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

Penny Okamoto, Joanne Skirving
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• 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

Deaths per 100,000 population vs. Edition Year
Age-Adjusted Suicide Rate, by Race / Ethnicity and Sex, Oregon, 2011-2015

- Non-Hispanic White: 19.5
- Non-Hispanic AI/NA: 17.4
- Non-Hispanic African American: 7.9
- Non-Hispanic Asian/PI Am.: 8.6
- Hispanic Males: 27.7
- Hispanic Females: 7.9
- Non-Hispanic White Males: 30.9
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.
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).

![Age-adjusted suicide rate, by race/ethnicity and sex, Oregon, 2011-2015](image)

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

- Suffocation / Hanging
- Firearm
- Poisoning
- Other

Suicide Mechanism:
- Firearm
- Other
- Poisoning
- Suffocation / Hanging

County or Statewide:
OREGON
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.

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

Source: Oregon Violent Death Reporting System, OHA
What Say You?

Does the presence of a firearm in the home increase the risk for 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.
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.
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)

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
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%).
• 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.
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.


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.

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

Anita Kropov, BA, Rebecca J. Sherman, BA, Julia R. Raifman, ScD, SM, Elyssia Larson, ScD, MPH, Michael B. Siegel, MD, MPH

DOI: https://doi.org/10.1016/j.amepre.2018.10.027
“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.

“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)

<table>
<thead>
<tr>
<th></th>
<th>High-Gun States</th>
<th>Low-Gun States</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population</td>
<td>39 million</td>
<td>40 million</td>
</tr>
<tr>
<td>Household Gun Ownership</td>
<td>47%</td>
<td>15%</td>
</tr>
<tr>
<td>Firearm Suicide</td>
<td>9,749</td>
<td>2,606</td>
</tr>
<tr>
<td>Non-Firearm Suicide</td>
<td>5,060</td>
<td>5,446</td>
</tr>
<tr>
<td>Total Suicide</td>
<td>14,809</td>
<td>8,052</td>
</tr>
</tbody>
</table>

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


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.

Objectives

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• 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.
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
Ask Suicide-Screening Questions (ASQ) Toolkit

Downloads
- Download ASQ Tool (PDF)
- Download Info Sheet (PDF)
- Download Summary (PDF)
- Emergency Department Clinical Pathway (PDF)
- Inpatient Clinical Pathway (PDF)

Medical Settings
- Emergency Department (ED/ER)
- Inpatient Medical/Surgical Unit
- Outpatient Primary Care/Specialty Clinics
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.
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.
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

graphics tell the story
80% 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.

LEARN MORE »
How Emergency Departments Can Help Prevent Suicide among At-Risk Patients: Five Brief Interventions
Professional Training

Industry-leading suicide prevention taken to the next level

OUR PROFESSIONAL TRAINING COURSES:

- No Prerequisites
- Many courses include the QPR Gatekeeper Training
- 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.
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.

Our thanks to Oregon Public Health Association

Ceasefire Oregon
Education Foundation

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