Developing a firearm storage decision aid to enhance lethal means counseling

Marian (Emmy) Betz, MD, MPH
Associate Professor of Emergency Medicine
University of Colorado School of Medicine
Disclosures

Research support
• NIMH: R34 MH113539 (PI: Betz)
  A Patient Decision Aid to Augment Lethal Means Counseling for Suicidal Patients
• NIA: K23 AG043123 (PI: Betz)
  Physician Screening of Older Drivers: Decision Rules for Geriatric Injury Prevention

Previous paid consultant
(AFSP, SPRC)
No conflicts of interest

Thank you:
Daniel D. Matlock, MD, MPH
Chris Knoepke, PhD, MSW
Bonnie Siry, MSS
Ashley Clement, MSW
Deborah Azrael, PhD
Stephanie Ernestus, PhD
The ED-AID study team
Views vary – but no one wants to lose a family member or friend.
Firearm deaths

2016: 38,658 deaths

1.3% “accidental”

~0.3% mass shooting

39% homicide & legal intervention

59% suicide

WISQARS, www.cdc.gov/injury/wisqars
Guns & suicide

Only 10% of people with suicidal thoughts/actions die (Owens 2002)

But 85-90% of people who use a gun for suicide die (e.g., Spicer 2000)

There is often a short period of final deliberation (Hawton 2007, Deisenhammer 2009)
Guns & suicide in the US

50% of suicide deaths in the US are by firearm (CDC)


Counseling to reduce access may affect home storage (Kruesi 1999, Runyan et al 2016)
“Lethal means counseling”

Counseling about voluntarily reducing access to firearms for someone at risk of suicide
- Locked storage in home
- (Temporary) removal out of home

CALM training available for providers
(Suicide Prevention Resource Center)
Suicide prevention framework

**COMPREHENSIVE PREVENTION APPROACH**
- Life skills
- Connectedness
- Identify
- Help-seeking
- Effective treatment
- Reduce access to means
- Crisis response
- Postvention
- Care transitions

**TRAJECTORY OF SUICIDAL BEHAVIOR**
- Risk factors (individual, environmental, population)
- Suicidal ideation
- Suicidal intent
- Suicide attempt

Death
Survival
Suicide prevention framework

**Reduce Access to Lethal Means**

**Delay**
- Temporarily or permanently

**Substitution**
- Different method (less lethal)

Suicide prevention framework includes:

- **Identify**
- **Help-seeking**
- **Effective treatment**
- **Reduce access to means**
- **Crisis response**
- **Postvention**
- **Care transitions**

Risk factors (individual, environmental, population)

**Trajectory of Suicidal Behavior**

- **Suicidal ideation**
- **Suicidal intent**
- **Suicide attempt**

**Survival**

**Death**
Counseling in EDs

Emergency departments are key site for acute suicide risk

Large, rising numbers of patients with suicide risk

(Ting 2012, Larkin 2008)
Counseling in EDs

Emergency departments are key site for acute suicide risk

Large, rising numbers of patients with suicide risk
(Ting 2012, Larkin 2008)

Evaluation of at-risk patients
Psychiatric hospitalization vs. discharge home
Counseling in EDs

Emergency departments are key site for acute suicide risk

Large, rising numbers of patients with suicide risk
(Ting 2012, Larkin 2008)

Evaluation of at-risk patients
Psychiatric hospitalization vs. discharge home

Prior work: Lethal means counseling often not
Barriers & Solutions

Intervention should:
- Be acceptable and feasible
- Address provider knowledge gaps
- Use neutral, respectful language
- Encourage behavior change

Time
Provider knowledge & comfort
Uncertainty about options
## Ottawa Decision Support Framework

### Decisional Needs
- Knowledge (*risks*)
- Values (*ownership reasons*)
- Resources (*storage devices*)
- Personal characteristics
Ottawa Decision Support Framework

Decisional Needs
- Knowledge (risks)
- Values (ownership reasons)
- Resources (storage devices)
- Personal characteristics

Decision Quality
- Action (reduce access for at-risk individuals)
- Impact (decrease suicide deaths)
Ottawa Decision Support Framework

**Decisional Needs**
- Knowledge *(risks)*
- Values *(ownership reasons)*
- Resources *(storage devices)*
- Personal characteristics

**Decision Support**
- Counseling
- Coaching
- Decision tools
  - Clarify decision & needs
  - Provide facts
  - Clarify values
  - Guide communication

**Decision Quality**
- Action *(reduce access for at-risk individuals)*
- Impact *(decrease suicide deaths)*
**Aim 1:** To complete a web-based lethal means decision aid for suicidal patients, with the decision being “which options to choose to reduce home access to firearms.”

**Aim 2:** In a pilot randomized controlled trial, to assess acceptability, feasibility and effects of LM-DA use among patients and providers, as well as feasibility of a subsequent trial.
“Lock to Live”

Includes:
1) Introduction specifying the decision
2) Clarification of preferences and logistics;
3) Table of storage options
4) Summary with specific next steps

You or someone you know may feel hopeless, down, or alone right now. Many people have gotten through times like this, and you can too.

This tool can help you make decisions about temporary firearm storage when there is a risk of suicide.

The promise of tomorrow can start with small steps towards safety today.

Get Started
“Lock to Live”

Intended for adults with suicide risk
Use by patient or family member
Separate tool for parents of at-risk youth (UCLA)
Testing in EDs but language not specific to any setting
“Lock to Live”

Intended for adults with suicide risk
   Use by patient or family member
   Separate tool for parents of at-risk youth (UCLA)
Testing in EDs but language not specific to any setting

64 participants in iterative development process
   35% firearm owners/enthusiasts/range employee
   61% personal or family history of suicide ideation/attempt/death
Preference questions

“How open are you to storing your firearms temporarily with someone else, away from your home?”
Preference questions

“How open are you to storing your firearms temporarily with someone else, away from your home?”

“When looking for storage options, how concerned are you about cost?”
Preference questions

“How open are you to storing your firearms temporarily with someone else, away from your home?”

“When looking for storage options, how concerned are you about cost?”

“How open are you to storage options that involve a background check?”
Other content considerations

Emphasize messages of hope
Other content considerations

Emphasize messages of hope

Encourage help from trusted others
Other content considerations

Emphasize messages of hope

Encourage help from trusted others

Normalize both suicide risk and temporary storage changes
Other content considerations

Emphasize messages of hope

Encourage help from trusted others

Normalize both suicide risk and temporary storage changes

Ensure confidentiality
Pilot RCT in 3 EDs – blinded, ongoing
Eligible: suicidal adults with 1+ firearm at home
Questionnaire + intervention/control in ED, then phone follow-up
Challenge: Recruitment (staffing; distrust)
(McClay et al 2018: 20% with self-infected GSW denied)
Future directions: decision aid

Adapt

Adolescents with suicide risk (UCLA)
Military/VA
Dementia & firearms (active work)
Non-suicide context

Disseminate & evaluate

Other healthcare settings
Public/community settings?
Future directions:

**provider training**

Assessment & counseling

When & how

Resources for patients

Firearm basics

Legal issues

Terminology & storage

Workplace safety
Future directions: partnerships

Common ground: suicide, dementia
Insight for program development
Trusted messengers
Partnerships with hospitals – discounts on locking devices?
Questions?

Emmy Betz, MD, MPH
@EmmyBetz
Marian.Betz@ucdenver.edu
Key References


• Betz ME et al. Suicidal behavior and firearm access: results from the second injury control and risk survey. Suicide Life Threat Behav. 2011;41(4):384-91.


• Johnson RM et al. Training mental healthcare providers to reduce at-risk patients’ access to lethal means of suicide: evaluation of the CALM Project. Arch Suicide Res. 2015;17:147-55.
Key References (cont.)

- McCourt AD et al. Temporary transfer of firearms from the home to prevent suicide: Legal obstacles and recommendations. JAMA internal medicine. 2017 Jan 1;177(1):96-101
In-home safe storage options
2016: Suicide Prevention Partnerships with Gun Owner Groups

New Hampshire Firearm Safety Coalition