempts in the National Comorbidity Survey Replication (NCS-R). *Psychol Med*. 2006; 36(12):1747-1757.

---

<sup>8</sup> U.S. Centers for Disease Control and Prevention. CDC Health Disparities and Inequalities Report—United States, 2011. *MMWR Morb Mortal Wkly Rep.* 2011;60(suppl).

<sup>9</sup> Carr JR, Hoge CW, Gardner J, Potter R. Suicide surveillance in the U.S. Military--reporting and classification biases in rate calculations. *Suicide Life Threat Behav.* 2004;34(3):233-241.

<sup>10</sup> Sampson HH, Ratty GN. Under-reporting of suicide in South Yorkshire (West): a retrospective study of suicide and open verdicts returned by HM Coroner, 1992-1997. *J Clin Forensic Med.* 1999;6(2):72-76.

<sup>11</sup> Huusko R, Hirvonen J. The problem of determining the manner of death as suicide or accident in borderline cases. *Z Rechtsmed.* 1988;100(2-3):207-213.