



Ceasefire Oregon

Education Foundation

Educating Providers and the Public About the Link Between
Firearm Ownership and Suicide

Penny Okamoto, Joanne Skirving
October 14, 2019



- Describe the rate of suicide in Oregon.
- Compare the rate of suicide mechanism.
- Describe the percent of public and health care providers who know the rate of suicide.
- Describe the percent of public and health care providers who understand that having access to a household firearm increases the rate of suicide.
- Demonstrate the link established between access to a household firearm and suicide.
- Design effective means to educate the public and healthcare providers about the increased risk of suicide when a household firearm is available.

In 2016 alone in the U.S., 22,938 killed themselves with a firearm.

Firearms are the most lethal significant means of suicide with an 82.5% fatality rate, versus a fatality rate of 4% for all suicide attempts.



Lethality matters, as approximately 90% of individuals don't attempt suicide again.

Even with a 100% substitution rate for suicide attempts (switching from firearms to an alternative means), the completed suicide rate would still go down as firearms are more lethal.



Attempting suicide is usually an impulsive decision (70% decide within an hour).



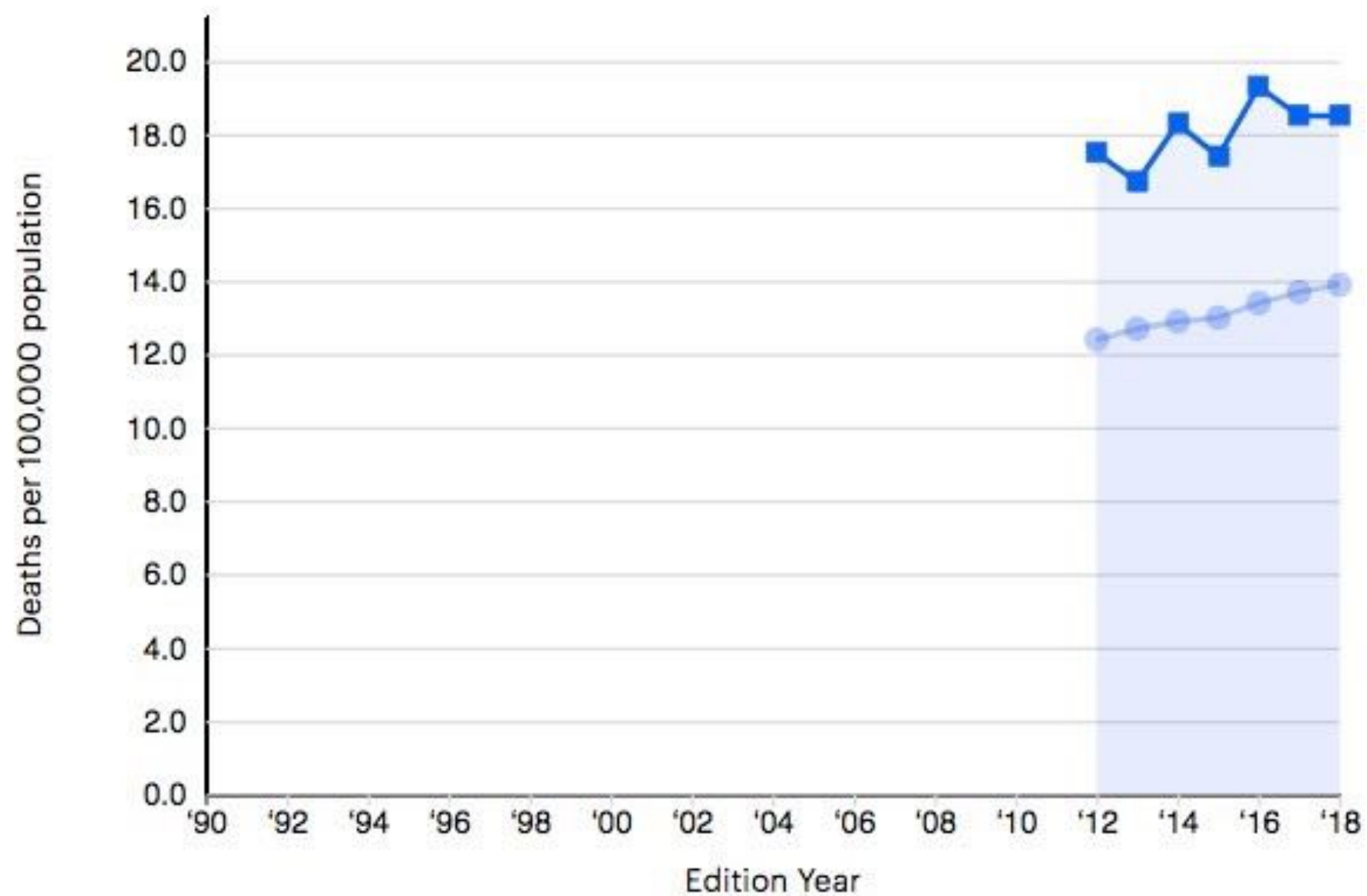
Firearm availability is the only plausible factor to explain the significant difference in suicide rate

The rate of suicide in Oregon is far above the national average.

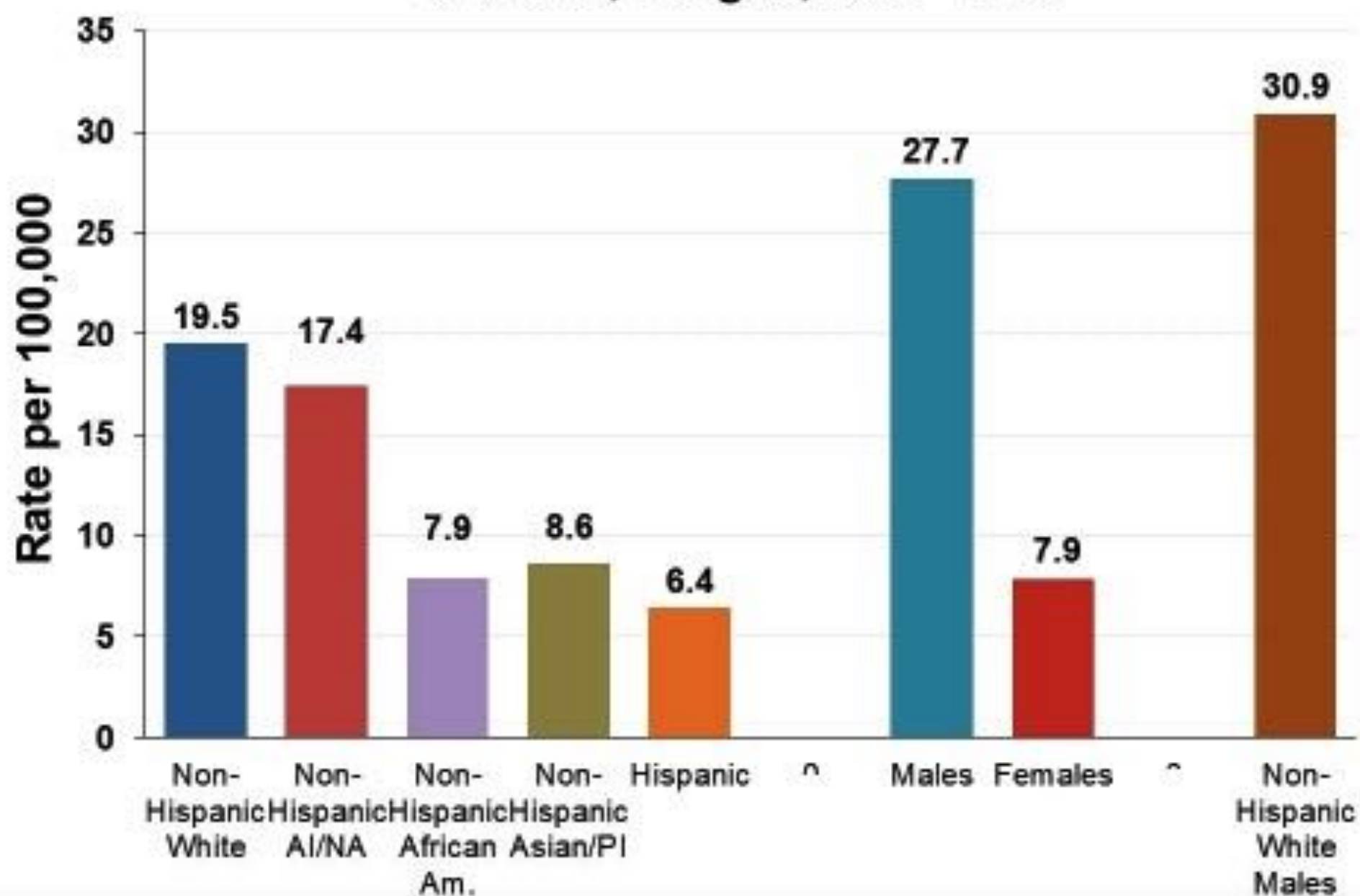
The 2018 suicide rate was 18.5 per 100,000 which was a decline from 19.3 in 2016 but still far above the national average of 13.9 per 100,000.

Suicide Rate for Oregon

Trend: Suicide, Oregon, United States



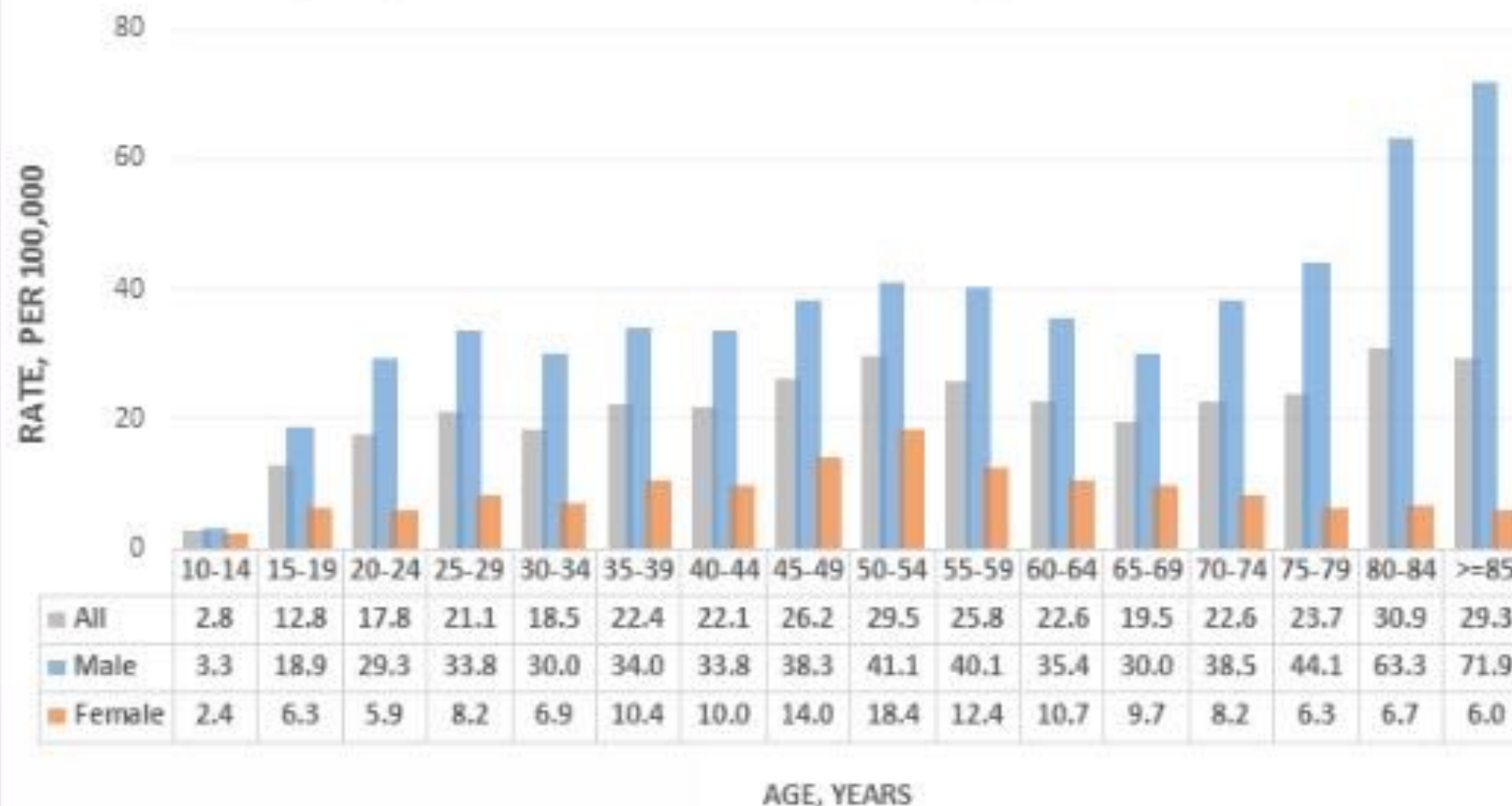
Age-Adjusted Suicide Rate, by Race / Ethnicity and Sex, Oregon, 2011-2015



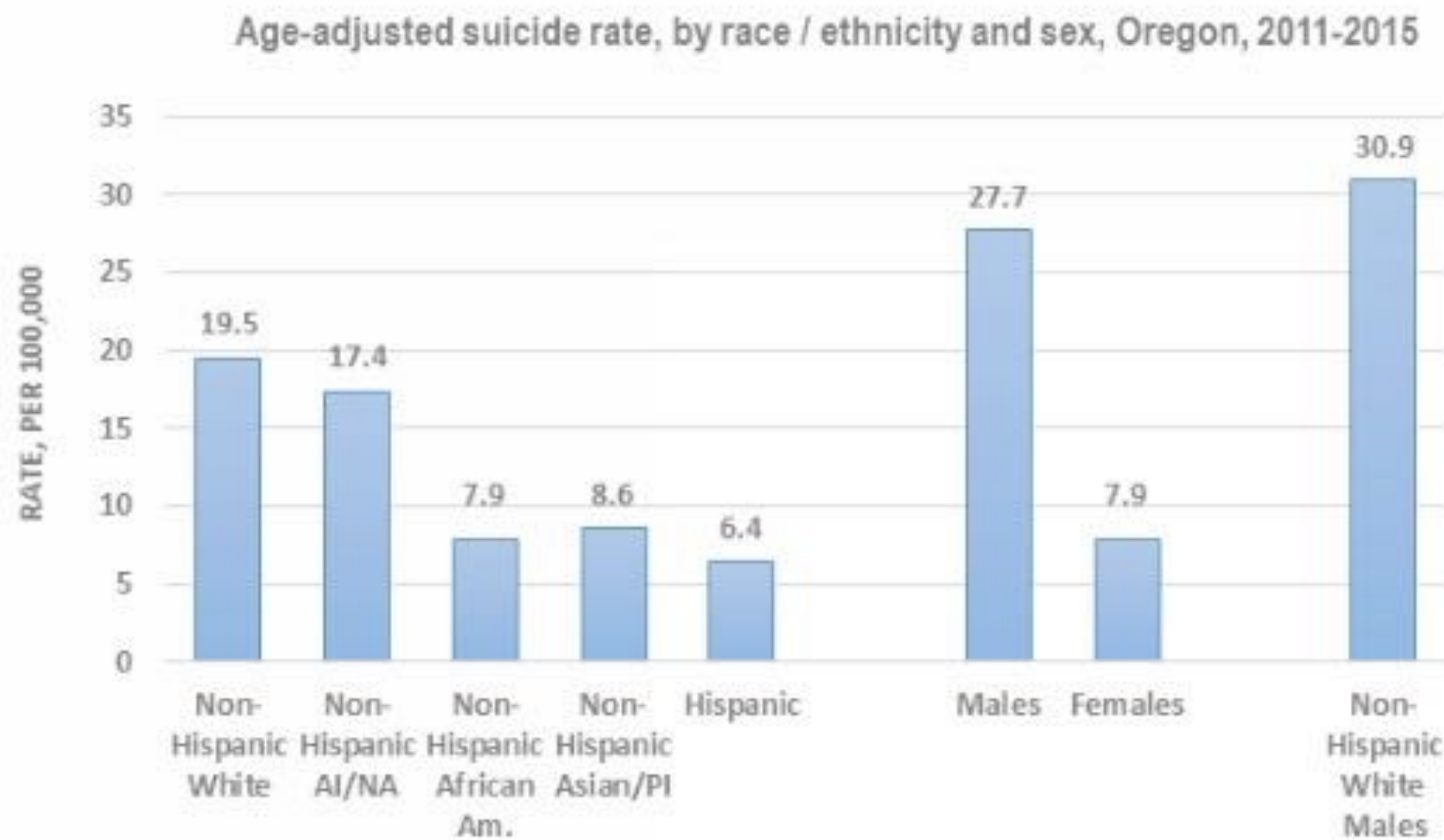
Who is at risk?

Men are about three times more likely to die by suicide than women. In general, suicide rates increase with age. The highest male suicide rate occurred among those aged 85 years and older; the highest female suicide rate occurred between the ages of 45 and 54 years.

Age-specific rate of suicide, Oregon, 2011-2015



Non-Hispanic whites, especially males aged 65 years and older, have the highest suicide rate in Oregon. Compared to the rate of non-Hispanic whites, non-Hispanic African Americans, non-Hispanic Asians/Pacific Islanders, and people of Hispanic ethnicity have a lower rate. There is no significant difference in rate between non-Hispanic whites and non-Hispanic American Indians/Alaska Natives (AI/AN).

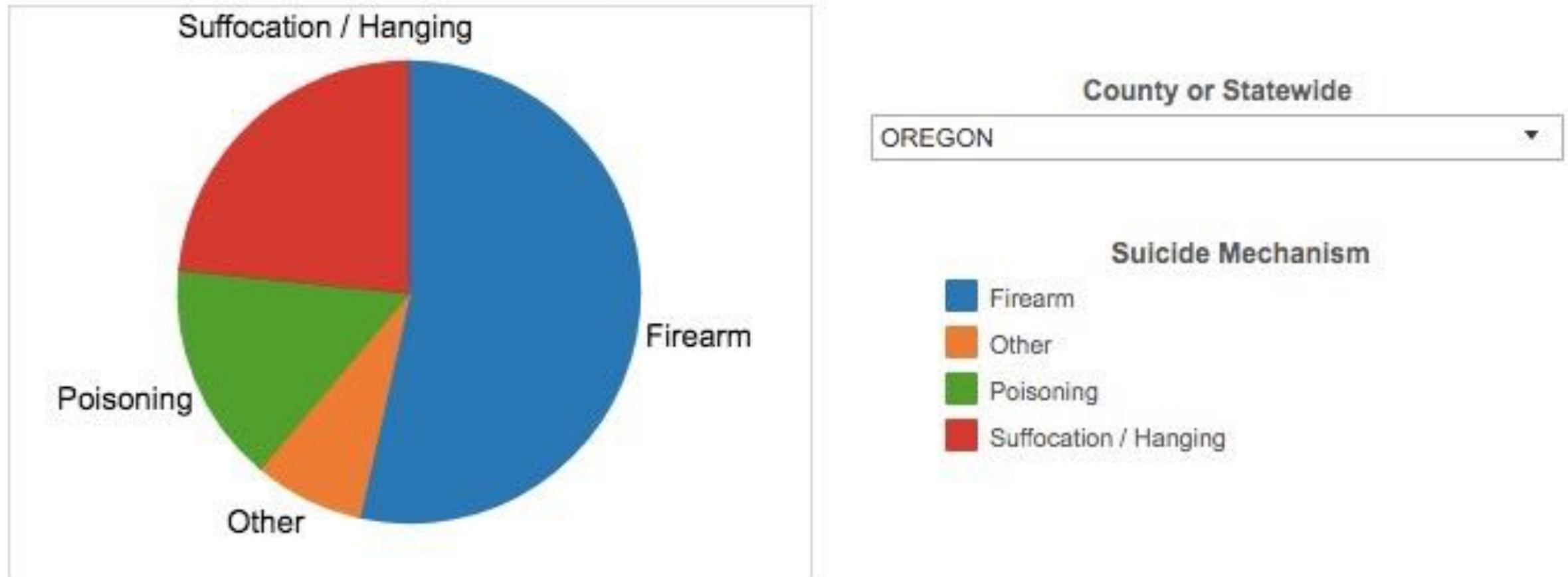


Some other important facts:

- 68 percent of suicides are among adults aged 25 to 64 years.
- About 22 percent of suicides occurred among veterans.

Comparison of Suicide Death by Mechanism

Oregon County Suicide Deaths by Mechanism, 2011-2014



What mechanisms (means) are involved in suicide deaths in Oregon?

Firearms, poisoning, and suffocation (hanging) are the most frequently observed mechanisms of injury in suicide deaths. Firearms alone accounted for 55 percent of deaths. There were differences in mechanisms of death between men and women. Details see below table.

Mechanism of injury in suicides by sex, Oregon 2013-2014

Method	Males	%	Females	%	Total	%
Firearm	689	61	112	34	801	55
Poisoning	99	9	101	31	200	14
Hanging / suffocation	255	23	87	27	342	24
Fall	26	2	8	2	34	2
Sharp instrument	21	2	3	<1	24	2
Drowning	12	1	6	2	18	1
Motor Vehicle (MV)	10	1	4	1	14	1
Other MV	6	<1	5	<1	11	<1
Fire / Burn	2	<1	1	<1	3	<1
Other / Unknown	2	<1	0	<1	2	<1

Source: Oregon Violent Death Reporting System, OHA

**Does the presence of a
firearm in the home
increase the risk of suicide?**

15.4% of U.S. adults overall agreed.

6.3% of firearm owners agreed.

19.8% of those who live in a home
without firearms agreed.

An Additional Finding...

Fewer than 10% of gun owners with children (or gun owners who had received firearm training) agreed that household firearms increase suicide risk.



What do healthcare professionals think?

Nearly 1 of 3 health care practitioners (30.2% [CI, 14.0% to 53.3%]) agreed that having a household firearm increases suicide risk.

Among health care practitioners who own firearms, 11.8% (CI, 4.5% to 27.3%) agreed with this statement.

Data and citation for previous slides.


A total of 15.4% (95% CI, 13.1% to 18.1%) of U.S. adults agreed that the presence of a firearm in the home increases the risk for suicide (6.3% [CI, 5.2% to 7.6%] of firearm owners, 8.9% [CI, 6.7% to 11.7%] of those who do not own a firearm but live with someone who does, and 19.8% [CI, 16.3% to 23.8%] of those who live in a home without firearms)

Conner A, Azrael D, Miller M. Public Opinion About the Relationship Between Firearm Availability and Suicide: Results From a National Survey. *Ann Intern Med*. [Epub ahead of print 24 October 2017]168:153–155. doi: 10.7326/M17-2348

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Perceived Roles of Emergency Department Physicians Regarding Anticipatory Guidance on Firearm Safety







[James H. Price](#), PhD, MPH •, [Amy Thompson](#), PhD, CHES •†, [Jagdish Khubchandani](#), MBBS, PhD, MPH
‡•✉, [Michael Wiblishauser](#), MS, CHES •, [Jamie Dowling](#), MPH •, [Karen Teeple](#), BS †



DOI: <https://doi.org/10.1016/j.jemermed.2012.11.010>



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A 2013 study by Price, et al

A national random sample (n = 500) of the members of the American College of Emergency Physicians was sent a valid and reliable questionnaire on firearm safety counseling.

Of the 278 (56.8%) responding physicians, those who were non-white and those who were not members of the National Rifle Association perceived firearm violence to be more of a problem than white physicians and those who were members of the NRA.

Price et al, continued

The majority did not believe that patients would view them as a good source of information on firearm safety (63.3%) or that patients would accept them providing anticipatory firearm safety guidance (56.5%).

The majority of the Emergency Department physicians did not believe firearm safety counseling would impact firearm-related homicides (75.2%) or suicides (70%).



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- Demonstrate the link established between access to a household firearm and suicide.
- Design effective means to educate the public and healthcare providers about the increased risk of suicide when a household firearm is available.

The vast majority of people, including healthcare professionals, do not believe that gun ownership increases the risk of suicide.

Most people believe that suicide cannot be prevented.

The link between suicide and gun ownership is well established.

**Miller, Azrael, et al, Harvard School of Public Health
2002 survey of American households**

In states where guns were prevalent—as in Wyoming, where 63 percent of households reported owning guns—rates of suicide were higher. The inverse was also true: where gun ownership was less common, suicide rates were also lower.

<https://www.hsph.harvard.edu/news/magazine/guns-and-suicide/>

March 2019 Volume 53, Issue 3, Pages 335–342

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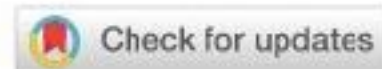
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Household Gun Ownership and Youth Suicide Rates at the State Level, 2005–2015

Anita Knopov, BA¹, Rebecca J. Sherman, BA¹, Julia R. Raifman, ScD, SM², Elysia Larson, ScD, MPH³,
Michael B. Siegel, MD, MPH¹. * [✉](#)



DOI: <https://doi.org/10.1016/j.amepre.2018.10.027>



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“Household gun ownership was the single biggest predictor of youth suicide rate in a state,” Dr. Michael Siegel, a public health specialist at Boston University, told NBC News.

<https://www.nbcnews.com/health/health-news/state-state-study-links-gun-ownership-youth-suicide-n959946>

“For each 10 percentage-point increase in household gun ownership, the youth suicide rate increased by 26.9 percent,” they wrote in their report, published in the American Journal of Preventive Medicine.

In both Alaska and South Dakota, just under 60% of households have guns.

The youth suicide rate in Alaska is **15.2** per 100,000.

The youth suicide rate in South Dakota is **14.9** per 100,000.

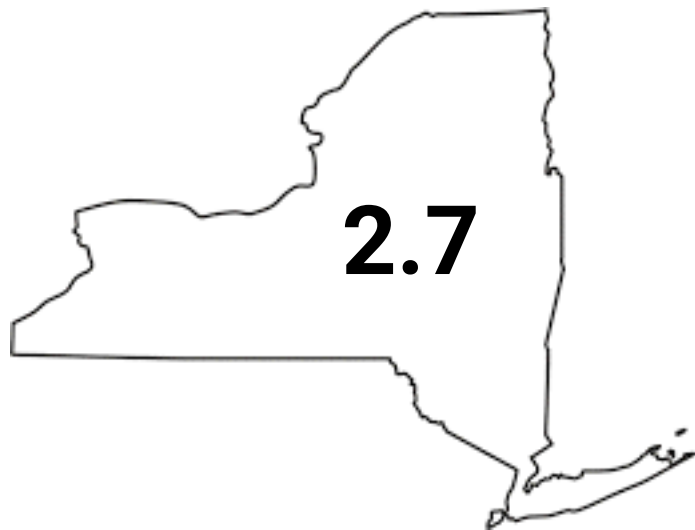


In New York, 18.5% of households have guns.

In New Jersey, 11.4% of households have guns.

The youth suicide rate in New York is **2.7** per 100,000.

The youth suicide rate in New Jersey is **2.6** per 100,000.



“This study demonstrates that the strongest single predictor of a state’s youth suicide rate is the prevalence of household gun ownership in that state,” Siegel said.

Suicides in the 15 U.S. States with the Highest vs. the 6 U.S. States with the Lowest Average Household Gun Ownership (2000-2002)

	High-Gun States	Low-Gun States
Population	39 million	40 million
Household Gun Ownership	47%	15%
Firearm Suicide	9,749	2,606
Non-Firearm Suicide	5,060	5,446
Total Suicide	14,809	8,052

<https://www.hsph.harvard.edu/means-matter/means-matter/risk/>

Evidence from studies over the past two decades show a strong association between the presence of a firearm in the home and an increased risk of suicide for the gun owner and the gun owner's spouse and children.[4,5,6] Recommendations for families worried about a family member include reducing access to firearms, lethal doses of medications and alcohol in the home.

<https://www.americashealthrankings.org/explore/annual/measure/Suicide/state/OR>

[4] Matthew Miller et al. "Suicide Mortality in the United States: the Importance of Attending to Method in Understanding Population-level Disparities in the Burden of Suicide." *Annual Review of Public Health* 33, (2012): 393-408. <https://doi.org/10.1146/annurev-publhealth-031811-124636>

[5] Matthew Miller et al. "Firearms and Suicide in the United States: Is Risk Independent of Underlying Suicidal Behavior?" *American Journal of Epidemiology* 178, no.6, (2013): 946-955. <https://doi.org/10.1093/aje/kwt197>

[6] April Opoliner et al. "Explaining Geographic Patterns of Suicide in the Us: The Role of Firearms and Antidepressants." *Injury Epidemiology* 1, no. 6 (2014): 1-7. <https://doi.org/10.1186/2197-1714-1-6>

Importantly, of children 0 to 19 years olds who had died by suicide, 77.4% had visited a health care provider in the year prior to their death and **37.9% in the four weeks prior to their death**. This includes contact with an inpatient, outpatient, or emergency department (ED) setting.

Ahmedani BK, Simon GE, Stewart C, Beck A, Waitzfelder BE, Rossom R, et al. Health care contacts in the year before suicide death. J Gen Intern Med. 2014;29(6):870- 877.

https://www.nimh.nih.gov/research/research-conducted-at-nimh/asq-toolkit-materials/inpatient/pdfs/suicide_risk_screening_clinical_pathway_inpatient_final_with_supplement_158699.pdf



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Programs Available to Educate Healthcare Professionals

- NIMH ASQ
- The Matt Adler Suicide Assessment, Treatment and Management Act of 2012, Washington State
- All Patients Safe
- Henry Ford Zero Suicide: Prevention Guidelines for Health Care Providers
- Zero Suicide
- CALM: Counseling Access to Lethal Means
- QPR: Professional Training



**Transforming the understanding
and treatment of mental illnesses.**

Ask Suicide-Screening Questions (ASQ) Toolkit



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Medical Settings

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The Ask Suicide-Screening Questions (ASQ) toolkit is designed for screening youth ages 10-24 (for patients with mental health chief complaints, consider screening below age 10).

The ASQ is free of charge and available in multiple languages, including Spanish, Portuguese, French, Arabic, Dutch, Hebrew, Mandarin, and Korean.

Washington State Legislature

The Matt Adler Suicide Assessment, Treatment and Management Act of 2012.

The legislature finds that one of the most immediate ways to reduce the tragedy of suicide is through suicide awareness and prevention education coupled with safe storage of lethal means commonly used in suicides, such as firearms and prescription medications.



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Suicide Prevention Training
for Medical Professionals

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All Patients Safe



SUICIDAL BEHAVIOR IN THE U.S. IN 2015

- > **44,193 SUICIDES**
- > **505,507* SUICIDE ATTEMPTS**
- > **9,800,000* SUICIDAL IDEATION**
- > **1 IN 5 PEOPLE* MENTAL HEALTH CONDITIONS**

**Estimated*

UNI

graphics tell the story

PHDA, 2016



00:24 / 01:20





reduction in suicide





ZERO SUICIDE

The foundational belief of Zero Suicide is that suicide deaths for individuals under the care of health and behavioral health systems are preventable. For systems dedicated to improving patient safety, Zero Suicide presents an aspirational challenge and practical framework for system-wide transformation toward safer suicide care.

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- Most courses are approved adaptations of QPR as listed in the National
- Registry of Evidence-based Programs and Practices (NREPP)

ADVANCED SUICIDE PREVENTION TRAINING

Big Concepts:

- **Suicides can be prevented.**
- **Lethality of guns increases the rate of suicide.**
- **70% of healthcare providers do not know that a firearm in the home increases the rate of suicide.**
- **Programs have been developed to educate healthcare professionals about suicide.**

Even Bigger Concept:

We can drastically cut the rate of suicide.

<https://www.ncbi.nlm.nih.gov/pubmed/24722784>

Ann Intern Med. 2014 Jun 17;160(12):821-7. doi: 10.7326/M13-1960.

Internists' attitudes toward prevention of firearm injury.

Butkus R, Weissman A.

The survey response rate was 56.5%. Eighty-five percent of respondents believed that firearm injury is a public health issue, and 71% believed that it is a bigger problem today than a decade ago. Seventy-six percent of respondents believed that stricter gun control legislation would help reduce the risks for gun-related injuries or deaths. Although 66% of respondents believed that physicians should have the right to counsel patients on preventing deaths and injuries from firearms, 58% reported never asking whether patients have guns in their homes.

Most respondents believed that firearm-related violence is a public health issue and favored policy initiatives aimed at reducing it. Although most internists supported a physician's right to counsel patients about gun safety, few reported currently doing it.

International Rates of Suicide

Suicide rates in the U.S., at 14.0 per 100,000 in 2017, increased by a third since 1999, according to the Centers for Disease Control and Prevention, especially among its rural communities.

Meanwhile, deaths from suicide in China and India – the countries with the highest populations – accounted for 44.2 percent of global suicide deaths in 2016. Both countries experienced significant decreases of 64.1 and 15.2 percent, respectively.

<https://www.usnews.com/news/best-countries/articles/2019-02-07/global-suicide-rate-declines-while-us-rate-rises-study-finds>

Our thanks to Oregon Public Health Association



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