Preventing Firearm Injury
The Role of Evidence-Based Research

Dr. Rebecca Cunningham, The University of Michigan
Diverse Perspectives, Common Goals

To decrease injuries and deaths by firearm
Leading Causes of Death in Children and Adolescents in the U.S.
1999-2020
New England Journal of Medicine
Goldstick, Cunningham, Carter
A National Public Health Problem

48,830 U.S. fatalities in 2021
54% Suicide / 44% Homicide
↑ 30% since 2014
2017: Firearms > MVC

Suicides
65-70% suicides military / veterans
(50% higher overall suicide rate)

Mass shootings
2000 – 2009: 8.6 incidents/year (mean)
2010 – 2019: 21.9 incidents/year (mean)
Increasing fatalities per incident
2021-61 incidents-52.5%
increase in incidents from 2020 to 2021

$229 Billion Societal Cost/Annually
$8.6 Billion/annually direct medical costs
Racial/Ethnic Disparities

Homicide rate for Black Americans 6X higher than other racial groups

Suicide rates higher among White and Native American/Alaska Natives

Important to consider role of structural factors in firearm injury
- Redlining; Systemic Racism; Economic Disinvestment
- Economic Distress/Poverty; Mental Health Access

CDC WONDER DATABASE (1999-2019)
FATALITIES PER 100,000

CDC WONDER DATABASE (1999-2019)

Rural/Urban Differences

Urban

Rural

Overall

Suicide

Homicide

Unintentional

CDC WONDER DATABASE (1999-2019)
Mortality for the Five Leading Causes of Child and Adolescent Death in 2016

According to Rurality 1999-2020

New England Journal of Medicine
Cunningham, Carter
Framework for Developing Solutions

- Define the Problem
- Identify Risk / Protective Factors
- Develop / Test Prevention Strategies
- Implement Promising Initiatives
- Monitor / Evaluate Effectiveness

DATA

KNOWLEDGE

ACTION
Where Did We Get Off Track?

1996
Dickey Amendment passed

2010
Total federal research on gun deaths among children was $135K for the entire nation

2011
Only a handful of firearm injury researchers in the U.S.

2017
Gun deaths surpass car deaths for teenagers in many states, and most of us don't know because there are no scientists counting
Federal Research Awards and Corresponding Peer-Reviewed Publications Focusing on Selected Causes of Mortality
Ages 1-18, 2008-2017

<table>
<thead>
<tr>
<th>Cause of mortality</th>
<th>Deaths</th>
<th>Research awards&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Funding for research ($)</th>
<th>Mean funding per year ($ millions)</th>
<th>Research dollars per death ($)</th>
<th>Publications</th>
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<tbody>
<tr>
<td>Motor vehicle crash</td>
<td>33,577</td>
<td>186&lt;sup&gt;a&lt;/sup&gt;</td>
<td>877,589,272</td>
<td>88</td>
<td>26,136</td>
<td>2,223</td>
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<tr>
<td>Firearm injury</td>
<td>20,719</td>
<td>32</td>
<td>12,368,889</td>
<td>1</td>
<td>597</td>
<td>540</td>
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<td>Cancer</td>
<td>17,111</td>
<td>5,168</td>
<td>3,345,352,670</td>
<td>335</td>
<td>195,508</td>
<td>50,235</td>
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<td>Opioid overdose</td>
<td>3,385</td>
<td>234</td>
<td>114,354,067</td>
<td>11</td>
<td>33,782</td>
<td>2,193</td>
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<td>Congenital abnormalities</td>
<td>9,627</td>
<td>759</td>
<td>357,597,201</td>
<td>36</td>
<td>37,145</td>
<td>7,716</td>
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</table>
History as a Guide
Not an “Accident”
Motor Vehicle Crashes and Injury Prevention
An Evidence-Based Path Forward
Evidence-based Solutions: Socio-Ecological Spectrum

- Public Policy
- Community
- Social Organizational
- Individual

- Extreme Risk Protection Orders
- Broken Windows
- Busy Streets

SafereTeens

Institute for Firearm Injury Prevention
University of Michigan
What Can We All Do As Individuals?

In your community, schools and workplace: the Basics

• Know the firearm facts and myths
• Know that gun deaths are preventable
• Support evidence-based prevention programs
  ■ Remember the DARE program?
• Start talking about firearm violence
• Silence solves nothing
Change the narrative
Cars and pools are here to stay
“The safest home is one without a pool?”
Respect views and values on firearm ownership
Focus on safety and harm reduction
Meet people where they are
Coalition Building

Reframe: Gun Control Gun Safety
Culture Change is Possible

And hope is not a strategy ...
Research to Action is a strategy
SAVE THE DATE

2023 NATIONAL RESEARCH CONFERENCE
FIREARM INJURY PREVENTION

November 1-3, 2023
Chicago, IL

Organized by:
The Research Society for the Prevention of Firearm-Related Harms