Why It's Time to Start Talking about Firearms

…and how to begin

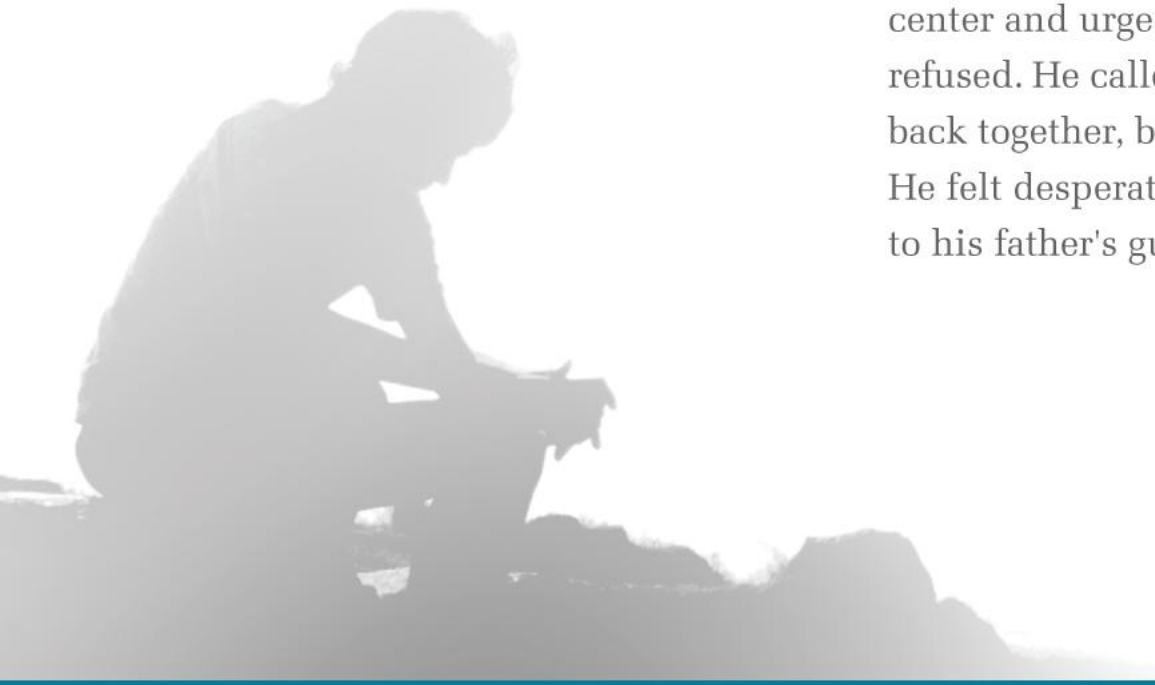
Catherine Barber
Harvard Injury Control Research Center

Means Matter

Suicide, Guns & Public Health

A Suicide

A 20-year old with a drug problem moved back in with his parents after his girlfriend broke up with him. When he stopped going to work, his parents contacted a mental health center and urged him to see a counselor. He refused. He called his girlfriend hoping to get back together, but she wouldn't speak to him. He felt desperate. Intent on suicide, he went to his father's gun cabinet...



Traditionally suicide prevention has focused on who takes their life, when, where, and especially why.

Why do people take their lives?

People who feel suicidal typically face multiple problems. Risk factors include:

- *Drug and alcohol problems*
- *Depression and other mental illness*
- *Impulsiveness and aggressiveness*
- *Family history of suicide*
- *Parental psychopathology*
- *Previous attempts*
- *Recent losses or setbacks*
- *Feeling hopeless*

Feeling hopeless is probably the most common theme.

Why do people take their lives?

Suicide attempts are rarely "out of the blue." Attempters typically face multiple problems–some long term, some short term.

The moment when they take action, however, is often during a brief period of heightened vulnerability.

One of the most powerful risk factors for suicide deaths is the ready availability of highly lethal methods.

In the U.S., that means guns.

We are beginning to understand that how people attempt suicide plays a crucial role in whether they live or die.

A Suicide

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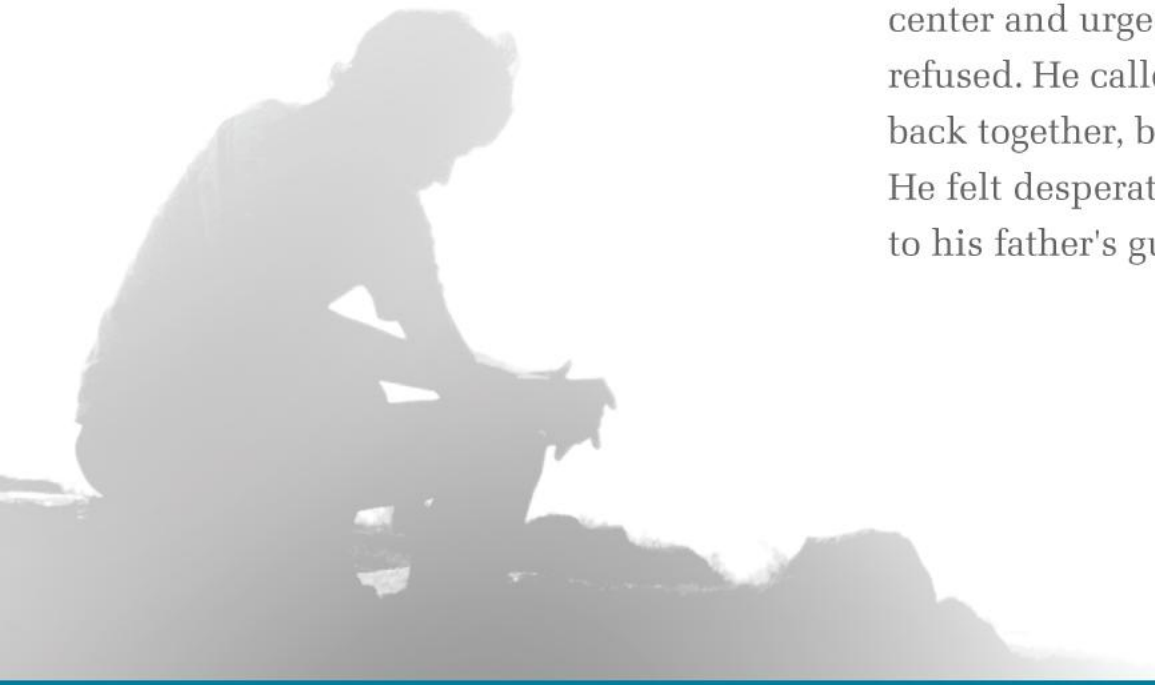
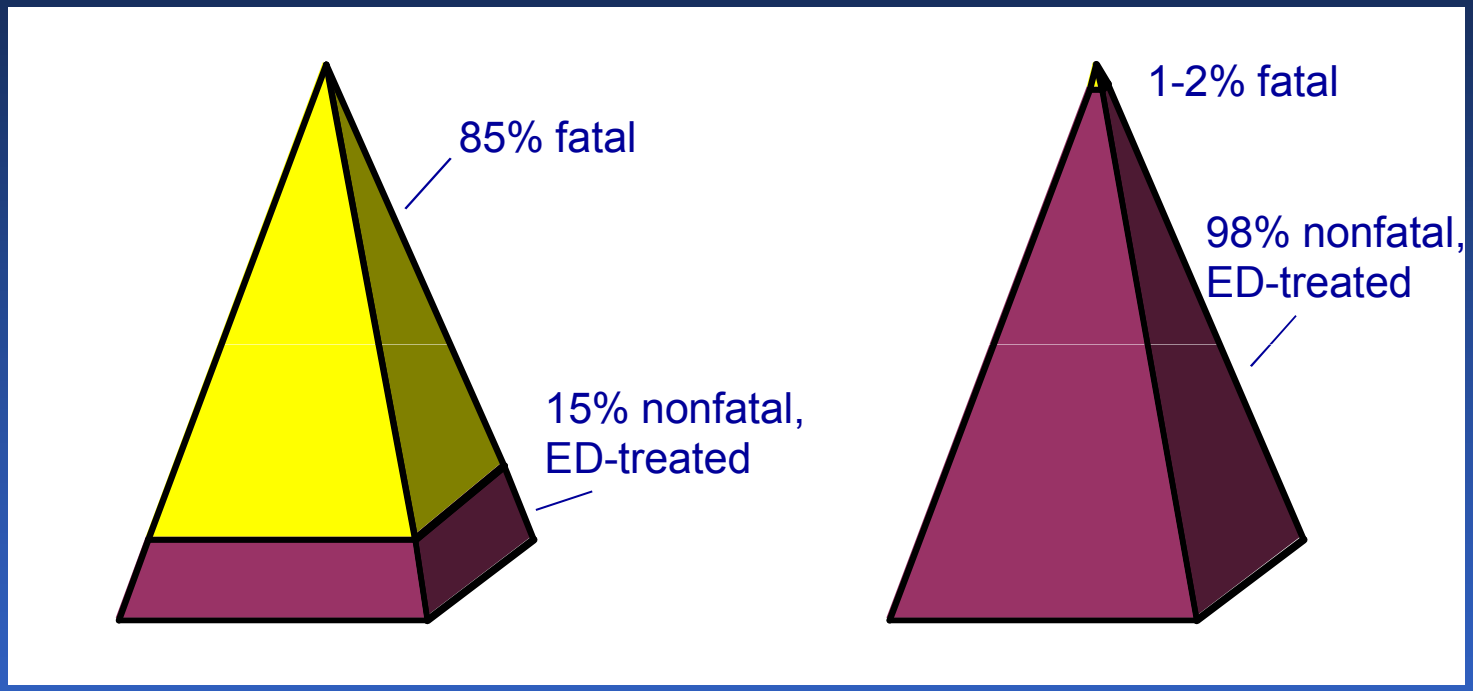


A Life Saved

A 20-year old with a drug problem moved back in with his parents after his girlfriend broke up with him. When he stopped going to work, his parents contacted a mental health center and urged him to see a counselor. He refused. He called his girlfriend hoping to get back together, but she wouldn't speak to him. He felt desperate. Intent on suicide, he went to his father's gun cabinet but the guns were gone. He found a razor and cut his wrists. His parents found him an hour later and brought him to the hospital where he was treated and agreed to get help.

Self-Harm Case Fatality Rates

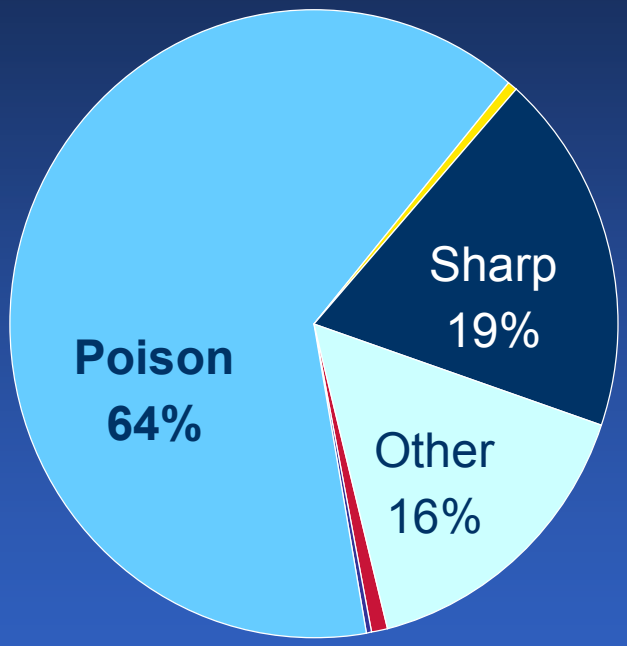


Firearms

Cutting & Poisoning

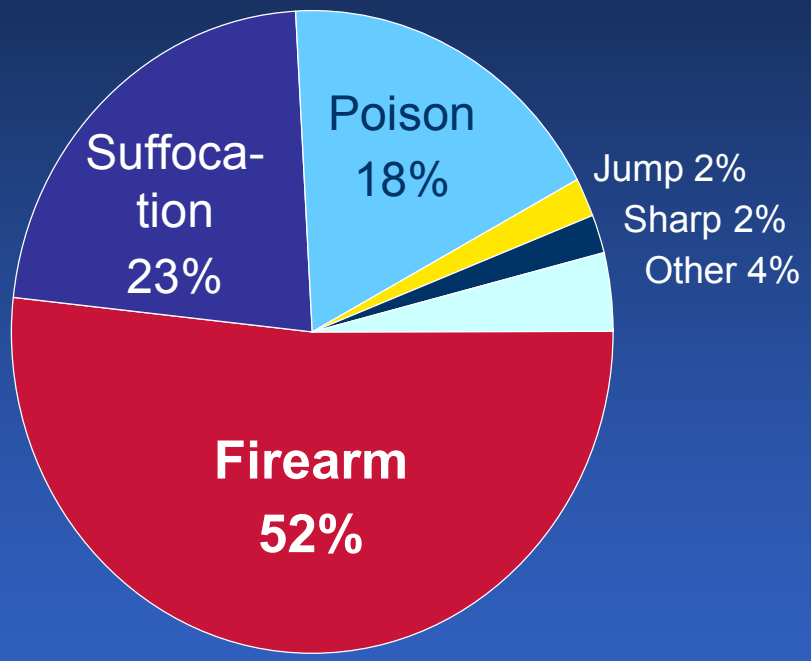
Source: CDC WISQARS <http://www.cdc.gov/ncipc/wisqars/>

Methods of Self-Harm, 2004



Nonfatal (ED-treated)

425,650 (estimated)



Suicide

32,439

Source: CDC WISQARS <www.cdc.gov/ncipc/wisqars>

But Is It Truly a Life Saved?

- History of suicide attempt is a risk factor for suicide.
- What proportion of serious attempters eventually die by suicide?

75% 45% 25% 10%

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Owens (Br J Psych, 2002) review of 90 studies: 90% or more of attempters did not go on to die by suicide, even serious attempters such as those jumping in front of a subway and even when followed 10-20 years. 20-25% made a nonfatal reattempt.

What If He Were a Different Sort?

- What if he weren't an angry, impulsive guy?
- What if he were a 60 year-old who prepared his will, researched his method, set out the bank statements, waited until no one was around?
- Reducing his access to lethal means might not help.
- In public health, we work incrementally, finding one set of strategies for one group, another set for another group, chipping away at the problem.
- We don't have a "one size fits all" solution for suicide prevention.

When do people take their lives?

Among people who nearly died in a suicide attempt, 24% said less than 5 minutes elapsed between deciding on suicide and making the attempt.

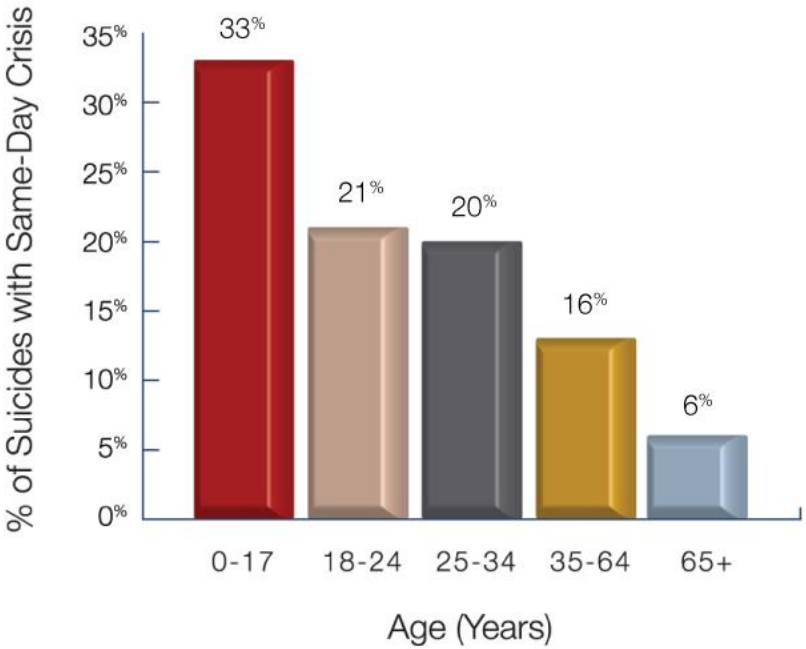
Source: Simon TR et al. Characteristics of impulsive suicide attempts and attempters. SLTR 2001;32 (supp) :49-59.

When do people take their lives?

Some take their lives after careful planning and deliberation, but many act impulsively.

1/3 of youths who died by suicide had faced a crisis within the past 24 hours.

Percentage of Suicides with a Crisis on the Day of Suicide (by age)

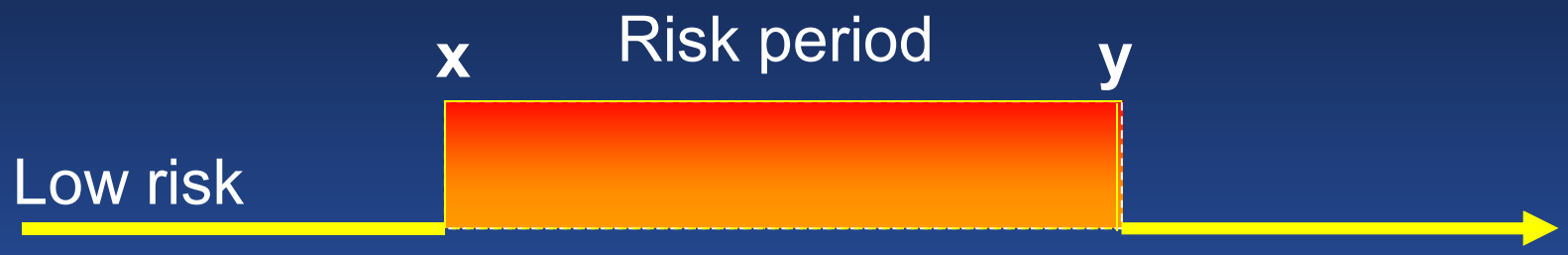


Source: Harvard Injury Control Research Center, National Violent Injury Statistics System (NVISS). 2001 suicide data summary. Available at: http://www.hsph.harvard.edu/hicrc/nviss/documents/Suicide%20Summary%202001.pdf

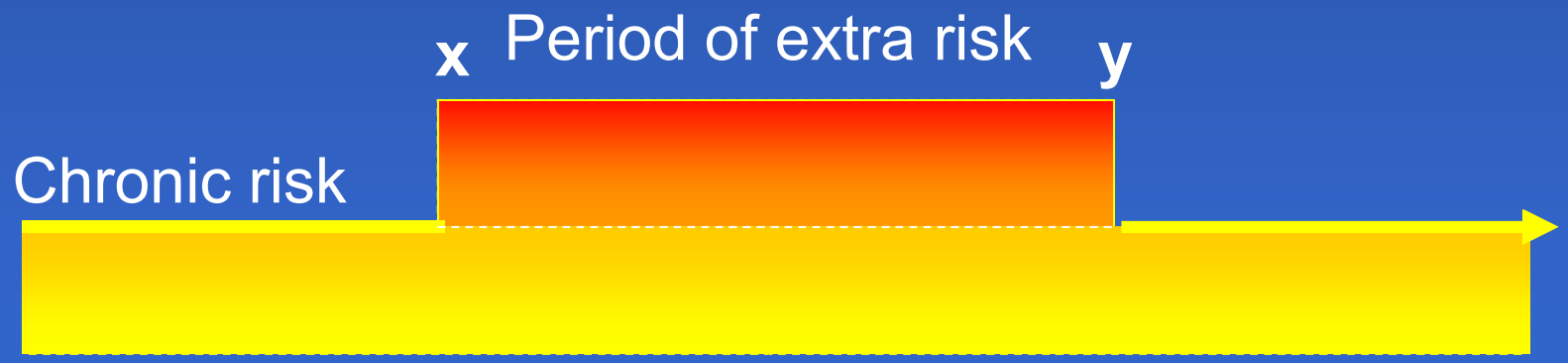
SUICIDE RISK

Keith Hawton

A ACUTE RISK (only)



B ACUTE ON CHRONIC RISK



Means Matter

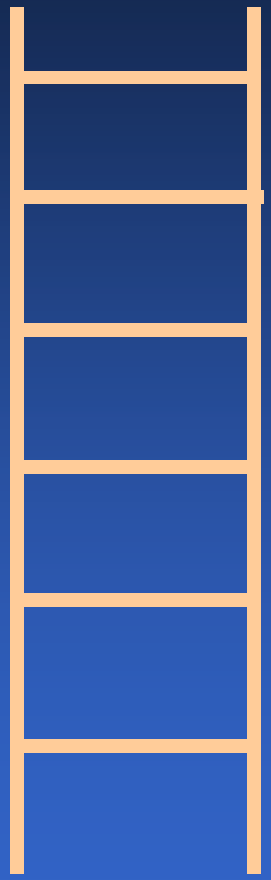
- People who attempt suicide are often ambivalent.
- Some are acting impulsively during a short-term crisis period.
- If a highly lethal method is unavailable and an attempter substitutes a less lethal method, the odds are increased that the attempt will be nonfatal.
- 90% or more of those making nonfatal attempts will not go on to die by suicide

"Won't an attempter just use another method if they don't have a gun?"

Many do. But they are much more likely to survive an attempt by another method.

Moving Attempters Down the Ladder

High Case Fatality Rate



Firearm
Jump from great height

Hanging
Carbon Monoxide

Low Case Fatality Rate

Overdose/Poisoning
Cutting

Where there are more guns, there are more suicides.

All U.S. case control studies (12 to date) have found that people who die by suicide are more likely to have lived in a home with a gun than similar people who did not die by suicide.

Brent et al. Psych Autopsy Studies

- 5 overlapping studies of adolescents in Western PA (each <=70 suicides)
  - Matched age, gender, county of origin
  - Controls drawn from
    - Suicidal psych inpatients
    - Non-suicidal inpatients
    - Community controls (adjusted for rates of psychiatric disorder in cases and controls)
    - Hx of substance abuse
    - Hx of affective illness
- Results common to all studies: Firearms in the home strongly associated with risk of suicide (OR=2 to 5)
  - Odds ratio highest for adolescents without a psychiatric history

Kellermann et al. (NEJM 1992)

Suicide in the home, all ages, large study (803 suicides)

- Controls matched by sex, race, age, neighborhood
- Control for living alone, taking prescribed psychotropic medication, arrests, drug/alcohol abuse, education

Results:

- Firearms in the home strongly associated with risk of suicide
- Association is strongest for adolescents/young adults and for individuals without a known psychiatric history
- Risk greater if gun stored loaded or unlocked
- Risk elevated for all members of the household

Conwell et al. (Am J Geriatric Psych 2002)

All Suicides, 50 years and older

86 cases and 86 community controls matched on age, sex, county of residence

- Results:
  - Presence of a firearm in the home was associated with increased risk for suicide, even after controlling for psychiatric illness.
  - RR more pronounced in men than women
  - Storing the weapon loaded and unlocked were independent predictors of suicide

How do states compare?

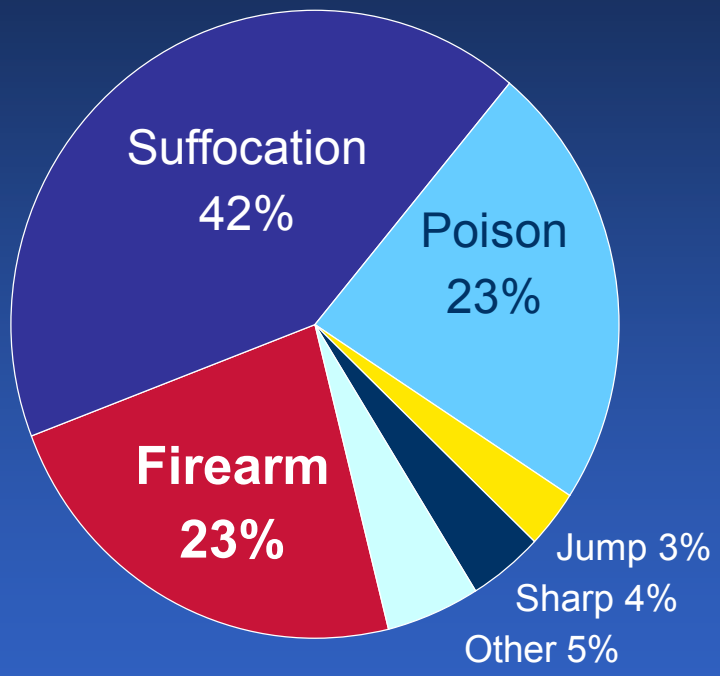
Suicide in States with the Highest and Lowest Gun Ownership Levels, 2000-2002

	High–Gun States *	Low–Gun States **
Population	**39 Million**	**40 Million**
% Of Adults With A Gun At Home	**47%**	**15%**
Male		
Firearm Suicide	8,489	2,430
Non-Firearm Suicide	3,572	4,007
Total Suicide	12,061	6,437
Female		
Firearm Suicide	1,260	176
Non-Firearm Suicide	1,488	1,439
Total Suicide	2,748	1,615

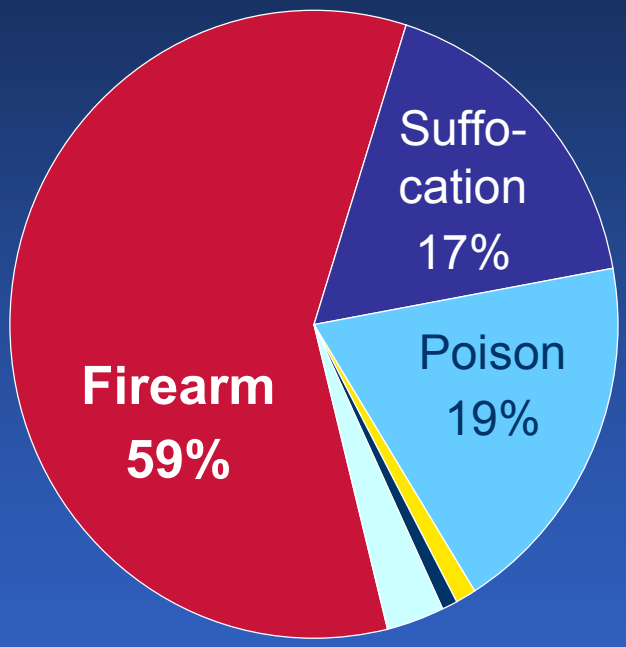
*WY, SD, AK, WV, MT, AR, MS, IO, ND, AL, KY, WI, LA, TN, UT
** HI, MA, RI, NJ, CT, NY

Source: Miller M, Lippmann S, Azrael D, Hemenway D. Household firearm ownership and rates of suicide across the 50 US States. Journal of Trauma. 2007;62(4):1029-35.

MA and MO Suicide Methods, 2005



Massachusetts



Missouri

Source: CDC WISQARS <www.cdc.gov/ncipc/wisqars>

Massachusetts

- Firearm ownership is low (11-12%)
- Suicide rate is low (6-7 per 100k)
- In the U.S., groups for whom hanging is the leading method of suicide (e.g., the very young, college students, low gun states) tend to have lower rates of suicide

Missouri

- Firearm ownership is moderate to high (44%)
- Suicide rate (12-13.7 per 100k) is above U.S. average
- In 2006, MO had 799 suicides. If MO had the same suicide rate as MA, there would have been about 400 fewer suicides.

Maybe it's not the guns…

- Is gun ownership a marker for a third variable, like a "go it alone" attitude or rural residence?
- Asked National Comorbidity Survey to add gun ownership to their psych epi study in 2001.

Maybe it's not the guns…

- Is gun ownership a marker for a third variable, like a "go it alone" attitude or rural residence?
- Asked National Comorbidity Survey to add gun ownership to their psych epi study in 2001.
- Gun owners no more likely than non-owners to have mental illness or to report thinking about or attempting suicide.
- *Gun owners aren't more suicidal. They're just more likely to die if they become suicidal.*

What is it about guns?

- Inherent lethality
- Immediacy
- Irreversibility
- Most other methods allow a “backing-out” opportunity--even many hangings. About half of hanging deaths are partial suspension (Gunnell 2005)

On the bridge, Baldwin counted to ten and stayed frozen. He counted to ten again, then vaulted over. "I still see my hands coming off the railing," he said. As he crossed the chord in flight, Baldwin recalls, "I instantly realized that everything in my life that I'd thought was unfixable was totally fixable—except for having just jumped."

–Tad Friend, "Jumpers"
The New Yorker, October 13, 2003.

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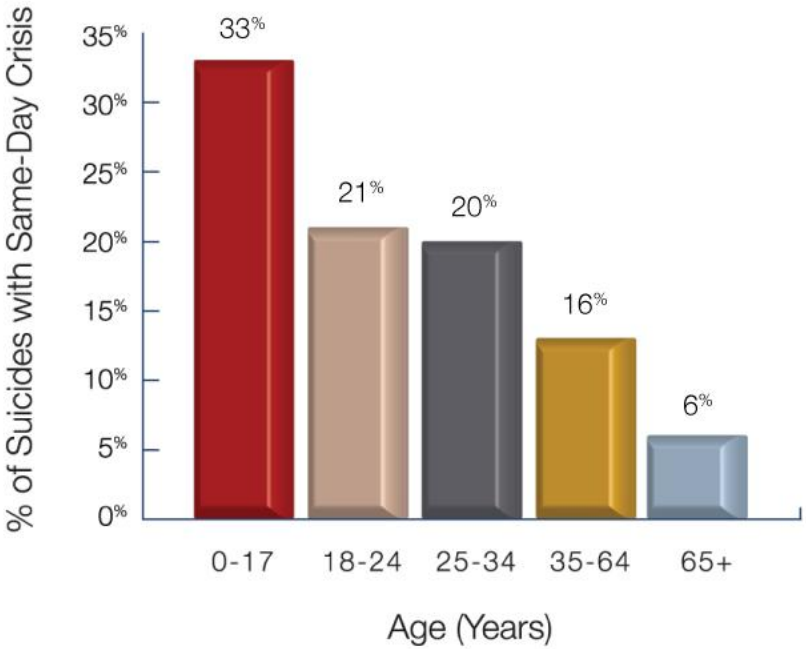


Source: Harvard Injury Control Research Center, National Violent Injury Statistics System (NVISS). 2001 suicide data summary. Available at: http://www.hsph.harvard.edu/hicrc/nviss/documents/Suicide%20Summary%202001.pdf

How do young suicide victims get a gun?

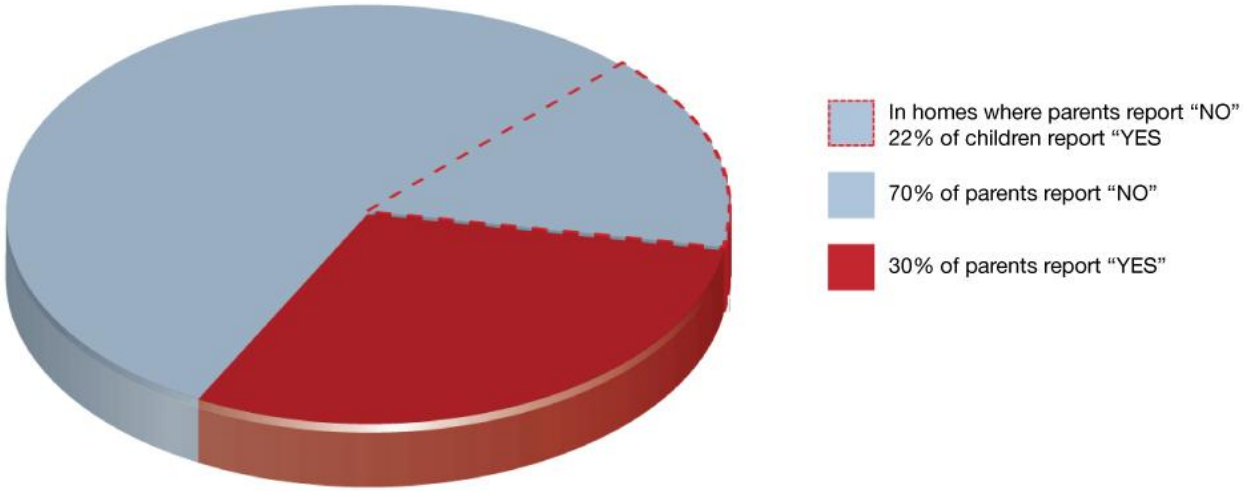
85%

of youths under 18 who died by firearm suicide used a family member's gun, usually a parent's.

Source: Harvard Injury Control Research Center, National Violent Injury Statistics System (NVISS). 2001 suicide data summary. Available at: http://www.hsph.harvard.edu/hicrc/nviss/documents/Suicide%20Summary%202001.pdf

How do young suicide victims get a gun?

Responses to the Question: "Has Your Child Handled Your Gun in Your Home?"



Source: Baxley F, Miller M. Parental misperceptions about children and firearms. Arch Pediatr Adolesc Med. 2006;160(5):542-7.

Reducing Access to Lethal Means

2005 Mann et al. - *JAMA*

- International expert review concluded only two intervention types currently have a strong evidence base pointing to effectiveness:
  - Physician education on treating depression
  - Reducing access to lethal means

Means Reduction

- Lower CO in domestic gas (UK)
- Pesticide toxicity (Asia, Pacific Islands)
- Lower CO emissions in car exhaust
- Medication packaging and availability
- Bridge barriers

Reducing Access to Lethal Means

1994 O'Carroll, Potter, Mercy - *MMWR*

"Some potentially successful strategies are applied infrequently, yet other strategies are applied commonly. Despite evidence that restricting access to lethal means of suicide…can help to prevent suicide among adolescents and young adults, this strategy was not a major focus of any of the programs identified."

State Interviews

- How many states are currently working on reducing a suicidal person's access to firearms?

43 34 18 9 0

State Interviews

- Telephone interviews
- Director/leader of statewide suicide prevention coalition or comparable planning body, as identified on SPRC website
- Summer ‘06-March ‘07
- N=50 (one per state)
- Content analysis of written state plans

State Interviews

- How many states are working on reducing a suicidal person's access to firearms?

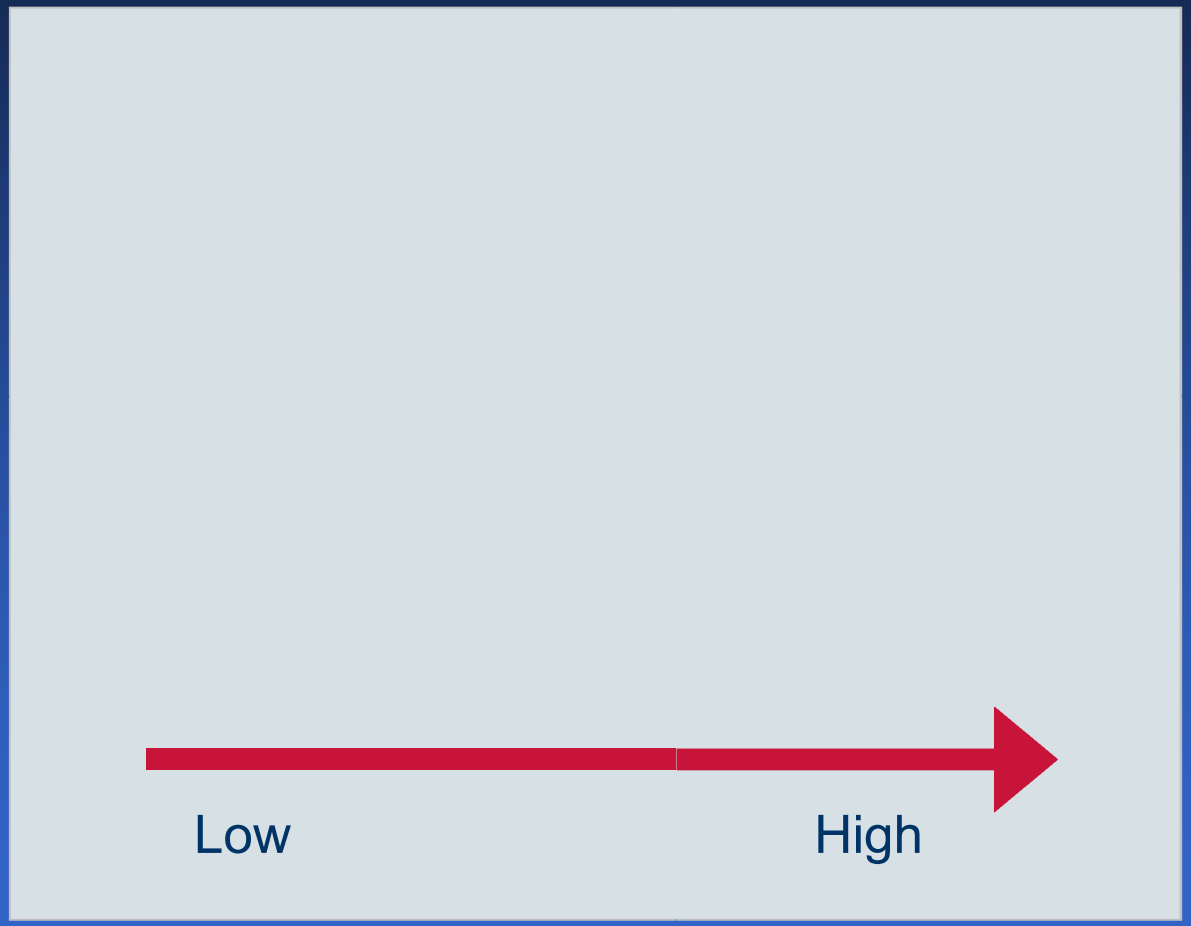
43 34 18 9 0

- 84% of the state plans call for means restriction (among the 45 with a written plan we could review).
- Why isn't every one of the 34 states that are doing gatekeeper training or screening or public awareness campaigns also doing means reduction?

Barriers to Means Reduction

- Political contentiousness of gun issue
- Assumptions about “intent” (“If you really want to commit suicide, you can always find a way.”)

Intent to Die Continuum



Political Contentiousness

- States with high gun ownership rates say they can't touch this.
- States with low gun ownership rates say this isn't their issue.
- Meanwhile, more gun owners live in low gun density states like Massachusetts and New Jersey than high ones like Maine and Wyoming because many high gun states have small populations.
- This is everyone's issue.
- This is not a legislative campaign.

A Life Saved

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What Made the Difference?

- The parents in both scenarios contacted a mental health center to learn how to help their son
- In the second scenario, the clinician asked about guns at home. Most do not.
- Surveys of psychiatrists (HICRC, unpublished), emergency dept nurses (Grossman J, 2003), ED patients (McManus B, 1997) confirm that few clinicians are asking and few feel prepared to broach the topic.
- What would it take to ensure this was standard practice in Missouri?

How do we keep our communities safe?

Recommendations for suicide prevention groups:

- *Educate providers.*
- *Change policy.*
- *Expand options.*

How do we keep our communities safe?

Recommendations for suicide prevention groups:

Educate providers.

Train providers on how to counsel suicidal or at-risk people and their families about guns at home. Many providers currently do not. Visit meansmatter.org for information about lethal means counseling.

Source: Grossman J, Dontes A, Kruesi M, Pennington J, Fendrich M. Emergency nurses' responses to a survey about means restriction: an adolescent suicide prevention strategy. J Am Psych Nurse. 2003;9:77-85.

What Providers?

- School psychologists
- Truant officer, coach, teacher, principal, nurse
- Pediatricians
- ED clinicians
- Employee assistance projects
- Defense attorneys
- Police
- Divorce attorneys
- Marriage counselors
- Social workers
- Rehab clinician
- Etc.

Program Examples

- New Hampshire's CALM training (Counseling on Access to Lethal Means)
- Kreusi Emergency Dept training (on SPRC evidence-based registry)

How do we keep our communities safe?

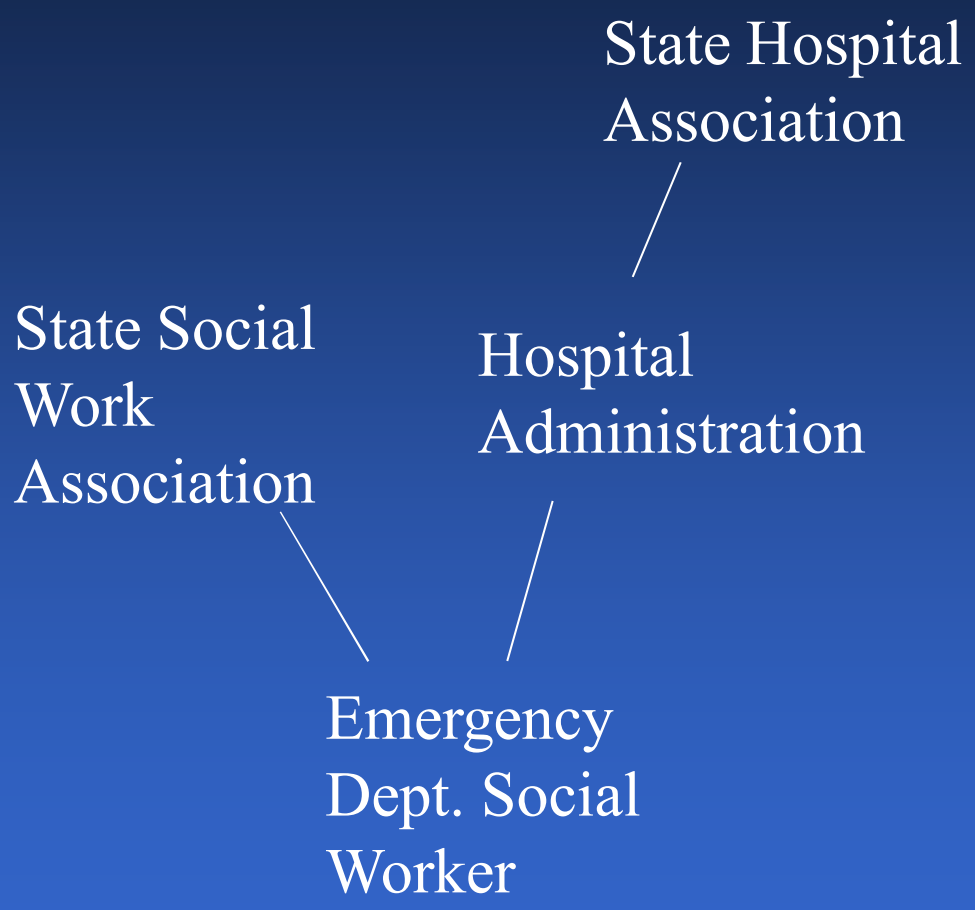
Recommendations for suicide prevention groups:

Change policy.

Ensure that all suicidal patients and their families are counseled about access to guns.

Do this by encouraging professional groups (e.g., state social workers association, state hospital association) to add lethal means counseling to current suicide prevention protocols.

Building It Into the System



How do we keep our communities safe?

Recommendations for suicide prevention groups:

Expand options.

Work with local police, public safety groups, and others to expand options for families who want to remove guns either permanently or temporarily.

Many police departments currently have no policy in place to dispose of or store weapons. Work with them to explore some feasible options.

Means Matter Campaign

- Targeted to the state suicide prevention coalitions (grasstops opinion leader approach)
- Serve as educators and advocates locally
- meansmatter.org
- Online course available at: training.sprc.org - choose Workshop #4) (Not a clinical skills training; rather, a research summary)
- CALM-Online coming fall 2009
- Means Matter funded by Joyce and Bohnett Foundations

Questions, Comments?

Contact Cathy Barber

cbarber@hsph.harvard.edu

Suicide is a national tragedy. With hundreds of thousands of Americans attempting suicide each year, and over 30,000 dying, the problem calls out for solutions.

By working with family members and care providers to reduce a suicidal person's access to guns, we help ensure that more people get a second chance at life.

Means Matter

Suicide, Guns & Public Health

www.meansmatter.org