Developing implementation strategies with stakeholders to promote firearm safety as a suicide prevention strategy in pediatric primary care

Rinad Beidas, PhD
Adolescent Suicide Prevention In Routine clinical Encounters: Project ASPIRE
The implementation problem

The solution
The implementation problem

haphazard selection

The solution
The implementation problem

haphazard selection
not systematic

The solution
The implementation problem

- haphazard selection
- not systematic
- non-participatory
The implementation problem

Challenges our ability to understand mechanisms

- haphazard selection
- not systematic
- non-participatory

The solution
The solution

To develop implementation strategies collaboratively systematically informed by context

The spirit of intervention mapping is systemat...
The solution

To develop implementation strategies collaboratively systematically informed by context

How?

The spirit of intervention mapping is systemat...
The spirit of intervention mapping is systematic, collaborative, and attentive to context.
The steps

- Needs assessment
- Identify the players
- Describe behaviors
- Identify determinants (CFIR)
- Select theory to inform strategies
- Design strategies practically
The steps

1. Needs assessment
2. Identify the players
3. Describe behaviors
4. Identify determinants (CFIR)
5. Select theory to inform strategies
6. Design strategies practically

The process is cyclical, allowing for iterative refinement and adaptation of strategies.
The steps

1. Identify the players
2. Describe behaviors
3. Identify determinants [CFIR]
4. Select theory to inform strategies
5. Design strategies practically
6. Needs assessment
The steps

1. Needs assessment
2. Identify the players
3. Describe behaviors
4. Identify determinants (CFIR)
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The steps are cyclical, indicating a continuous process.
The steps

1. Identify determinants (CFIR)
2. Describe behaviors
3. Identify the players
4. Design strategies practically
5. Select theory to inform strategies
6. Needs assessment
The steps

- Design strategies practically
- Select theory to inform strategies
- Identify determinants (CFIR)
- Needs assessment
- Identify the players
- Describe behaviors

Assess context
The steps

- Needs assessment
- Identify the players
- Describe behaviors
- Identify determinants (CFIR)
- Select theory to inform strategies
- Design strategies practically

Select strategies  Assess context
The research-to-practice gap

Rate of youth suicides continues to increase and ...

Firearms are common and most lethal method

Firearm access is a modifiable risk factor for suicide; saf...

Cayman Naib
2002-2015
Rate of youth suicides continues to increase and is the second leading cause of death in youth aged 10-24 (CDC, 2014)
Firearms are common and most lethal method
1 in 3 homes in the United States contain a firearm
1 in 3 homes in the United States contain a firearm

The risk of suicide is 2–5 times greater in homes with a firearm (Miller et al., 2008)
1 in 3 homes in the United States contain a firearm

The risk of suicide is 2-5 times greater in homes with a firearm (Miller et al., 2008)

Firearm access is a modifiable risk factor for suicide; safer storage could result in saved lives
Pediatric primary care may be one place to promote firearm safety.

Primary care may be an optimal setting for suicide.

Firearm safety promotion is a promising suicide.

Safety Check is an evidence-based practice.
Primary care may be an optimal setting for suicide prevention

Most suicide prevention strategies are implemented in behavioral health settings
Primary care may be an optimal setting for suicide prevention

Most suicide prevention strategies are implemented in behavioral health settings.

Yet, only 1/3 of youth visit a behavioral health provider in the year preceding a suicide attempt.

80% of youth will visit a primary care provider in the year preceding death by suicide.
Firearm safety promotion is a promising suicide prevention strategy

Means restriction = limiting access to lethal methods of suicide

Firearm safety promotion is one way to achieve means restriction around one of the most commonly used methods to attempt suicide
Safety Check is an evidence-based practice for increasing firearm safety
Safety Check is an evidence-based practice for increasing firearm safety.
Study Approach

Partner with stakeholders around the systematic development of implementation strategies for an evidence-based program for firearm safety as a suicide prevention strategy for youth in primary care.
Our partnership

Henry Ford Health System

Baylor, Scott, and White

Penn Medicine

The Children's Hospital of Philadelphia
Henry Ford Health System

About 50 primary care practices

1 million lives served annually

12% under 18

38% ethnic minorities
Baylor, Scott, and White

About 60 primary care practices
630,000 lives served annually
20% under 18
Rural and urban practices
Aim: To determine the perspectives of primary care physicians in pediatric practices regarding the acceptability and use of the three components of Safety Check.
Method
Sample

N = 103
(204 eligible)

60% Female

54% White, 24% Asian, 7% Black,
13% not disclosed, 4% Latino

Practicing 11 years on average
Sample

N = 103
(204 eligible)

60% Female

54% White, 24% Asian, 7% Black, 13% not disclosed, 4% Latino

Practicing 11 years on average

31% had a firearm in the house

17% experienced a family or friend suicide attempt
Outcomes

Screening → Counseling → Firearm Locks

Acceptability: _______ would be an acceptable suicide prevention strategy in my practice.
Outcomes

Screening ➤ Counseling ➤ Firearm Locks

Acceptability: _______ would be an acceptable suicide prevention strategy in my practice

Universal vs. high risk

43.
Outcomes

Screening → Counseling → Firearm Locks

Acceptability: _____ would be an acceptable suicide prevention strategy in my practice

Universal vs. high risk

Use: How often do you ____?
Acceptability

PCP Acceptability of Safety Check Interventions

- Screening
- Counseling
- Gun Locks

- Universal
- Indicated (high-risk youth)
Use

Percent of PCPs Reporting Use of Safety Check Interventions

- Screening: 83.8%
- Counseling: 70%
- Gun Locks: 8.6%
Implications for Implementation Strategy Development

1. Understanding the lay of the land

2. Asking about the intervention components separately suggests different acceptability and use; and thus different implementation strategies and mechanisms.

3. Asking about universal vs. high risk youth suggests conditions in which implementation may be more acceptable
Aim: To conduct interviews with stakeholders to understand (a) barriers and facilitators and (b) who will be in charge of adopting, implementing, and maintaining
Sample

Approximately 54 stakeholders from the following groups:

Parents of youth

Primary care physicians

Non-physician primary care providers

Leaders of systems (i.e., primary care, behavioral health, quality improvement)

Third party payers

Leaders of national bodies (e.g., American Academy of Pediatrics)

Gun Rights Advocates
Interviews

Guns are polarizing
Interviews

I. Intervention Characteristics (i.e., features of Safety Check)
II. Outer Setting (e.g., legislation, patient/families, resources)
III. Inner Setting (e.g., system policies, resources)
IV. Individuals (e.g., provider skills, efficacy)

PLANNING HEALTH PROMOTION PROGRAMS
AN INTERVENTION HARMONY APPROACH
FOURTH EDITION

Guns are polarizing
Guns are polarizing
Guns are polarizing
Implications for Implementation Strategy Development

We will directly map our implementation strategies on to hypothesized determinants and mechanisms.
Aim: To develop a menu of implementation strategies that will be rated by stakeholders for feasibility and acceptability.
Selecting strategies
## Project ASPIRE Interview Summary Sheet

<table>
<thead>
<tr>
<th>Participant Code:</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Health System:</td>
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<tr>
<td>Date:</td>
<td>3/8/17</td>
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**Stakeholder Group(s) (Circle one as primary - can underline additional if they commented from multiple perspectives):**

- Medical Leader
- System Lead
- First Party: Doctor, Nurse, Parent
- QI Leader
- QI Leader: Nurse Advocate

### Barriers identified:

1. Time
2. Obtaining parental consent
3. 
4. 
5. 

### Facilitators identified:

1. This is important/relevant
2. Providers would feel comfortable having these conversations
3. It would be easy to integrate this into the EHR
4. 
5. 

### Suggested Implementation Strategies:

1. Embed a script for these conversations into EHR
2. Have patient handouts in English and Spanish
3. Education/training for everyone in the practice
4. Bundle with other safety councils/universal at well visits/start talking about when kids are young
5. Partner with community/policy (e.g., Gun Safety Month)

### Suggested Personnel:

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<th>Adoption</th>
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60.
Project ASPIRE Interview Summary Sheet

Participant ID#: 101008
Health System: HFHS

Initials: CBW
Date: 8/8/17

Stakeholder Group (circle one as primary – can underline additional if they commented from multiple perspectives):

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<th>Clinical Leader</th>
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<th>Non phys provider</th>
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<td>3rd Party Payer</td>
<td>CredBody</td>
<td>Parent</td>
<td>Firearm Advocate</td>
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Barriers Identified:

1. Time

2. Obtaining gun locks

3. 

4. 

5. 

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Next Steps

Hybrid Effectiveness Implementation Trial
Next Steps

Hybrid Effectiveness Implementation Trial

Penn ALACRITY (Beidas, Mandell, Volpp; PIs)
Want to learn more?

Please contact me at rbeidas@upenn.edu
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