Gun Violence and Mental Illness

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Disclosures and Conflicts of Interest

None

Educational Objectives

- Understand the relationship between gun violence and mental illness, including suicide
- Improve skills in identifying patients at risk for firearm violence and familiarity with interventions to mitigate risk
- Develop clinical skills in discussing firearm safety with patients and/or their families to decrease the risk of suicide by firearm
- Discuss with patients the mental health prohibited categories of firearm ownership and the clinician's reporting requirements

Gun Violence: A Public Health Problem

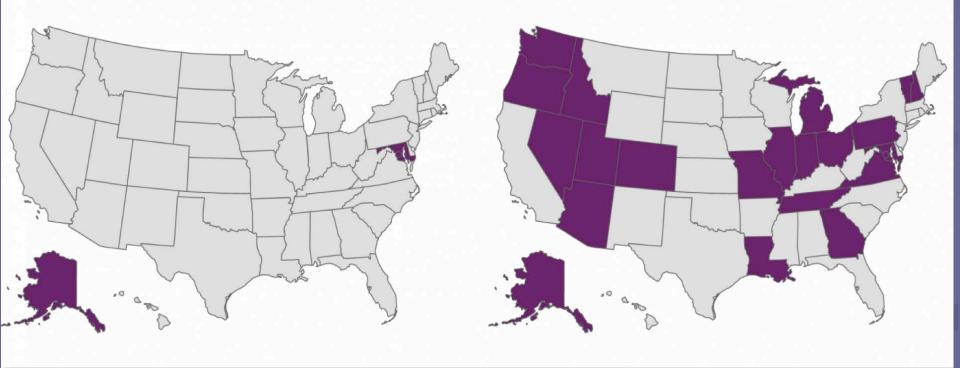
Year	Total Firearm Deaths	Death Rate (per 100,000)
2014	33,599	10.25
2013	33,636	10.37
2012	33,563	10.44
2011	32,351	10.16
2010	31,672	10.07

Gun deaths now outnumber car deaths in 21 states plus D.C.

States with more deaths from gun violence than from motor vehicle events.

In 2005

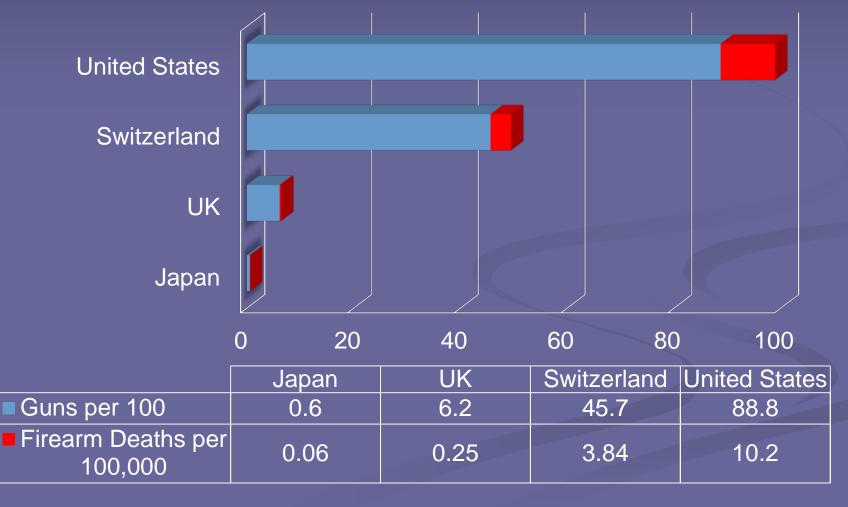
In 2014



WAPO.ST/WONKBLOG

Source: CDC

Gun Violence: A US Public Health Problem



Firearm Violence: A Public Health Issue

First defined as a public health problem in the late 20th century

1989: AMA Council on Scientific Affairs labeled firearm death and injuries "a critical public health issue."

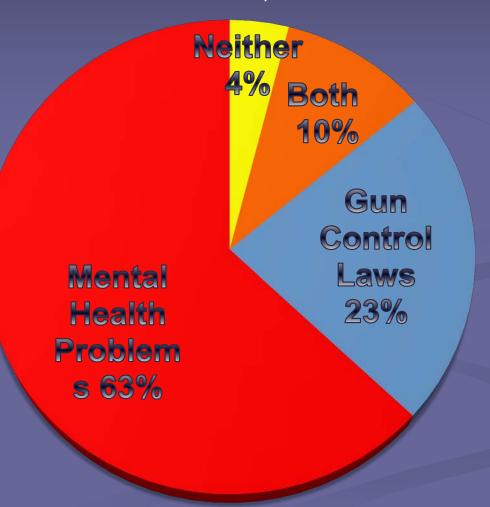
Gun Violence: A Mental Health Problem?

True or False:

- People with mental illness are DANGEROUS
- MASS SHOOTINGS represent the most significant type of gun violence
- People with mental illness are responsible for mass shootings and therefore, most gun violence

Of Course Its Mental IIIness!!

Washington Post-ABC News Poll, October 15-18, 2015



"Americans Fault Mental Health System Most for Gun Violence"

Gallup Poll: September 20, 2013

- 80% Failure of the mental health system to identify individuals who are a danger to others
- ■61% Easy access to guns

Mental Health Professionals Should be Able to:

- Determine who is mentally ill and dangerous
- Get them off the streets by involuntarily committing them
- Get them into the NICS database

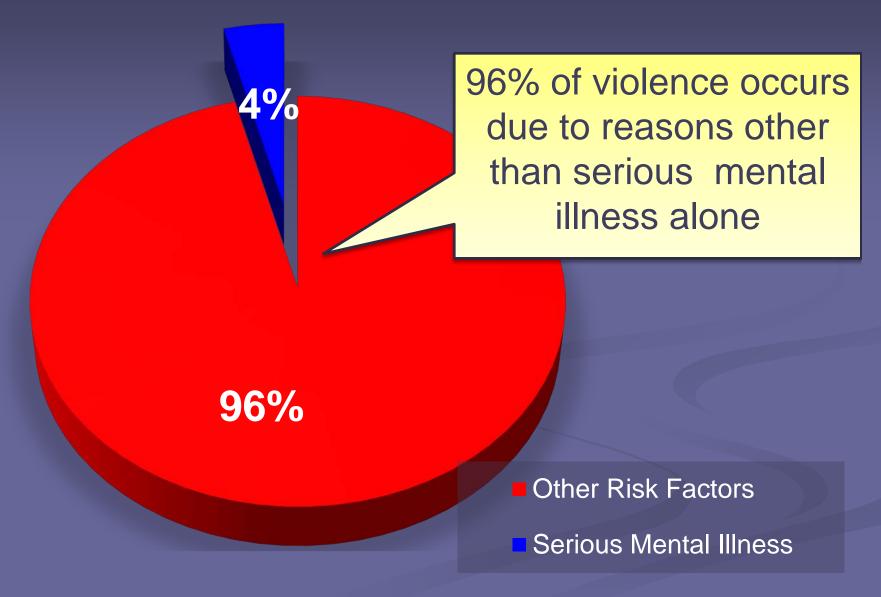
The Evidence: Mental Illness and Guns

- Most people who commit gun violence against others do not have serious mental illness
- Most people who have serious mental illness do not commit gun violence against others

Mental Illness and Violence

- 3-5% of all violence, not just firearm homicide, attributable to SMI
- Link between elevated risk of any type of violence and SMI is relatively weak

Fazel and Grann 2006; Van Dorn, Volavka, and Johnson, 2012)



Mental Illness and Violence

Link between elevated risk of any type of violence and SMI is typically mediated by other factors, primarily

- > Substance use
- > History of violent behavior

Mental Illness and Firearm Homicide

- Gun violence committed by people with SMI against strangers is exceptionally rare
- No statistically significant relationship between gun ownership and stranger firearm homicide rates (Siegal et al. 2014)

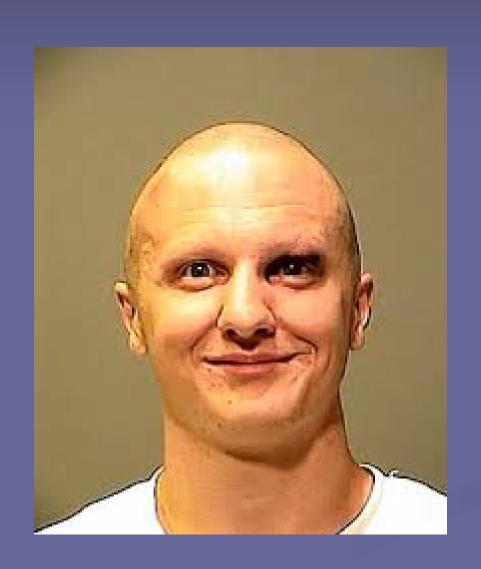
Mental Illness and Firearm Homicide

MacArthur Violence Risk Assessment Study

1% incidence of gun violence found by persons with SMI committed against strangers in this study population

(Steadman et al. Psychiatric Services 66, pp. 1238 – 1241, 2015: MacArthur Violence Risk Assessment Study)

But Doctor, Surely That's Not True!!





Year	Firearm Homicides	Mass Shooting Deaths	% of Firearm Homicides
2015	13,467	46	0.34
2014	12,590	18	0.14
2013	11,208	27	0.24
2012*	11,662	63	0.54
2007*	12,632	37	0.29

Centers for Disease Control and Prevention 2016; Overberg et al. 2016; Follman et al. 2013

Mass Shootings and Mental Illness

Jan 2009-July 2015: 133 incidents total

- 15 incidents (11%): Concerns about mental health had been brought to attention of medical practitioner, school official, or legal authority prior to shooting
- 1 incident: Shooter prohibited by federal law from possessing guns on basis of mental health prohibitor

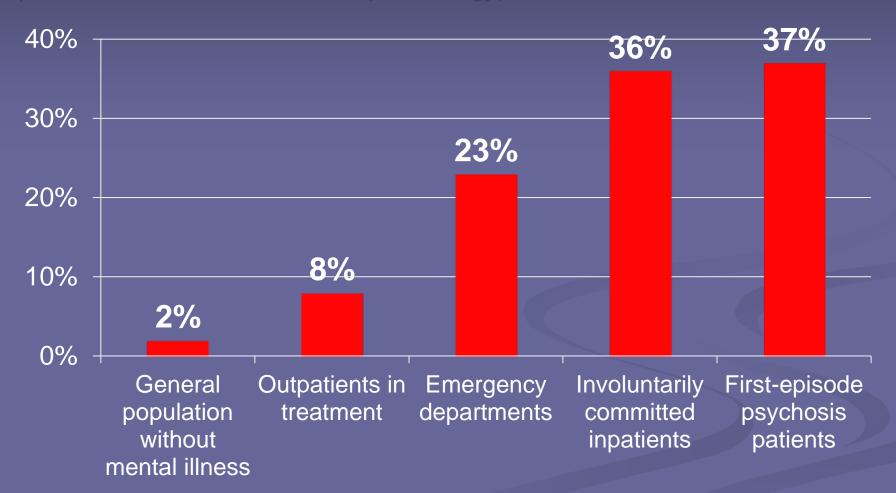
Everytown for Gun Safety, 2016

Mental Illness and Violence Risk

At certain times, in certain settings, individuals with SMI are at increased risk of committing violence

Percent violent within 6 – 12 months

(Swanson et al 2014, *Annals of Epidemiology*)



Mental Illness and Guns:

- Individuals with SMI more likely to be victims of violence than perpetrators
- Individuals most likely to be victims of violence by people with SMI are not strangers, but family members
- When people with SMI commit gun violence, they are most dangerous to themselves

The National Instant Criminal System (NICS)

Do current legal and categorical mental health prohibitions against owning or possessing firearms effectively decrease rates of firearm violence?

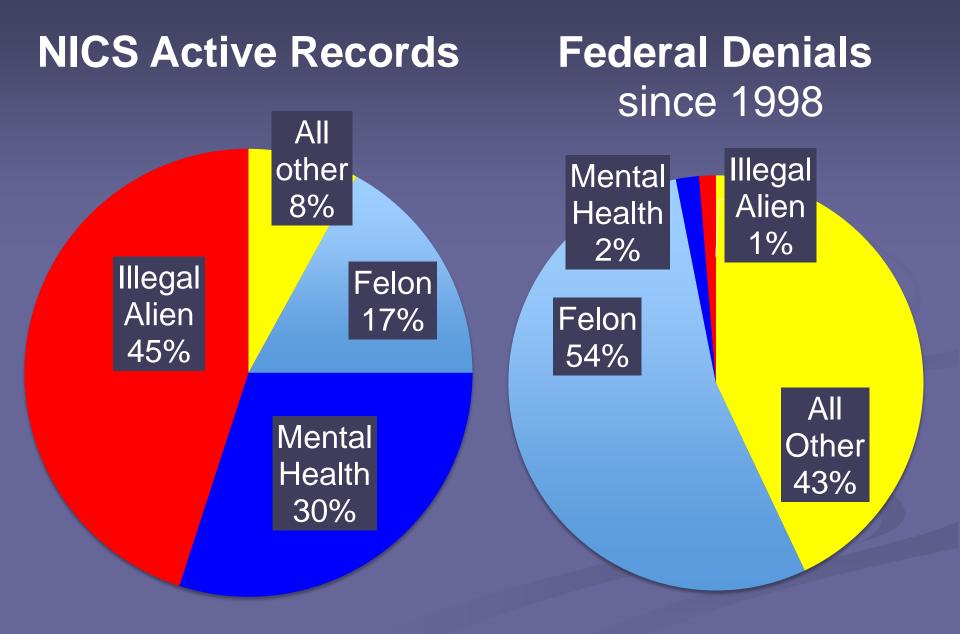
NICS, Mental Health, and Guns as of 7/31/16

"Adjudicated Mental Health":

- ≈ 4.5 million names
- 30% of total names
- 2nd largest category out of 12

Between 1998 and 2016

- only 1.8% of federal denials
- 8th out of 12 categories



FBI.gov 7/31/16

New York's SAFE Act

- Secure Ammunition and Firearms
 Enforcement Act of 2013
- Response to 12/12 Newtown mass shooting
- MHPs mandated to report patients likely to engage in conduct that would result in serious harm, which could lead to requiring individual to surrender firearm license and firearms

New York's SAFE Act

Between 3/16/13 and 10/18/14, MHPS reported almost 43,000 potentially dangerous patients

- Of these, 34,500 were entered into state's new database
- Fewer than 300 (0.7% of names reported) of these individuals found to have a gun permit

Implications of the Data

- Media/public/politicians are stuck on NEGATIVE STEREOTYPES of people with SMI
- Results in focusing on issues that will not result in decreased morbidity/mortality for gun violence

NICS Mental Health Prohibitors: "Adjudicated Mental Health"

- Involuntarily committed to a mental institution
- Adjudicated "Mental Defective"
 - Not Guilty By Reason of Insanity
 - Incompetent to Stand Trial
- Miscellaneous others:

 i.e. people under guardianships
- (and of course, state must report)

"Adjudicated Mental Defective:" Involuntary Commitment

Involuntary commitment is becoming rarer and rarer

- Largest number of names in category
- Commitment criteria are extremely narrow and strict
- Inpatient beds are unavailable
- May not be based on risk of suicide/violence/or firearms

"Adjudicated Mental Defective:" Incompetent to Stand Trial

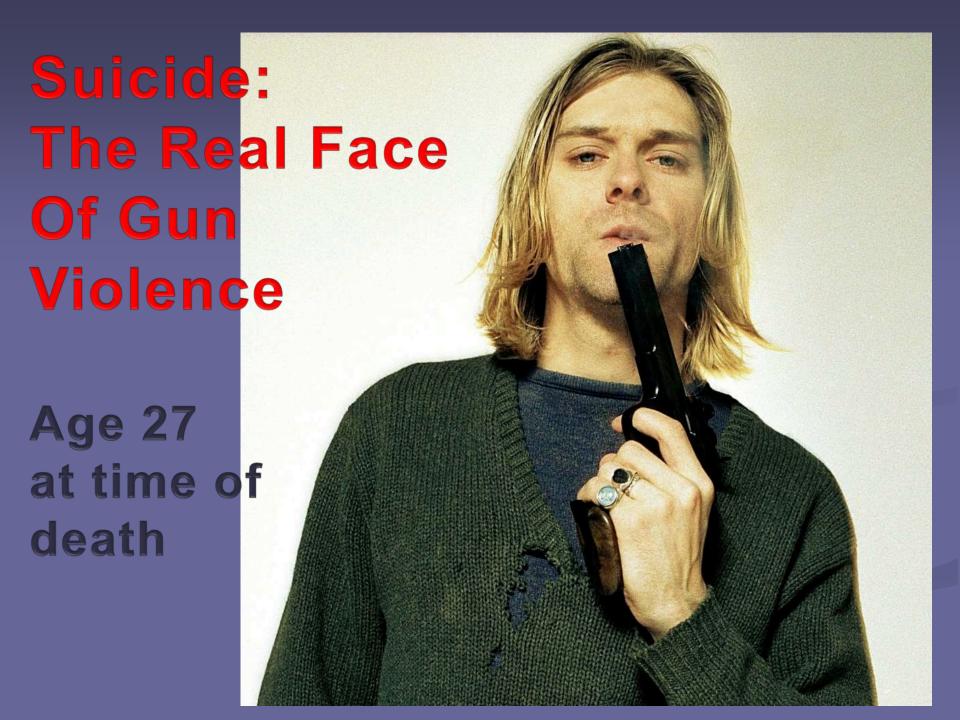
One of most common forensic psychiatry referrals/evaluations

- Low base rate: only about 20% of defendants referred
- About 60,000 evaluations a year

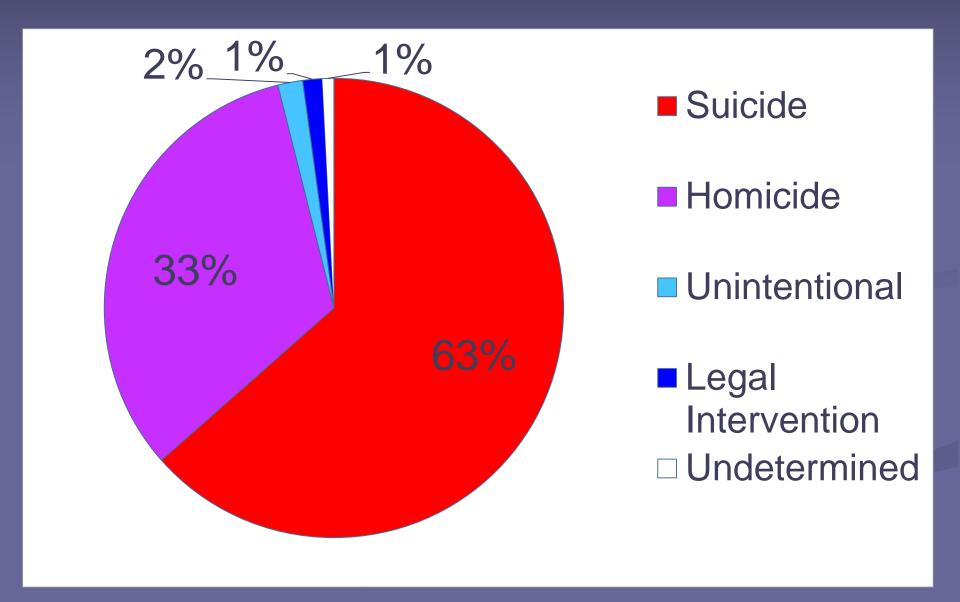
"Adjudicated Mental Defective" Not Guilty by Reason of Insanity

Successful NGRI defenses rare

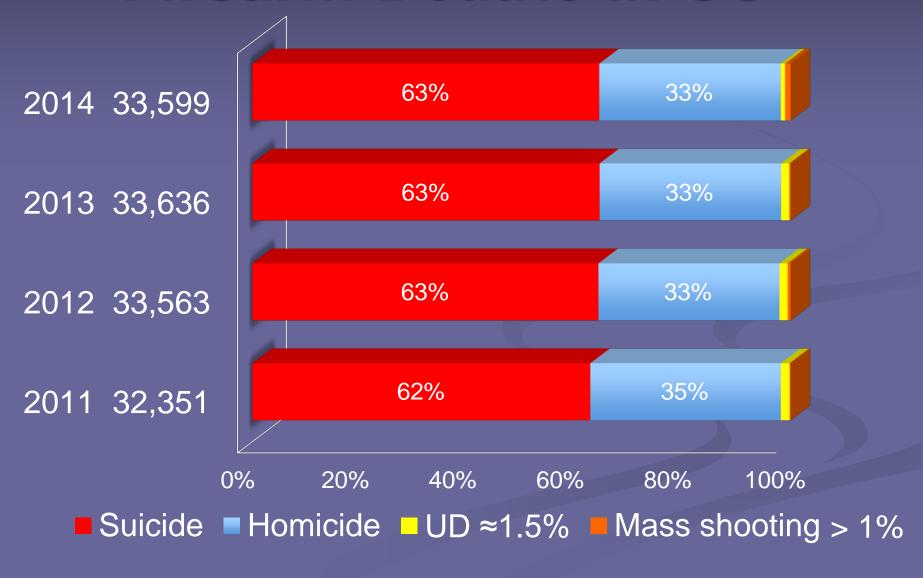
- Average: Raised in less than
 1% of all criminal cases
- When raised, successful in only 0.26% of cases



Firearm Deaths 2014: 33,599



Firearm Deaths in US

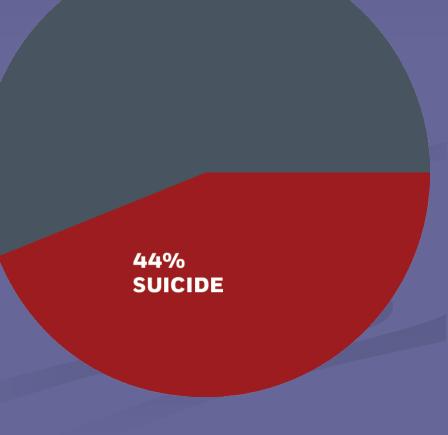


Year	Total Firearm Fatalities	Firearm Suicides	Firearm Homicide s
2014	33,599	21,334	12,590
2013	33,636	21,175	11,208
2012	33,563	20,666	11,662
2011	32,351	19,990	11,068

Centers for Disease Control and Prevention 2016; Overberg et al. 2016; Follman et al. 2013

Mass Shootings and Suicide

Of the 133 mass shootings between Jan 2009 and July 2015 shooter committed suicide in 58 incidents (44%)



Suicide and Mental Illness

In contrast to firearm homicide

47-74% of people who commit suicide have diagnosable mental illness at time of death

(Swanson et al. 2014)

Suicide: Also a Public Health Problem

2014: 10th leading cause of death overall in US (Homicide 17th)

 Ages 15-34, 2nd leading cause of death [1st is unintentional injury]

2014 Data from Centers for Disease Control/Wisqars and American Association of Suicidology

Suicide: The Numbers

- About 100 suicide deaths each day
- About 40,000 people a year
- About 20,000 people a year commit suicide with a firearm

(CDC; American Foundation for Suicide Prevention)

Suicide and Firearms

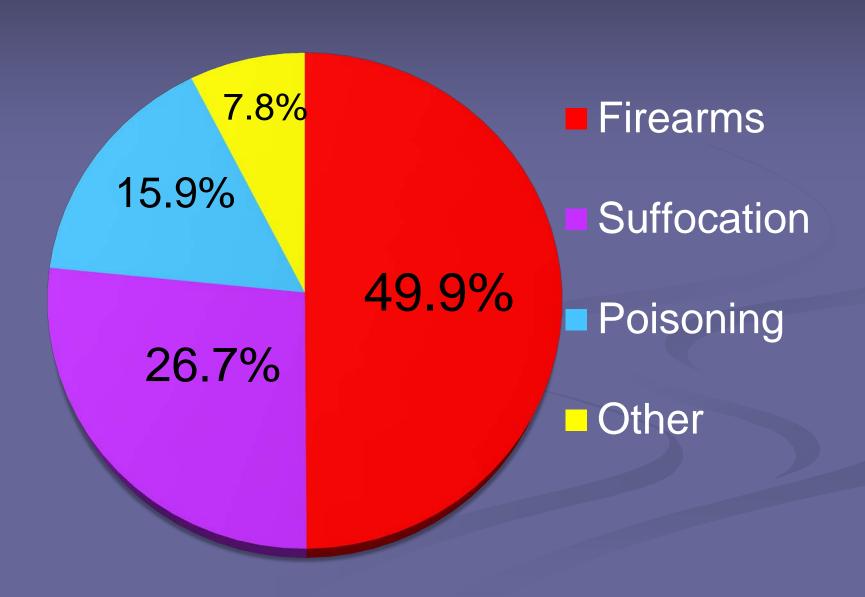
Year	Total Suicides	Firearm Suicides	% Total Suicides
2014	42,773	21,334	49.9
2013	41,149	21,175	51.5
2012	40,600	20,666	50.9
2011	39,518	19,990	50.6

American Association of Suicidology 2016

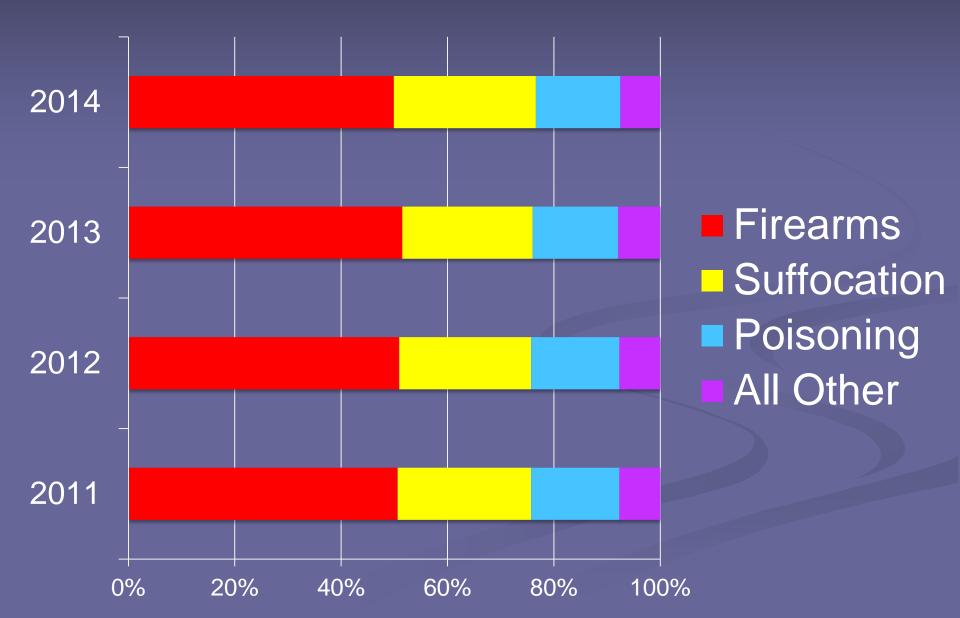
Firearms are the means used in about 40% of teen suicides

2014 Data from Centers for Disease Control/Wisqars and American Association of Suicidology

Suicide Methods 2014



Suicide Methods 2014 - 2011



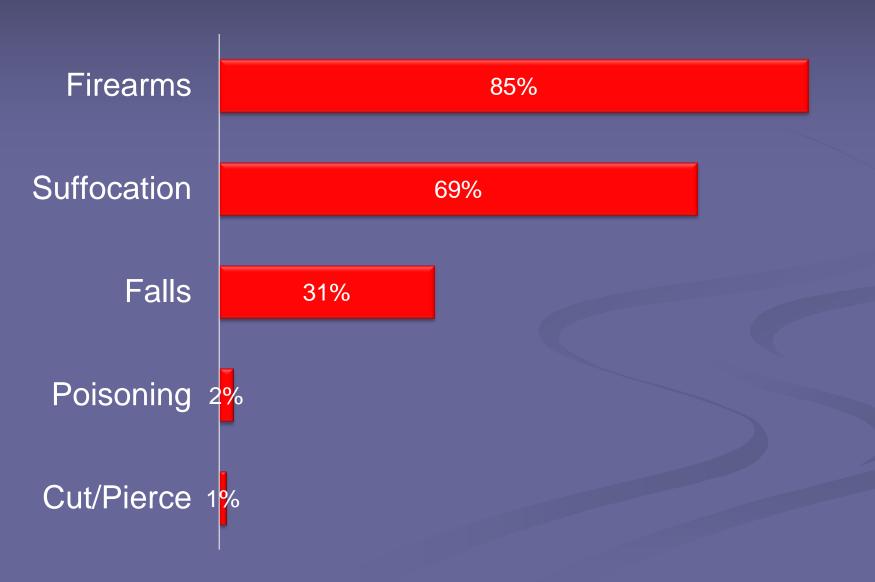
Firearm Suicide: Lethality



Source:

http://www.hsph.harvard.edu/means-matter/means-matter/case-fatality/

Case Fatality Rate (Lethality)



Public Health and Injury Prevention



Public Health and Injury Prevention

Evaluation of and interventions designed to alter

- Individual or human factors
- Factors associated with agent of injury
- Environmental factors

on as many levels as possible before, during, and after the injury

Public Health: Goal

Changing social norms through multiple interventions to reduce morbidity and mortality of preventable injury

- Motor vehicles
- Childproof caps on bottles
- Tobacco Use
- ?SUICIDE?
- ?FIREARMS?

Suicide is Preventable!

Two effective interventions supported by research evidence

- 1. Mental health treatment
- 2. Lethal means restriction

Mental Health Treatment

Suicide Risk Assessment (SRA) is

- the gateway to mental health treatment
- a core competency for psychiatrists and psychologists

All psychiatric and primary care patients should be routinely screened for increased risk of suicide if evidence or complaints of

- symptoms of depression
- substance misuse

Each patient contact an opportunity to decrease suicide risk through assessment and intervention

Contact with PCP or MHP prior to suicide is common

- Luomo et al 2002: In year prior to death in this study cohort
 - > About 32% made contact with MHP
 - About 77% made contact with PCP
- ◆ Ahmedani et al 2014: in this study
 - > 83% of suicide decedents had received primary care services in year prior to death
 - > 50% had PCP visit within 4 weeks of death

Risk Assessment vs Prediction

MHPs

- do not predict suicide
- **MHPs**
- assess risk of suicide then
- attempt to intervene to reduce risk

Why we shouldn't try to predict suicide

STATISTICALLY suicide is a low base rate event

- i.e., occurs at low rate of frequency
- 2014: 13.4 per 100,000 population

Why we shouldn't try to predict suicide

- Low base rate events are extremely difficult to predict with accuracy
- No single risk factor or combination of factors is pathognomonic for suicide

Why we shouldn't try to predict suicide

Prediction therefore results in high rates of false positives

- is not prediction
- is an evidence-based process (not an event)

- Suicide is a behavior that may be associated with many different diagnoses
- Level of risk can change rapidly and often without notice
- Requires ongoing systematic assessment, particularly before and after treatment interventions

Cannot rely solely on

- Checklists cannot encompass all relevant factors
- Patient report patient may deny or be unreliable
- Clinical intuition or judgment highly susceptible to error and bias

Important risk and protective factors are easily overlooked in absence of systematic assessment

- Systematic assessment combines semistructured tools, clinical interview, self report
- May also need to include information from other treatment providers, family, and psychiatric records

An evidence based consideration of multiple factors that increase or decrease risk of suicide

- Short term risk factors
- Long term risk factors
- Protective factors

Risk and protective factors are synthesized into clinical formulation of:

- low, moderate, or high
- foreseeable risk of suicidal behavior

Level of risk dictates need for and types of treatment

- Triage decisions
- Treatment planning (including need for hospitalization)
- Safety planning

Low risk: mild symptoms and no suicidal intent or features

• Moderate risk: emerges as symptoms escalate, evidence of subjective intent is identified and warning signs start to emerge

High risk:

- serious symptoms
- presence of active intent
 - subjective: i.e., articulation of intent or
 - objective: i.e., preparation, rehearsal behaviors
- presence of warning signs
- limited protective factors

- No standardized SRA models or tools have been widely adopted or agreed upon
- Nevertheless, many SRA models are available for use in systematic suicide risk assessment

Lethal Means Restriction

- An evidence-based intervention that decreases rates of suicide
- Evidence includes but is not limited to reducing access to firearms

Lethal Means Restriction

- Population Based Intervention
- 2. Individual Level Interventions
 - Firearm Safety Planning
 - Anticipatory Guidance and Counseling

Population Based Public Health Interventions

Reducing morbidity and mortality:

- Child proof caps on medication
- Requiring use of seat belts in cars
- Tobacco restrictions

Prevention, As Far "Upstream" As Possible

Advantage: More effective to change the agent/environment in which problem occurs than focus on trying to change individual (victim or perp) with last clear chance to prevent problem

Miller and Hemenway 2015

Suicide: Population Based Lethal Means Restrictions

- Banning sale of highly toxic pesticides (Southeast Asia)
- Household natural gas replaced "coal gas," has lower carbon monoxide levels (UK/US)
- Limiting firearm ownership (Australia)

Population-Based Interventions

- Broad and inclusive approaches that apply to everyone
- Emphasize shared responsibility
- Builds on mutual interests to change social norms

Advantage: Nonstigmatizing

Firearms Restriction: Population Level Interventions Multiple areas for population based restrictions might be considered

- Legislative restrictions, eg, waiting periods,
- Safe storage requirements in home
- Legally authorized removal of firearms from individuals in crisis, with or without mental illness

Evidence Based Population Level Intervention: Example

- High risk of suicide: first year post discharge from psychiatric hospitalization
- Kessler et al (2015): access to firearms one of strongest risk factors for suicide during this period

Evidence Based Population Level Intervention: Example

State and federal policies requiring minimum of one year prohibition on firearms post hospital discharge whether admission is voluntary or involuntary

Population Level Interventions: Firearms

Disadvantages:

- Always politically and socially controversial
- Difficult to enact legislatively

Individual Level Interventions to Restrict Access to Firearms

- Suicide Risk Assessment and Firearm Safety Planning
- Anticipatory Guidance and Counseling regarding Safe Firearm Storage

Suicide and Access to Firearms

Reducing access to commonly used and highly lethal means of suicide can decrease suicide rates by 30%-50%

Suicide Risk Assessment and Firearms

Evaluations should always include questions re:

- Suicidal ideation/plans AND
- Access to (not ownership of) firearms

Suicide and Access to Firearms

- Independent of psychopathology, access to firearms increases risk of suicide for all members of household
- Presence of firearms in the home is associated with 2-10 times increased risk of suicide in the home

(Barber and Miller 2014)

Suicide Risk Assessment and Firearms

Questions re: lethal means should not be limited to firearms BUT

Because of frequency of use and high lethality, SRAs should specifically include queries regarding access to firearms

How Does Means Reduction Save Lives?

- Suicide attempts are often impulsive
- Suicidal states of mind are often transient, many lasting minutes or hours
- The method people use to commit suicide largely depends on a method's ready availability

How Does Means Reduction Save Lives?

- Likelihood that a specific method of suicide will lead to death is also related to accessibility (Yip et al 2012)
- The more time and steps needed to commit suicide, the less likely person will go on to commit suicide

Suicide and Access to Firearms

- Over 310,000,000 civilian owned firearms in US
- About 30% of households in US have guns in home, most have more than one gun
- Varies by state:
 - Delaware: Less than 6% have guns
 - Wyoming: More than 50%

Suicide and Access to

- Firearms
 Over 75% of firearm suicides among adults occur in the home
- Vast majority of firearm suicides involve a firearm owned by a member of the household
- Most adolescent suicides occur in the home with a firearm owned by a parent

Suicide and Access to Firearms

Firearms, especially if stored unlocked and unloaded, are

- easily accessed
- highly lethal
- require little preparation to be effective

Dose response relationship consistently found in home suicides

- Ease of firearm access creates hierarchy of suicide risk
- People in homes with loaded firearms at higher risk of suicide than those with unloaded firearms
- People in homes in which gun stored unlocked at higher risk than those in which guns locked

Suicide and Unintentional Firearm Injuries

- 3 times more likely when firearms stored loaded
- 4 times more likely when firearms stored unlocked
- 2-3 times more likely when firearms stored with ammunition

Each individual safety practice decreases risk (Grossman 2005)

Safe Storage

Shenassa et al (2004):

Owners who kept firearms locked or unloaded at least 60% less likely to die from firearm suicide than those who stored firearms unlocked or loaded.

The Myth of Means Substitution

But Doctor:

- Won't people who really want to kill themselves find some other way to commit suicide?
- If you stop them this time, won't they just go on to commit suicide later?

Substitution

- Multiple studies: restriction of a common and highly lethal means of suicide does not inevitably lead to means substitution
- Where substitution does occur, chances for surviving a suicide attempt increase because other methods are less lethal than firearms.

SRA: Creates opportunity for lethal means restriction through planning with patient and family

Goal: formulate concrete interventions to separate at risk individual from firearms

- Approach ideally should be collaborative, and include supportive family members/friends
- Questions and safety planning should be based on explicit acknowledgement of concern for patient's safety

1. Become familiar with firearm laws in your community

- 2. Ask patient (and SO's) about access to guns in the home or elsewhere
- Does patient own guns?
- Does anyone in home own guns?
- Does patient have access to guns owned by someone else?
- Is patient planning to purchase firearms?

3. Involve patient and SO's in designing FSP. Include discussion of clinical criteria to be considered for return of firearms.

May require more than one meeting

4. Use meetings with patient and family or other SO's to educate all involved of increased risk of suicide with access to firearms, use of drugs or alcohol, and that safest option is removal of guns from home

- 5. Designate a willing responsible individual to follow through with gun safety plan
- Potentially suicidal patients should not handle firearms, even for purposes of removal

6. Confirm via call back from designated individual that plan has been carried out

7. Document safety plan and confirming call back

8. Repeat SRA as often as indicated, especially before any treatment decision that may restore access to firearms.

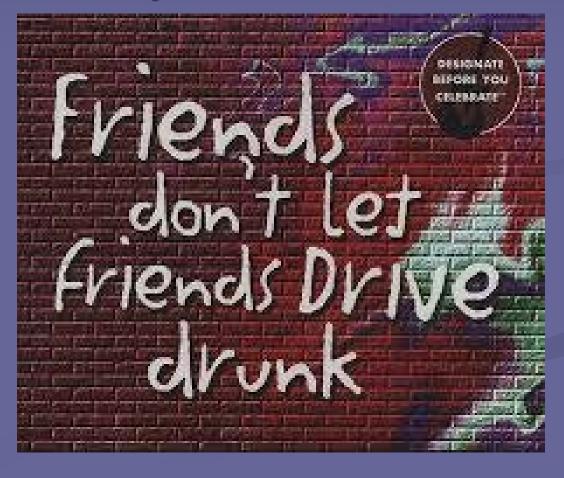
If patient refuses to participate in firearm safety planning, consider invoking emergency exception to confidentiality to contact family or SO's

SRA and Firearm Safety Planning

Bear in mind: firearms do not have to be permanently removed

Analogy: taking car keys from friend or

family member if that person has been drinking and should not be driving



- Separating intoxicated driver from car is not equivalent to confiscating car
- Access to car is returned when risk is mitigated
- Similarly, firearm safety plan that restricts access can include agreed upon benchmarks of mitigated risk for return of access

In Crisis, Advocate for Firearm Removal

THERE IS NO SUCH THING AS SAFE HOME STORAGE OF FIREARMS

if anyone in the home is having an acute

- mental health problem and/or
- substance use problem and/or
- a personal crisis (financial, relationship, professional, medical)

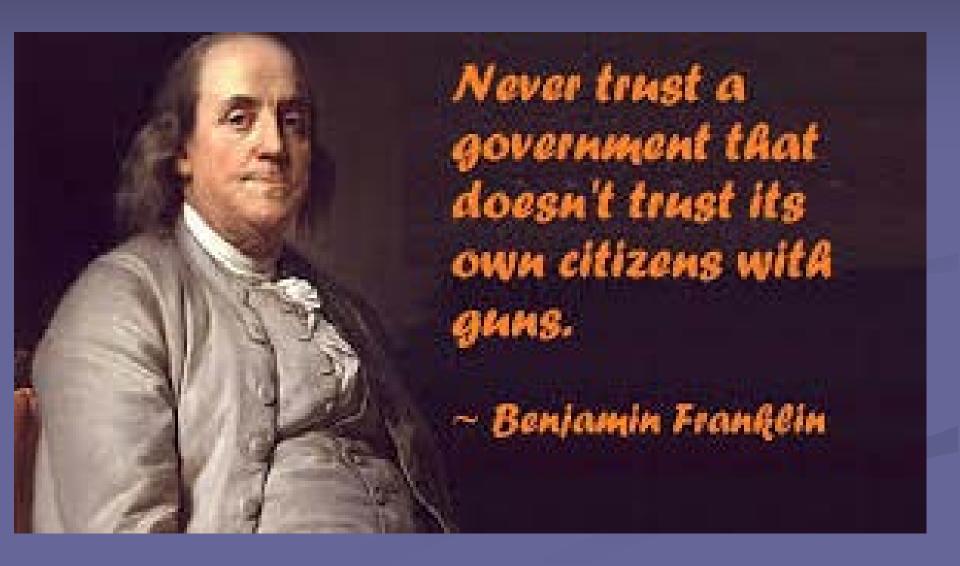
DO NOT EVER RELY ON SUICIDE PREVENTION CONTRACTS, but especially in regard to firearm safety

There is no evidence they reduce or eliminate suicide risk.

Anticipatory Guidance and Counseling: Firearms and Suicide

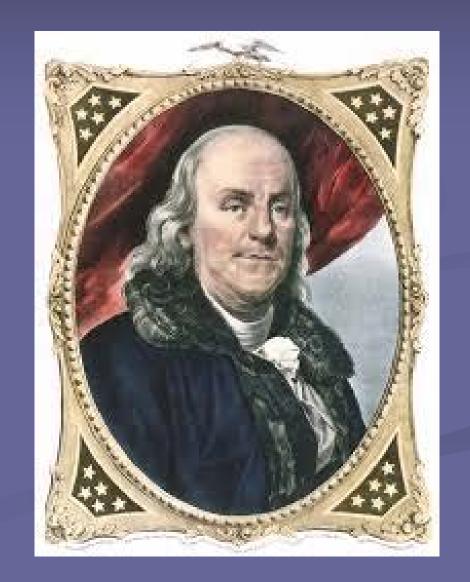
Suicide
Appropriate counseling regarding safe firearm storage should be provided BEFORE a crisis leads to a fatal outcome

Anticipatory Guidance



Anticipatory Guidance

"An ounce of prevention is worth a pound of cure."



Firearm Safety Planning: Education

- Suicide often impulsive
- Presence in home of firearm increases likelihood of fatality
- Drugs and alcohol increase risk of impulsive suicide and fatal outcomes
- Treatment options are available and reduce risk of suicide
- Limiting access to firearms does not have to be permanent
- No safe storage in home with someone in crisis

Discussions are not about politics or rights, but about reducing risks of injury or death for patient and all members of patient household.

Counseling patients should include objective and neutral education and discussion regarding:

- risk and
- means of mitigating risks

Each barrier that delays access to firearms associated with decreasing levels of morbidity and mortality.

 Empirical data supports efficacy in decreasing suicide, especially among teens

Patient Counseling Safe Storage Practices

Firearms should be kept

- Unloaded
- Disassembled or properly applied safety device such as lock
- Locked

Ammunition stored and locked separately

- Gun communication within family
- Alternate storage plan discussed before needed

Available at suicideproof.org

Is your home

SUICIDE-PROOF?

Even if you think your child is not at risk for suicide, why take chances? These simple steps can help you suicide-proof your home and possibly save a teen's life.



Remove Firearms For Now

- · Ask a trusted friend or family member to keep it temporarily.
- Your local police precinct or shooting club might offer temporary storage.
- . At the very least, lock them securely away from ammunition.

Limit Medications

- Don't keep lethal doses on hand. A pharmacist can advise you on safe quantities.
- . Consider locking up medications.
- . Dispose of any medications you no longer need.

Provide Support

- . The warning signs of suicide are not always obvious.
- · Pay attention to your teen's moods and behavior.
- If you notice significant changes, ask them if they're thinking about suicide.





MEDICATIONS

Lock and limit.

Fact: Teens who attempt suicide use medications more than any other method.



SUPPORT

Listen and ask.

Fact: Millions of kids and teens seriously consider attempting suicide every year.





FIREARMS

Remove. Lock.

Fact: Firearms are used in close to half of teen suicide deaths.





VISIT suicideproof.org

NATIONAL SUICIDE PREVENTION LIFELINE:

24/7 free and confidential. 1-800-273-TALK (8255)

IN CASE OF EMERGENCY:

Call 911 or visit your local emergency room.



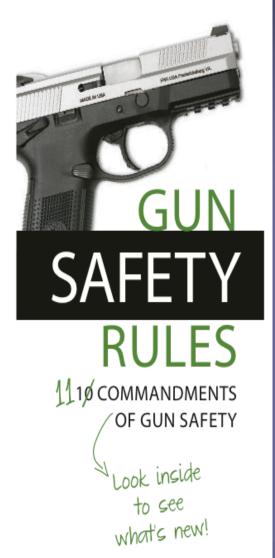
The Tennessee Suicide Prevention Network (TSPN) is the statewide public-private organization responsible for implementing the Tennessee Strategy for Suicide Prevention as defined by the 2001 National Strategy for Suicide Prevention.

TSPN is a non-partisan, non-profit network that works across the state to eliminate the stigma of suicide and educate communities about the warning signs of suicide, with the ultimate intention of reducing suicide rates in the state of Tennessee.

This pamphlet is part of a statewide gun safety program intended to prevent suicides involving guns. It brings together gun shops, firing ranges, gun enthusiasts, legislators, and advocates and researchers in injury prevention and mental health to raise public awareness about gun safety and its role in suicide prevention. It is based off a highly successful public awareness campaign by the New Hampshire Firearm Safety Coalition.

More information about this project is available via our website (www.tspn.org) or from the central office at tspn@tspn.org or (615) 297-1077.

For more information, visit our website: www.tspn.org



11. Consider temporary off-site storage if a family member may be suicidal. When an emotional crisis (like a break-up, job loss, legal trouble) or a major change in someone's behavior (like depression, violence, heavy drinking) causes concern, storing guns outside the home for a while may save a life. Friends as well as some shooting clubs, police departments, or gun shops may be able to store them for you until the situation improves.

Available at www.tspn.org

Physician Practices: We need to do better!

- Carney et al (2002): only 6% of psych outpatients in one setting reported screening for firearms
- Price et al (2007): only 27% of psychiatrists reported having a routine system for identifying patients who owned firearms, even among suicidal patients
 - One common reason: "Lack of expertise"

Physician Practices

Psychiatric residency directors: (Price et al 2010)

- only 13% reported providing firearm injury prevention training to residents
- 79% reported had not seriously thought about such training

Physician Practices

Residency Training Directors reported most significant barriers to such training

- 50% lack of standardized teaching material
- 49% lack of faculty expertise on firearm issues
- 42% absence of curriculum competencies or guidelines approved by APA or ACGME

Gag Laws



"Docs v. Glocks"

Wollschläger v. Governor of Florida, 2014

- District Court: unconstitutional
- 11th Circuit Court (3 judge panel) ruled this law constitutional
- En banc appeal pending

Approximately a dozen states have introduced similar legislation, most not enacted; however versions passed in

- Montana (2013)
- Missouri (2014)

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- Montana (2013)
- Missouri (2014)

Violations reportable to State Boards of Medicine (no due process rights)

Overall effect: Likely to deter PCPs (not directed generally at psychiatrists) from asking questions re: firearm safety due to fear of being reported to their State Boards.

Medical Organizations Opposing Physician Gag Laws

- American Psychiatric Association
- American Medical Association
- American Public Health Association
- American Academy of Family Physicians
- American Academy of Pediatrics

Medical Organizations Opposing Physician Gag Laws

- Laws

 American Academy of Pediatrics
- American College of Emergency Physicians
- American Congress of OB/GYNs
- American College of Physicians
- American College of Surgeons

Talking about Firearms

Physicians don't need a law to talk to patients and execute firearm safety plan

Educate ourselves and our patients to decrease risk of firearm suicide

Conclusion

- Public health approaches offer opportunities to decrease the public health problems of firearm violence and suicide
- The overwhelming majority of firearm deaths in the US are firearm suicides.

Conclusion

Psychiatrists have an important role to play in decreasing firearm deaths by

- Educating the public to decrease influence of negative stereotypes of individuals with mental illness and gun violence
- Conducting suicide risk assessments
- Working with patients and families to restrict access to firearms,, especially in times of crisis