


Children's Hospital of Chicago  
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Northwestern Medicine  
Firearms and suicide  
Maryann Mason, PhD  
Illinois Violent Death Reporting System



BEST CHILDREN'S HOSPITALS  
MAGNET  
ACADEMICAL

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Suicide risk factors

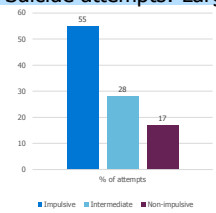
- Family history
- History of child maltreatment
- Previous attempts
- Untreated mental health disorders\*
- Substance misuse\*
- Isolation
- Local suicide epidemics
- Feelings of hopelessness
- Loss (jobs, relationships, financial, etc.)
- Physical illness
- Barriers to mental health treatment
- Violent/aggressive behavior
- Access to lethal means\*

\* Strong association with firearm suicide

Source: Centers for Disease Control and Prevention. Suicide Risk and Protective Factors. Available at: <https://www.cdc.gov/violenceprevention/suicide/riskprotectivefactors.html>

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Suicide attempts: Largely impulsive acts



Reactive to interpersonal events in proceeding 24 hours including problems with:

- intimate partners
- physical health
- criminal legal system
- finances
- school

Source: Baca-Garcia, et al. A prospective study of the paradoxical relationship between impulsivity and lethality of suicide attempts: Clin Psychiatry 2001;62(7):560-564.

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Impulsive suicide attempts

Crisis Mindset

- Characterized by compromised thinking –“Accident of the mind”

Occur in contexts with untreated or undiagnosed chronic conditions:

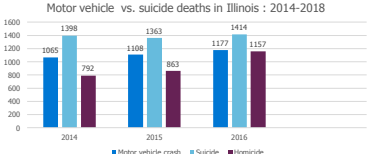
- Underlying mental health conditions (60-80%)
  - Most suicide victims not in treatment for mental health issues at time of suicide (60%)
  - Health problems/pain
  - Substance misuse

Source: Simon, T.R., Swann, A.C., Powell, K.E., Potter, L.B., Kresnow, M., and O'Carroll, P.W. Characteristics of Impulsive Suicide Attempts and Attempters. SLTB. 2001; 32(suppl):49-59.

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Suicide is a leading cause of death in Illinois

Each year in Illinois more people die from suicide than motor vehicle crashes or homicide

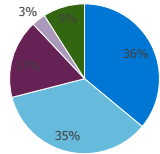


Source: National Center for Injury Prevention and Control, CDC. Data Source: NCHS Vital Statistics System for numbers of deaths. Bureau of Census for population estimates.

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In 2016, more than a third (36%) of suicides in Illinois were by firearm

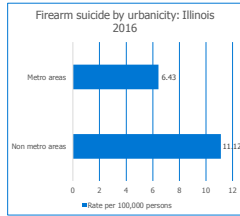
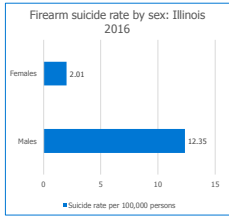
2016 Suicide by means in Illinois



Source: National Center for Injury Prevention and Control, CDC. Data Source: NCHS Vital Statistics System for numbers of deaths. Bureau of Census for population estimates.

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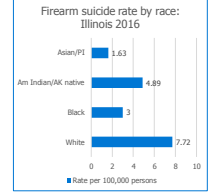
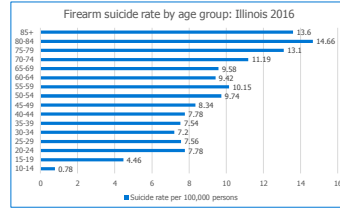
### Firearm suicide in Illinois who is at risk?



Source: National Center for Injury Prevention and Control, CDC. Data Source: NCHS Vital Statistics System for numbers of deaths. Bureau of Census for population estimates.

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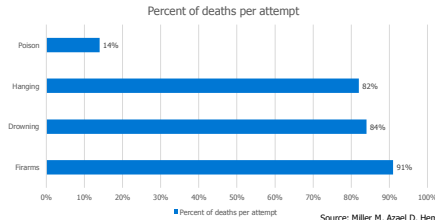
### Firearm suicide in Illinois who is at risk?



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### What makes firearms different? Lethality



Source: Miller M, Azael D, Hemenway D. The Epidemiology of case fatality rates for suicide in the North East. Am Emerg Med. 2008;43(6):723-730.

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### Suicide prevention: Evidence base

Solid evidence of effectiveness in reducing suicide rates:

- Physician education in depression recognition and treatment
- Restricting access to lethal means

More study needed:

- Public education
- Screening
- Media education

Source: Mann JJ, Apter A, Bertolote J et al. Suicide Prevention Strategies: A Systematic Review. JAMA 2005;294(16):2064-2074.

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### Lethality of means → Means Matter Campaign

• Harvard School of Public Health –Injury Control Research Center (<https://www.hsph.harvard.edu/means-matter/>)

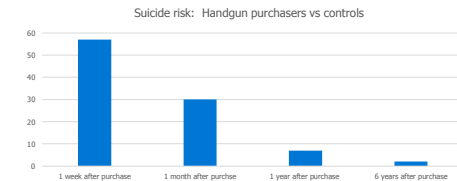
• Focus: Means reduction (reducing access to highly lethal means)



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### Firearm access and suicide risk

- Most firearm suicides involve handguns<sup>1</sup>
- Suicide risk is greatly increased for handgun purchasers<sup>2</sup>



Source: <sup>1</sup>Wintermute GJ, Teet SP, Kraus JF, Wingle MW. The choice of weapons in firearm suicides. Am J Public Health. 1985;75(7):524-526. <sup>2</sup>Wintermute et al. 1995. Mortality among recent purchasers of handguns. N. Engl. J. Med 341(21)

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## Firearm access and suicide risk



Increased risk of suicide in homes with guns<sup>1</sup>

Suicide risk among adolescents is doubled when there is a gun at home<sup>2</sup>

Sources: <sup>1</sup> Dahlberg LL, Ikeda RM, Kresnow M. Guns in the home and risk of violent death in the home. Findings from a national study. *Am J Epidemiol* 2004; 160(10):929-936.  
<sup>2</sup> Brent DA, Baugher M, Bridge J, Chen T, Chiappetta L. Age- and sex-related risk factors for adolescent suicide. *Journal of the American Academy of Child and Adolescent Psychiatry*. 1999; 38(12):1497-505.

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## Limiting firearm access for suicide prevention: What works? Extreme risk protection order (ERPO)



Allows families, household members or law enforcement to petition a court for an order temporarily restricting a person's access to guns

- Connecticut
  - 2016 study: for every 10 to 20 firearms seized one suicide was prevented<sup>1</sup>
  - 2018 study: 1.6% reduction in suicides initially, 13.6% when enforcement was enhanced<sup>2</sup>
- Indiana
  - 2005-2015: found a 7.5% drop in suicides (law passed in 2005)<sup>2</sup>

<sup>1</sup>Jeffrey W. Swanson et al., *Implementation and Effectiveness of Connecticut's Risk-Based Gun Removal Law: Does it Prevent Suicides?* *Law and Contemporary Problems* (August 24, 2016), available at SSRN: <https://ssrn.com/abstract=2828847>  
<sup>2</sup>Aaron J. Kivisto and Peter Lee Phalen, "Effects of Risk-Based Firearm Seizure Laws in Connecticut and Indiana on Suicide Rates, 1981-2015," *Psychiatric Services* (2018)

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## Illinois Firearm Restraining Order Act (FRO)



Takes effect January 1, 2019

Provisions:

- **Family member, household member** or law enforcement official may petition a court for an FRO;
- Can petition emergency hearing (same day or next court day)
- If emergency order is issued, a full hearing must be held within 14 days.
- Non emergency FRO issued for six month periods. Renewable

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<http://www.ilga.gov/legislation/publicacts/fulltext.asp?Name=100-0607>

## Illinois Firearm Restraining Order Act(FRO): How/why issued



Issued by circuit court

Why issued: substantial likelihood that a person will, in the near future, cause personal injury to him- or herself or others by owning or possessing a firearm.

Evidence considered:

- Recent threat or committed a recent act of violence directed at him- or herself or another
- Violation of a protective order of any kind
- Conviction for a violent offense; or engaged in a pattern or violent acts or threats within the past 12 months

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## Illinois Firearm Restraining Order Act(FRO): How to file



Petition filed in the county where the subject resides

No fees

Office of the Clerk of the Court/States Attorney may provide help in writing and filing

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## Illinois Firearm Restraining Order (FRO): What happens when a FRO is issued



Court is authorized to issue a warrant for any firearms in the person's possession;

Restrained person must immediately surrender all firearms in his or her possession. The law enforcement officer serving an FRO must also take custody of any firearm or other deadly weapon in plain sight;

Court must electronically notify state and local authorities within 1 court day of issuing an FRO;

FOID card is surrendered to law enforcement

Enforcement not affected by lack of summons service

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## Limiting firearm access for suicide prevention: What works? Safer storage



### Safer storage

- Locked (trigger locks, lock boxes and gun safes)
- Unloaded
- Ammunition and firearms stored separately



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## Limiting firearm access for suicide prevention: What works? Safe storage



Storing guns safely can lower the risk of firearm-related injury/death by 70%<sup>1</sup>

Firearm owners who store their firearms locked and/or unloaded are 60% less likely to die from FA suicide than those who store their FA unlocked and/or loaded<sup>2</sup>

Safer firearm storage may be most effective in reducing impulsive suicide & least effective with those who are highly determined to die<sup>3</sup>

Sources: <sup>1</sup> Moreno MA. Keeping Children and Adolescents Safe From Firearms. *JAMA Pediatr.* 2-15;160(4):412.  
<sup>2</sup> Shenassa ED, Catlin SN, Buka SL. Lethality of firearms relative to other suicide methods: a population based study. *Epidemiology & Community Health.* Feb 2003.  
<sup>3</sup> Shenassa E, Rigters M, Svanvikubg m, Ribbers N. Safer storage of firearms at home and risk of suicide : a study of protective factors in a nationally representative sale. *J Epidemiol Health.* 2004; 58: 981-988.

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## Barriers to safer storage



Substantial group of Firearm owners primarily purchase for protection --safe storage conflicts with that (fear of lacking access in emergency)

Firearm owners don't believe firearms in home increase risk for suicide above that of other means

Source: Aitken ME. Determining Barriers and Facilitators to Safe Storage of Firearms. Arkansas Children's Hospital Injury Prevention Center, University of Arkansas for Medical Sciences. Presented at Injury Free Kids Conference, Dec 2017.

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## Limiting firearm access for suicide prevention: Promising ideas: Gatekeeper education



**The Gun Shop Project:** Firearm retailers/range owners and sporting clubs

- Creates/distributes materials to help firearms retailers/range owners prevent suicide among their customers.
- Materials include guidelines on how to avoid selling a firearm to someone who may be at risk for suicide
- Suicide prevention information tailored to customers
- Lead by Means Matter Campaign and the New Hampshire Firearms Safety Coalition (includes gun sellers, ranges, sporting clubs).
- Being replicated in 20 states

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## Limiting firearm access for suicide prevention: ideas: Gatekeeper education



Firearm safety instructors:

- An estimated 61% of firearm owners have taken firearm instruction classes<sup>1</sup>
- Only 1 in 7 trained firearm owners had received education in suicide prevention<sup>1</sup>

Training materials available: <https://www.hsph.harvard.edu/means-matter/firearm-instructors/>

Source: <sup>1</sup> Rowhani-Rahbar A, Lyons VH, Simonetti JA, Azrael D, Miller M. Formal firearm training among adults in the USA: results of a national survey. *Inj Prev.* 2015; Apr;24(2):161-165.

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## Limiting firearm access for suicide prevention: Promising ideas: Gatekeeper education



Targeting safe storage messaging to households with high risk populations:

- Elderly and their care givers
- Teens and adolescents with mental health and/or substance misuse

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## Takeaways

- Firearms are the most common means of suicide in Illinois
- White men aged 70+ living in rural areas are at highest risk of firearm suicide in Illinois
- Firearms pose a high risk for suicide due to:
  - Lethality
- Limiting access to lethal means is a proven suicide prevention strategy
  - Safer storage
  - Emergency Restraining Orders
- Gatekeeper education is a promising suicide prevention strategy:
  - Gun retailers, ranges
  - Firearm safety instructors
  - Parents of teens, young adults
  - Elderly and their caregivers

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## Thank you!



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