## PREVENTING FIREARM INJURY:

# the Role of Evidenced-Based Research

Assistant Research Professor, Institute for Firearm Injury
Prevention
University of Michigan

# **OBJECTIVES**

- •Firearm Injury: Magnitude of the Problem in the United States
- Framework for Developing Solutions & Reducing Injury
- What Do We Know about What Works to Prevent Firearm Injury
- •Institute for Firearm Injury Prevention: Mission, Vision, & Structure
- Questions / Comments

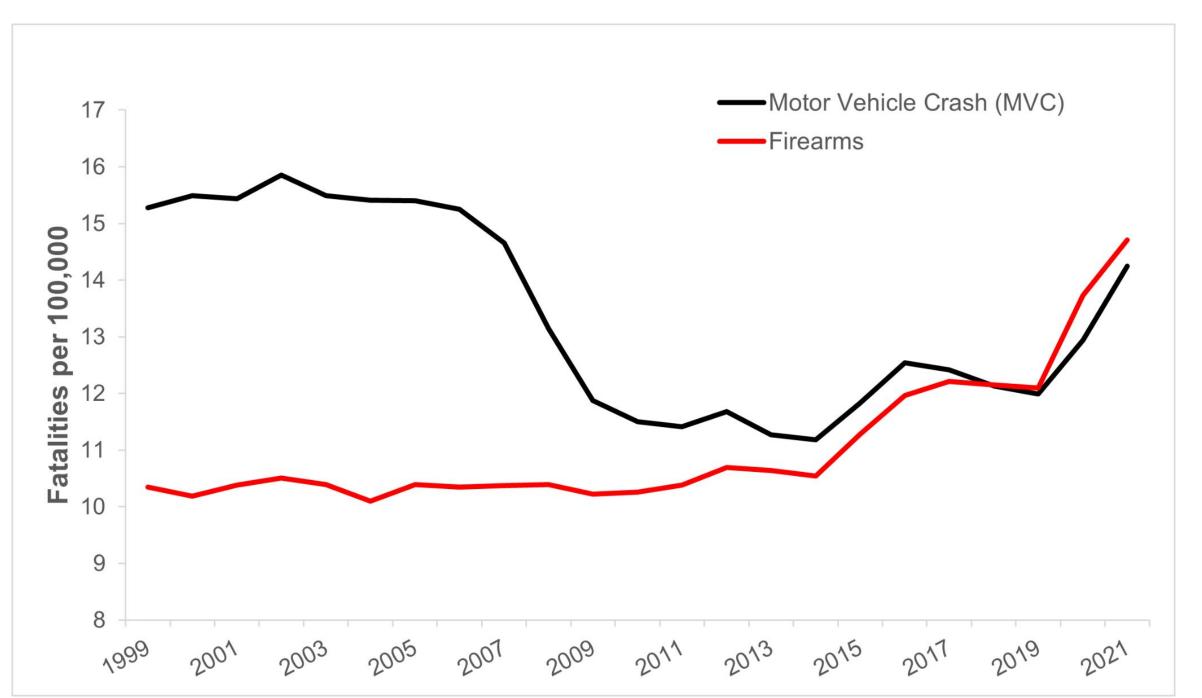


# WHAT IS FIREARM INJURY?



# Firearm Injury: Magnitude of the Problem in the US & MI

# A NATIONAL PUBLIC HEALTH PROBLEM



#### 45k U.S. fatalities annually

54% Suicide / 43% Homicide ↑ 30% since 2014 2017: Firearms > MVC

Leading cause of death for Children/Teens

70% of Older Adult (65+) Suicides

**65-70%** of suicides among **active-duty military** / **veterans** (50% higher overall suicide rate)

Active Shooter Incidents (e.g., mass shootings)

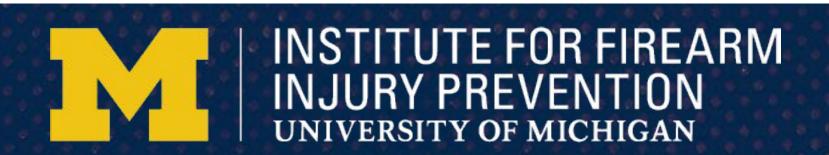
2000 – 2009: 8.6 incidents/year (mean) 2010 – 2019: 21.9 incidents/year (mean)

Increasing fatalities per incident

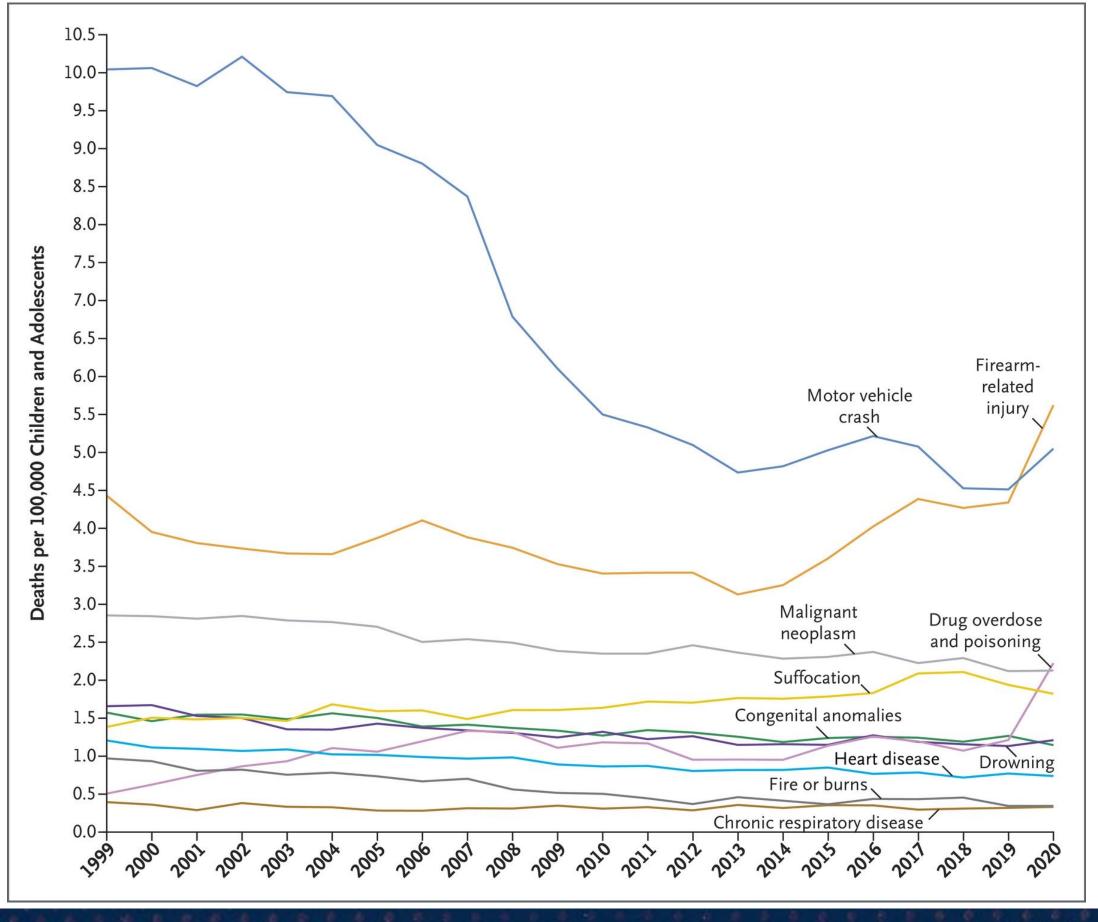
#### \$229 Billion Societal Cost/Annually

\$8.6 Billion/annually direct medical costs

CDC WONDER DATABASE (1999-2021)



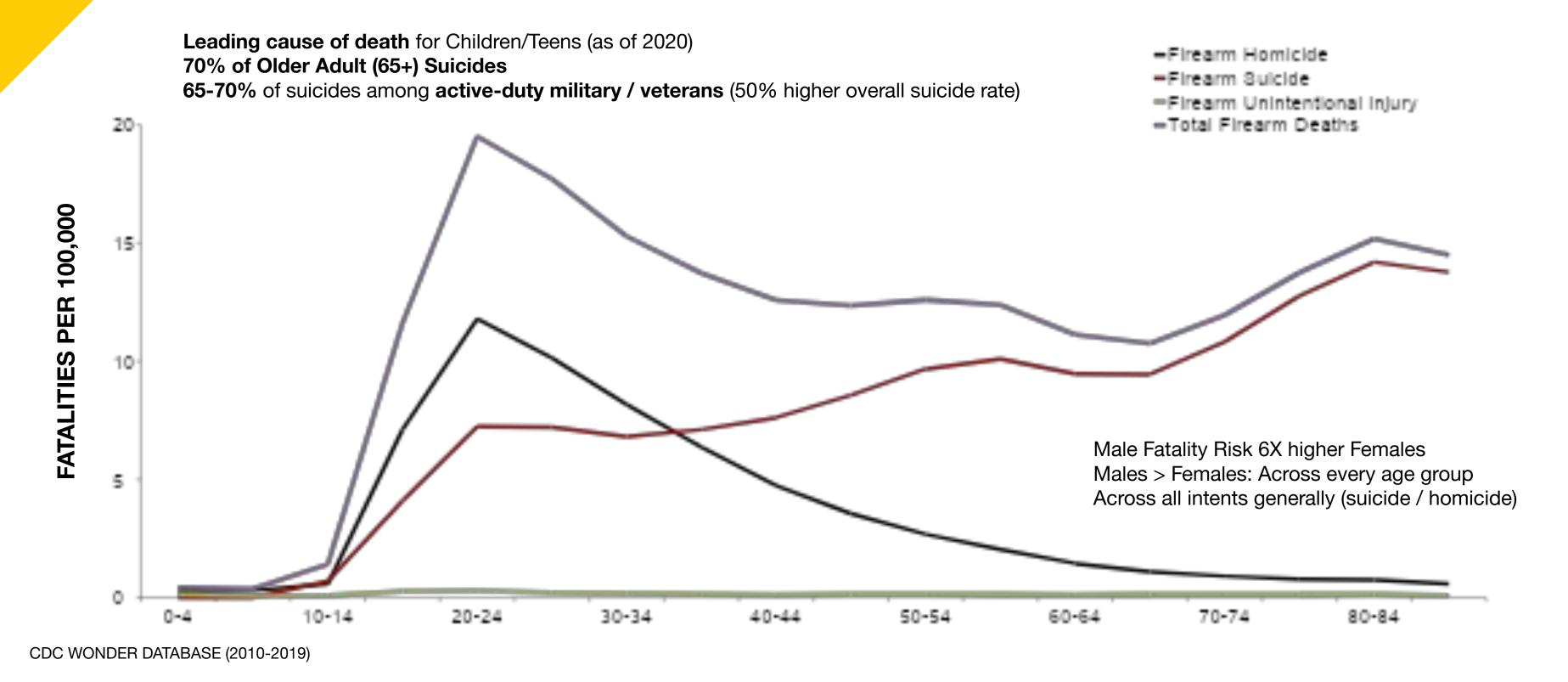
Leading Causes of Death among Children and Adolescents in the United States, 1999 through 2020.



CDC Wonder, Goldstick, Cunningham, Carter, 2022



### OVERALL FATALITY RISK & INTENT VARIES BY AGE



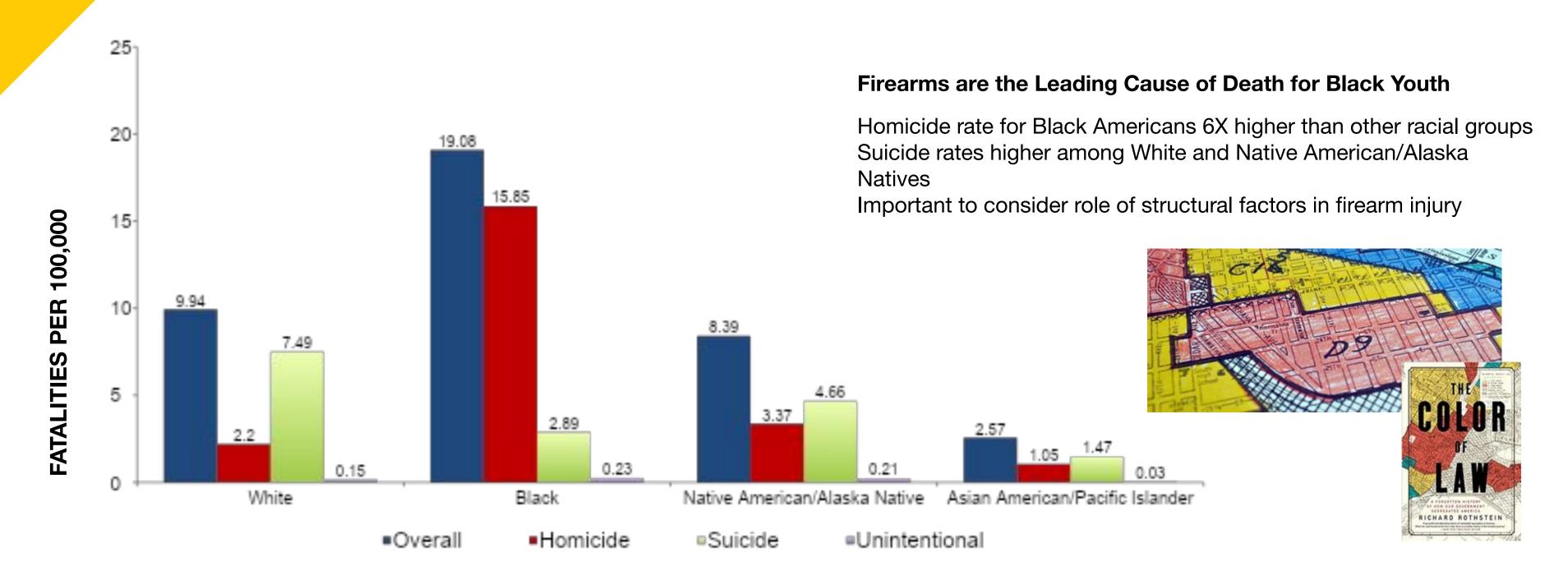


#### INTIMATE PARTNER VIOLENCE / HOMICIDE

- 23.2% of women and 13.9% of men in the U.S. experience severe physical intimate partner violence during their lifetime
- 1 in 27 U.S. women have been threatened with a firearm by a partner
- 55.3% of all female homicides in the U.S. result from IPV, and more than half (53.9%) of intimate partner homicides are firearm related.
- 30% of female homicides occur during early adult years (age 18-29)
- 56% of mass shooting incidents, perpetrator killed partner or other family member as part of the incident
- Increased Risk = Women; Pregnant Women; Underrepresented Minority Populations; People with Disabilities, LGBTQ populations



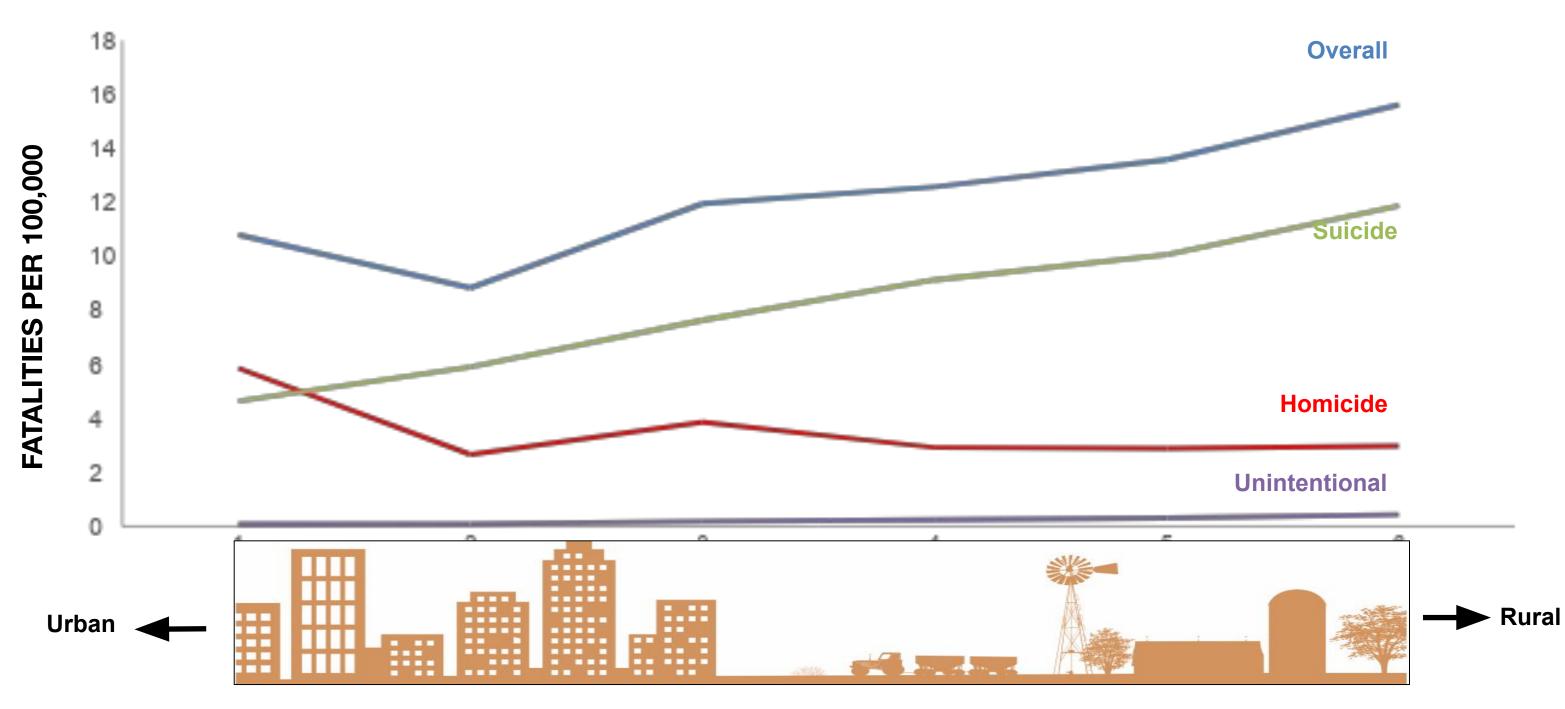
# RACIAL / ETHNIC DISPARITIES



CDC WONDER DATABASE (1999-2019)



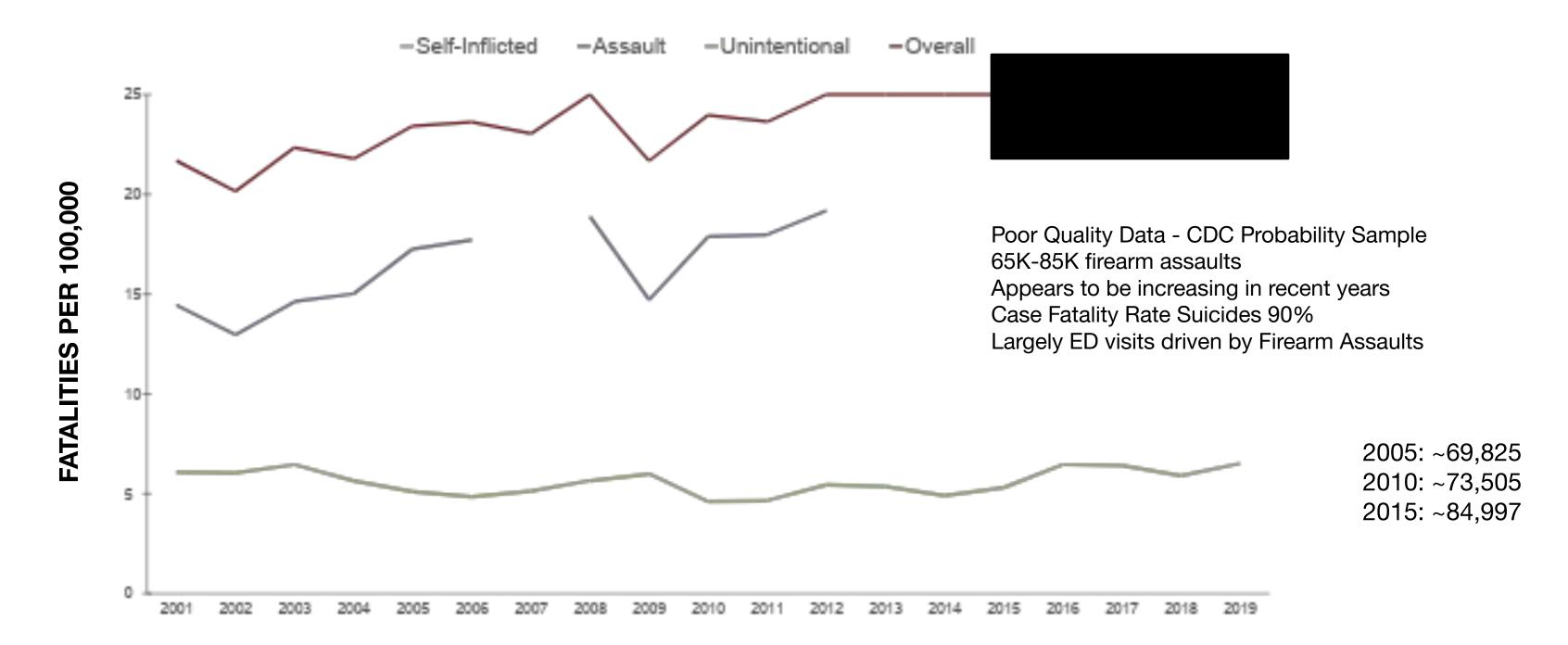
## RURAL / URBAN DIFFERENCES



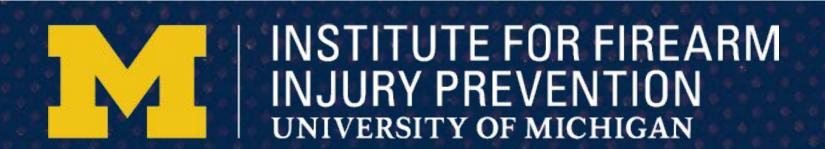
CDC WONDER DATABASE (1999-2019)



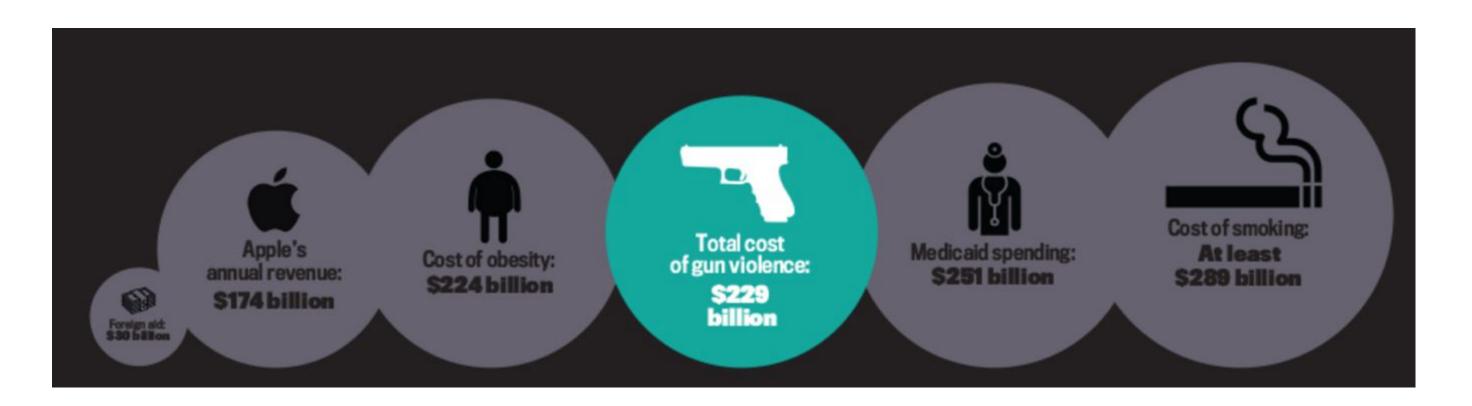
### NON-FATAL FIREARM INJURIES?



CDC WISQARS DATABASE (2001-2019)



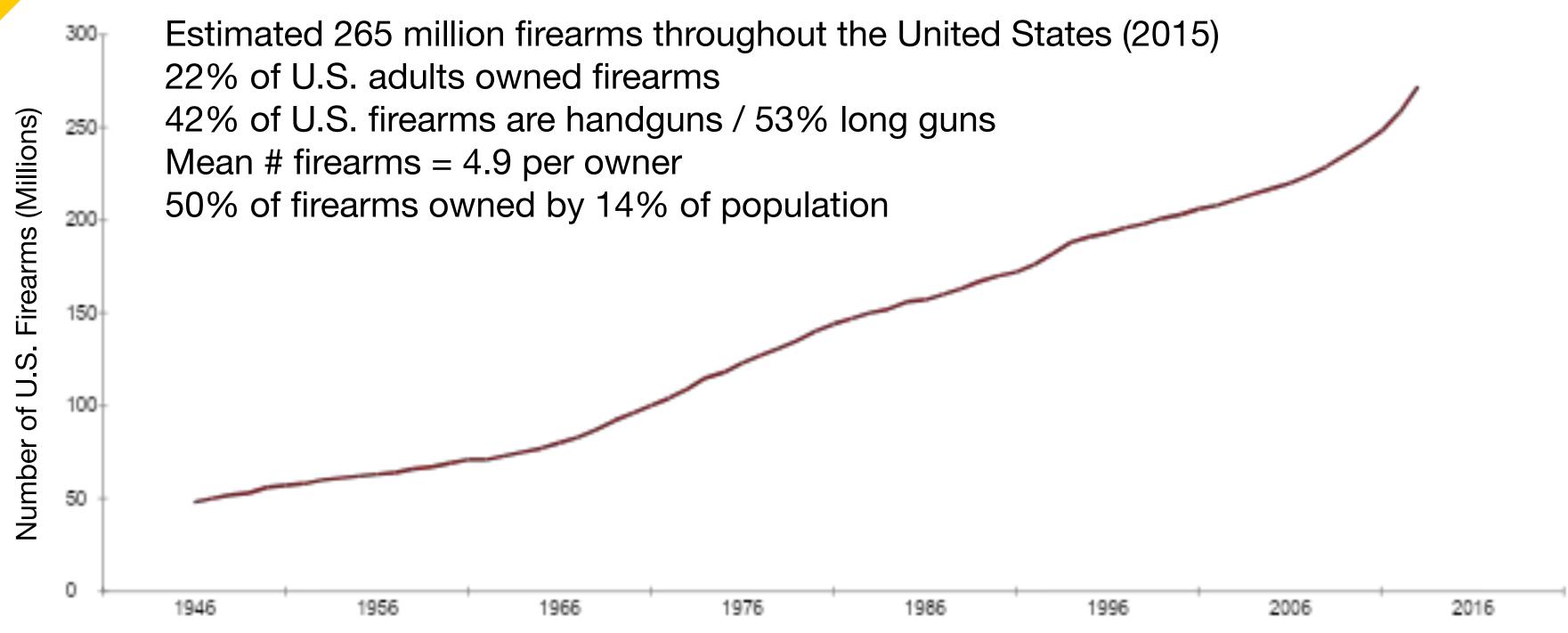
# ECONOMIC COSTS



- \$229 Billion Annually
  - \$8.6 billion in direct costs (e.g., acute medical treatment)
  - Remainder = Indirect costs
- Majority of indirect costs are due to lost work/productivity, lost quality of life, and criminal justice/jail time



### ESTIMATES OF U.S. FIREARM OWNERSHIP





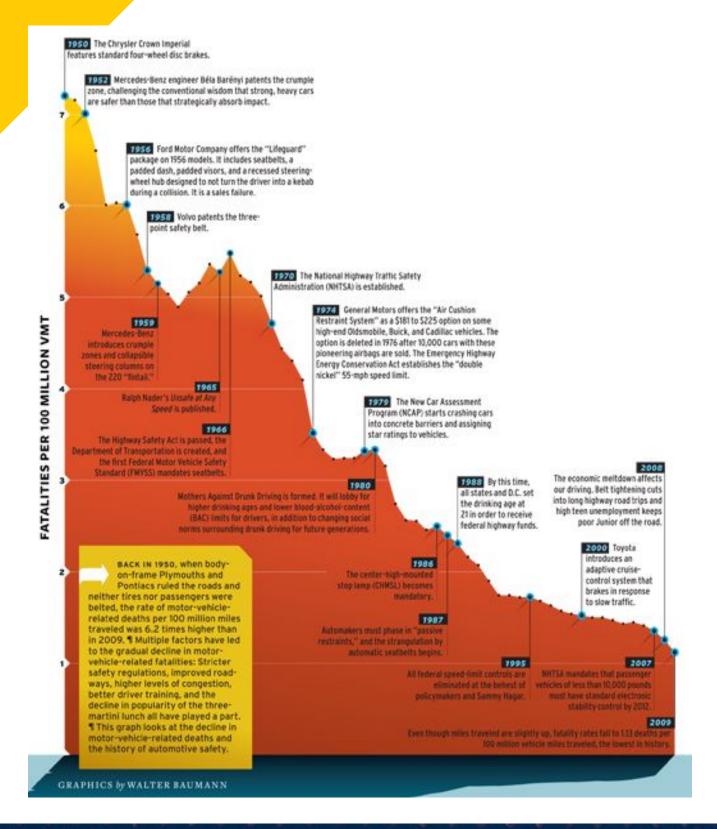


# Framework for Developing Solutions & Reducing Injury

# NOT AN "ACCIDENT": MOTOR VEHICLE CRASHES & INJURY PREVENTION



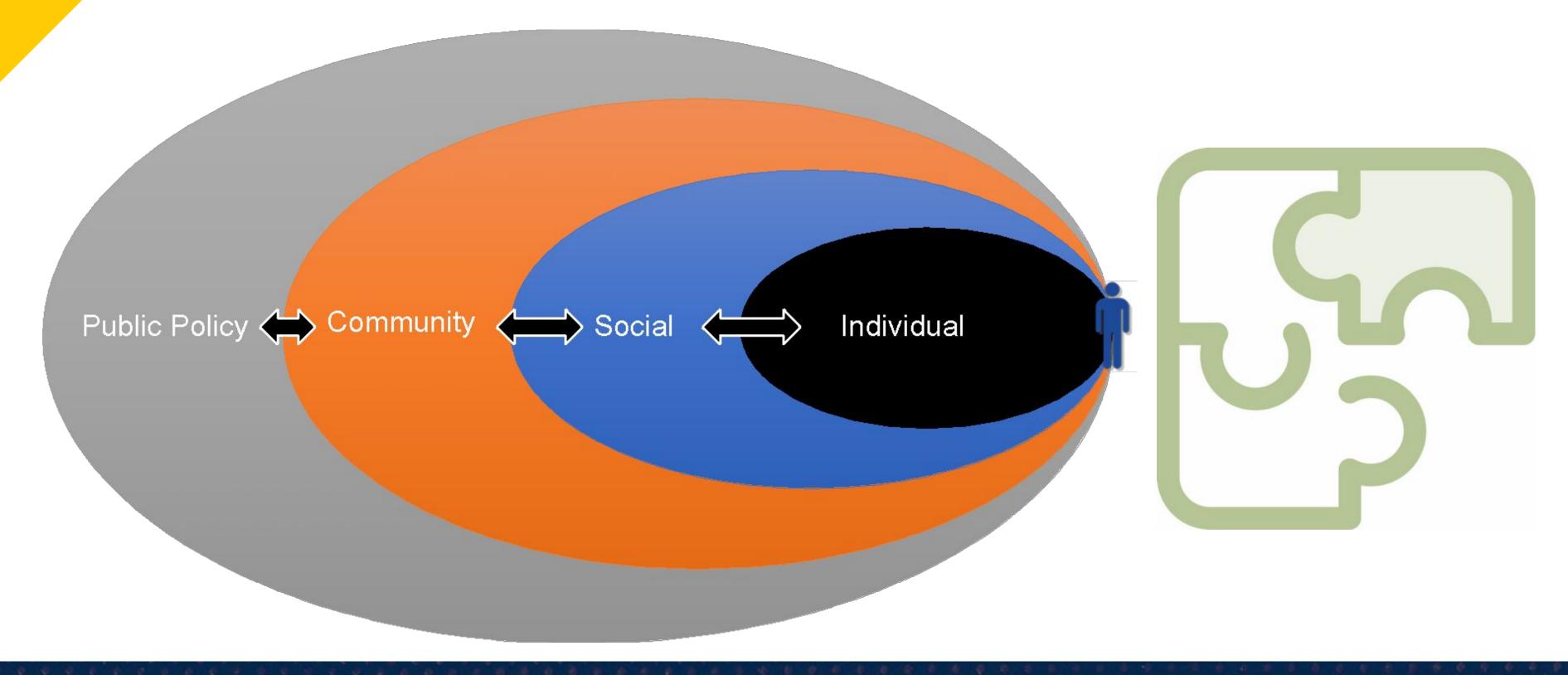
## MVC: INJURY PREVENTION SUCCESS STORY



- <u>Crash Avoidance</u> = Adaptive Headlamps, Reflectors, Signals, Mirrors, Anti-lock brakes, Lane departure warning systems, Electronic Stability Control
- <u>Crashworthiness Improvements</u> = Seatbelts, Airbags, Tempered Glass,
   Crumple Zones, Collapsible Steering Columns, Instrument Panel padding
- <u>Behavioral Modifications</u> = Alcohol Impaired Driving
  - Per Se Laws (i.e. .08 BAC Limit) / Alcohol Interlocks
  - o Min Drinking Age Laws (18 □ 21)
  - Zero Tolerance Laws
- Road Safety Interventions
  - Divided Roadways, Signs, Streetlights, Reflective barriers, Curved rails
- Trauma System Development
- Increased Measures for High-risk Populations
  - Children = Car Seats, Graduated Drivers Licensing Laws
  - Elderly = Physician Review/Intervention for Elderly Drivers



# SOCIO-ECOLOGICAL SPECTRUM





# What Do We Know about What Works to Prevent Firearm Injury

# FIREARM ACCESS AS A RISK FACTOR

- Homicide of a household member is 3 times more likely overall in homes with firearm access
  - Women are **five times more likely to be murdered** by an intimate partner when the partner has access to a firearm.
  - In nearly 75% of school shooting incidents, firearm was acquired from the student's home or the home of a relative/family member.
- Household firearm access increases suicide risk, even after adjusting for prior psychiatric diagnosis
  - Firearms increase suicide risk nearly 5 times
  - Homes where firearms are kept loaded were over 9 times as likely to be the site of a suicide
  - 75% of suicide completers obtained the firearm from their home or the home of a friend/acquaintance
  - In the first week after handgun purchase, the rate of suicide among purchasers was 57 times as high as the adjusted rate in the general population

<u>Take Home Point</u>: Firearm Access by high-risk individuals at high-risk time periods (e.g., moments of crisis) is the single biggest modifiable risk factor for firearm injury (regardless of intent and across multiple populations).



## LOCKED STORAGE / DECREASED ACCESS

- Single greatest risk factor for (Pediatric) Firearm Injuries (regardless of intent) is firearm access (at home or in places children spend time)
- Gun Safe or Locked Box
- Firearms Stored Unloaded
- Safety Switch Engaged
- Ammunition Stored separately
- Trigger Lock / Firearm Cable Lock











## LOCKED FIREARM STORAGE

- Important to consider sources of off-property firearm access and storage patterns
- Homes where children play or spend time (e.g., friends, relative, grandparents)
- 75% of suicides and school shooting incidents, firearm source is the home of the adolescent or a close relative/family member
- 25% of high-school age teens report that they could identify an off-property source for firearm access
- ASK Campaign: Public Health Campaign Tools

# "Is there a gun where my child plays?" O% of homes with children in Americ

40% of homes with children in America have guns, many unlocked or loaded. Every year thousands of children are killed or seriously injured as a result.

Ask if there are guns in the homes where your children play.



If there are any doubts about the safety of anothe home, invite the kids to your house instead.

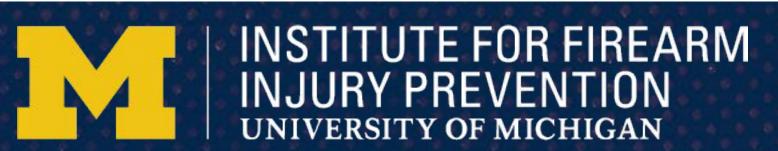
Hiding guns is not enough. Just talking to kids is not enough. Kids are curious and if they find guns they're likely to play with them.



## LOCKED STORAGE COUNSELING

- 75-90% families report being receptive to discussing the risks of firearms during healthcare visits
- Anticipatory guidance / behavioral counseling on firearm safety can be effective increasing locked storage practices
  - Motivational Interviewing framework (2X as likely to use firearm cable lock)
  - Simple public health messages/handouts either not effective or less effective
  - Stronger evidence for when paired with provision of locking device
- •64% of adults made safe firearm storage changes after counseling by their family physician
  - 12% removed firearm(s) from their home

Webster 1992; Barkin 2008; McGee 2003; Grossman 2005; Grossman 2012; Albright; McManus 1997; Yip 2012



# SKILLS TRAINING

#### Module 1: Introduction

Format Lecture by study author with supplemental Powerpoint slides Content

- Background on firearm injuries in youth
- Impact of pediatricians on counseling
- Outline of curriculum modules and goals Length 4 minutes

#### Module 2: Epidemiology

Format Lecture by firearm injury expert with supplemental Powerpoint slides Objectives

- Review trends in national firearm injuries
- Understand types of pediatric firearm injuries Discuss importance of firearm access/safe
- storage in the home Length 8 minutes

#### Module 3: Counseling

Format Three scripted clinical scenarios authored by firearm injury experts and performed by actors, highlighting motivational interviewing-based behavioral counseling techniques:

- Case 1: Teenager with depression
- Case 2: Six-year-old without firearms in the home Case 3: Three-year-old with firearms in the home Objectives
- Utilize direct questioning for firearm screening
- · Identify high risk households Develop counseling techniques
- Recognize counseling barriers and developing
- approach to challenging scenarios Connect families to resources

#### Module 4: Safe Storage

Format Hands-on video demonstration by pediatrici and firearm owner Objectives

Approach to Firearm Safety Counseling

- Review firearm/ammunition types
- Review of safe storage guidelines and options for firearms and ammunition Length 9 minutes

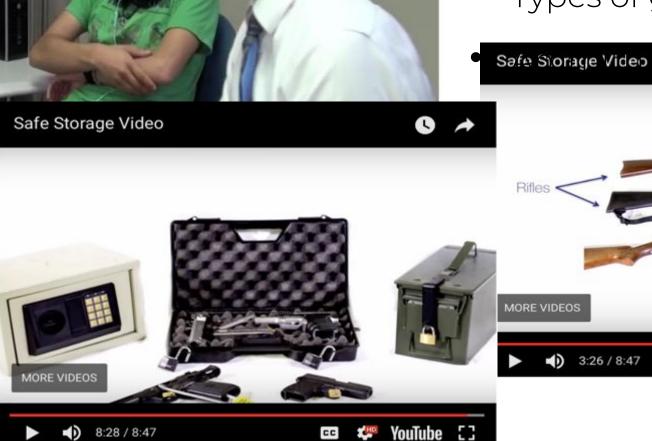
#### Module 5: Documentation

Format Powerpoint slides with instructional Objectives

- Demonstration of proper documentation of screening and counseling in EHR
- Demonstration of access to educational handout.
- through the EHR

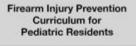
- Types of firearms
  - Basic ammunition
  - Firearm actions
  - Parts of a firearm
  - Types of gun locks

Long Guns



www.childfirearmsafety.org





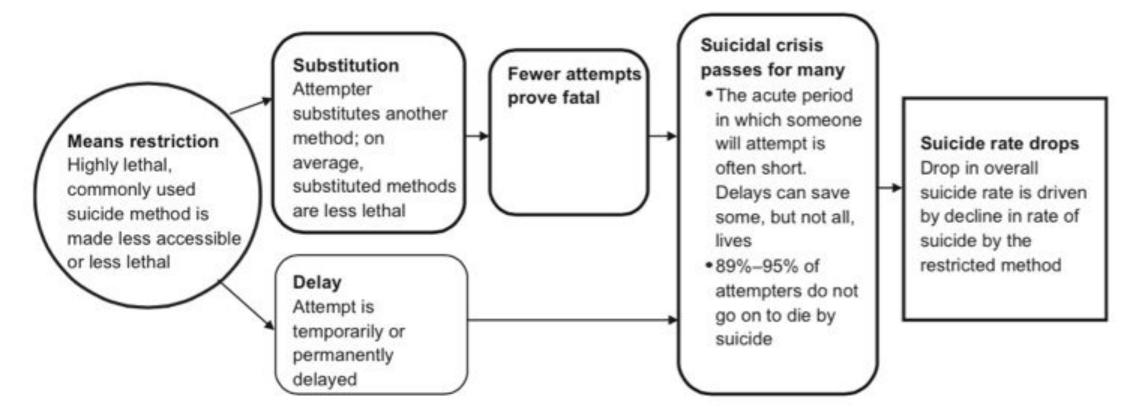
Five web-based video modules Self-paced over one month

Developed through literature review and content-expert guidance

Filmed using free university-based recording studios and Camtasia software Accessed by learners through Canvas online learning platform

YouTube []

# LETHAL MEANS ACCESS / COUNSELING



- Most Suicidal Crises are short-lived / Methods depends on availability
- Case fatality rate varies across methods Firearms (90%) vs. Medications (1%)
- 90% of survivors do not end up dying from suicide (i.e., limited number of repeat attempters)
- Lethal Means Counseling
  - Counseling for individuals / families to make household firearms inaccessible
  - ED youth receiving MH treatment where patient/family received lethal means counseling were 4X more likely to restrict access to firearms / meds
  - Estimated ~4,000 suicides prevented annually if counseling with modest impact (25%)
  - Challenges Remain Best practice screening and counseling

Barber and Miller 2014; Barber and Miller 2014b; Kruesi et al 1999; Betz et al 2010



# RESOURCES



#### Not a Bipolar Choice / Range of Options

- Locked Storage Counseling
  - Range of Storage Options / Methods
- Reducing Access / Availability at High-risk Times
  - Supervised Access
  - Lethal Means Counseling
- Reducing Firearm Risk / Less Lethal Firearms
  - "Smart" Guns
  - Removal of Firing Pin
- Temporary Removal / Off Property Storage
  - Gun Range / Shops
  - Transfer of Ownership
- Permanent Removal

#### **ENGINEERING SOLUTIONS?**

#### "Smart" Firearm Manufacturing Technology: Technology to Improve Firearm and Storage Design

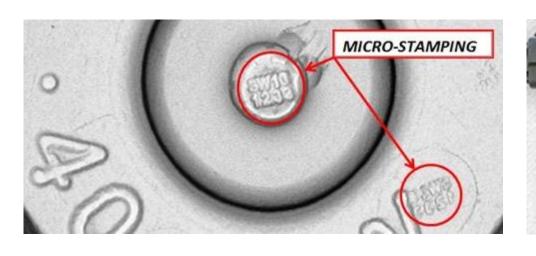
- Loaded Chamber Indicator
- Higher Pressure Triggers
- Biometric Fingerprint Signature Firearms
- RFID technology (watch, ring, bracelet)
- Smart Firearm Storage Devices (allowing immediate access)

#### Micro-stamping Tracers: Technology to Improve Tracing of Illegal Firearm Behaviors

- Unique marking on firing pin transmits to round as fired
- Improves forensic tracking of firearm and identification of criminal activity

#### Controversy

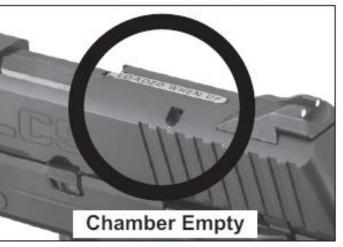
- Failure rate / Acceptability among Firearm Owners
- False sense of Safety Around Firearms
- Likely Negligible Effect on Firearm Injury Reduction (unless widely deployed)















## INTERPERSONAL FIREARM INJURY

- Firearms are the leading cause of death for teens / youth
  - 60% are due to firearm homicide / interpersonal violence
- Evidence-based Screening for Firearm Violence Risk & Violence Prevention Programs
  - NIH State of Science Conference on Youth Violence (2004)
- Hospital ED's and Primary Care are key settings for violence prevention
  - EDs are a teachable moment and provide access to at-risk population that may not be in school or connected to adult medical care system
- Hospital Programs have Common Elements
  - Built on a care management model linking youth to community services
  - Immediate post-injury period (3-6 months)
  - Examples: Youth Alive (Oakland, CA); Within Our Reach (Chicago, IL)

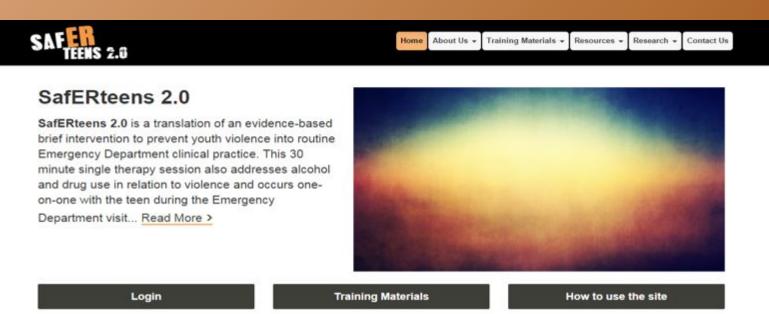


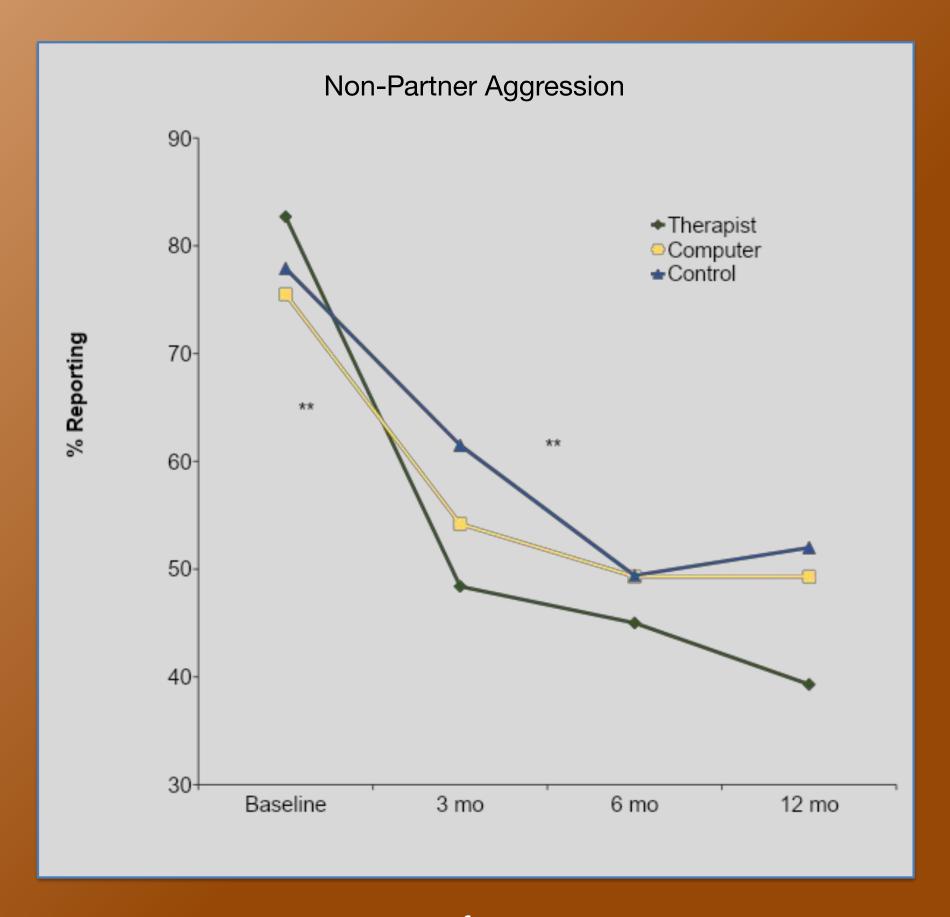
Barber and Miller 2014; Barber and Miller 2014b; Kruesi et al 1999; Betz et al 2010











## www.saferteens.org

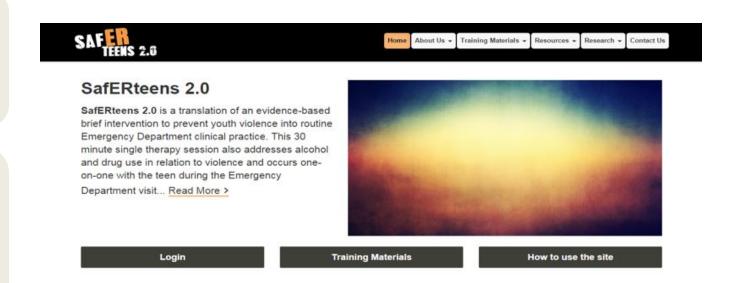
### IMPLEMENTATION: SafERteens

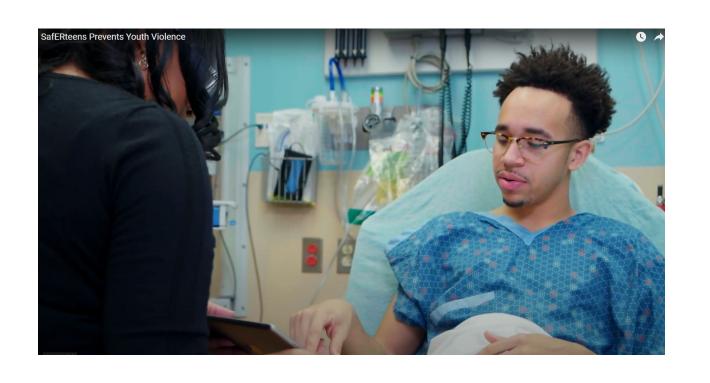
Evidence-based youth violence prevention program

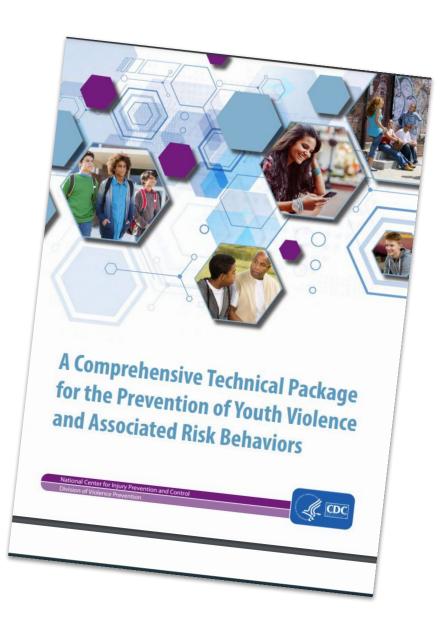
Only hospital youth violence program supported by the CDC

Being implemented in six clinical settings in Muskegon, MI as part of clinical care

Plans to add in Sparrow, New York & Arizona Health System









## BUILDING ON SAFERTEENS

Primary Prevention Secondary Prevention Tertiary Prevention





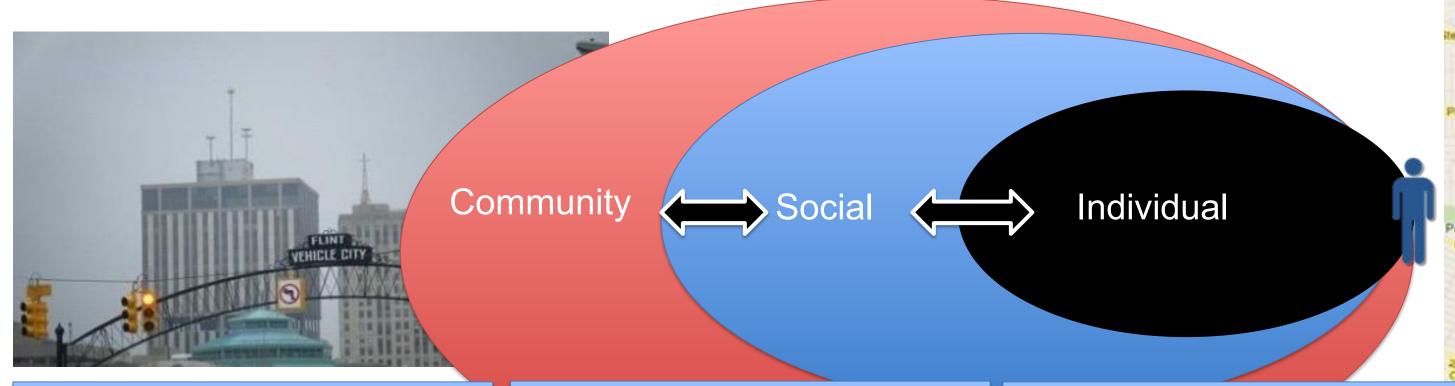




# EXPANDING BEYOND THE INDIVIDUAL LEVEL

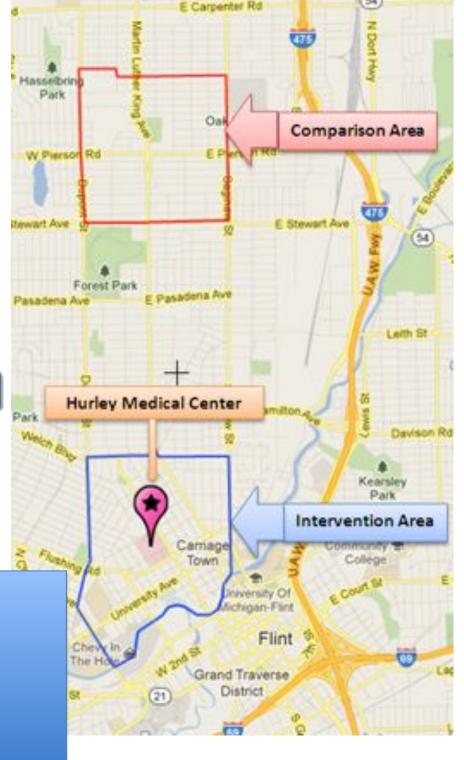
Michigan Youth Violence Prevention Center

Multi-faceted youth violence prevention program testing six interventions focused at multiple ecological levels in an intervention neighborhood vs. a comparison neighborhood



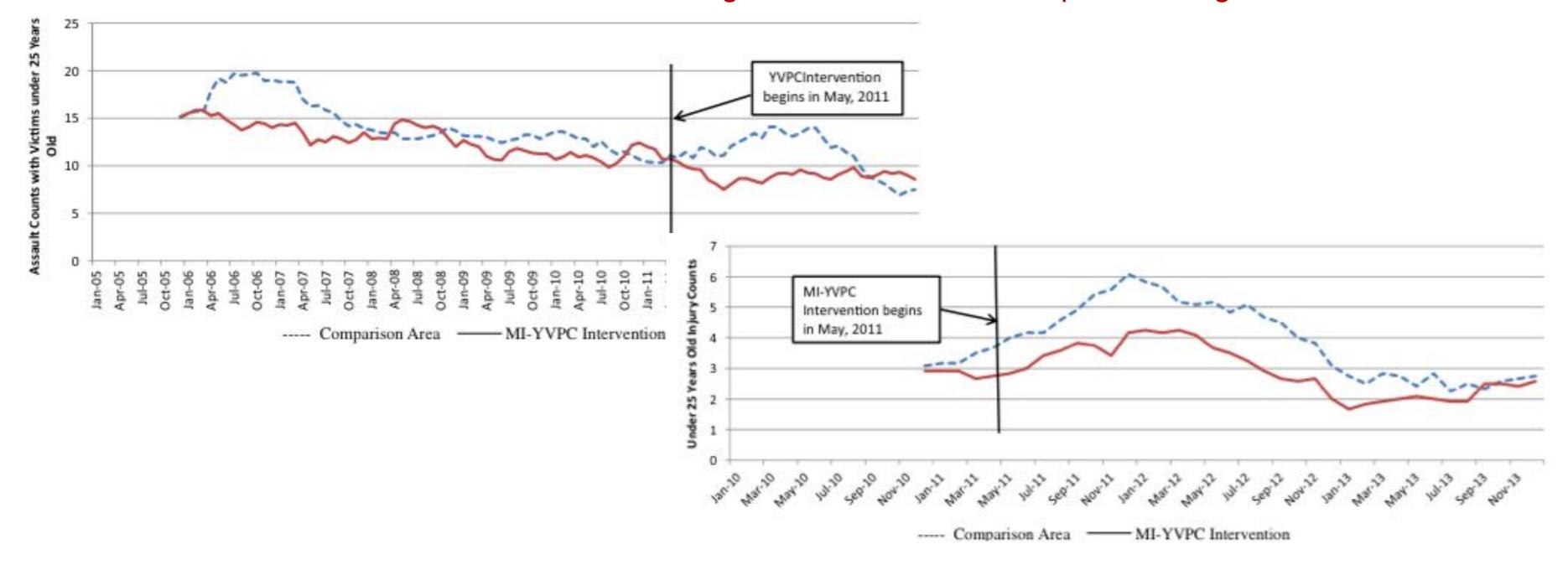
- Community Policing
- Clean & Green Initiatives
- Father & Sons
- Targeted Outreach Mentoring

- Sync (ED-based BI)
- Youth Empowerment Solutions (YES)



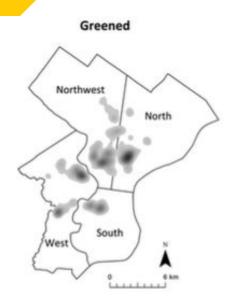


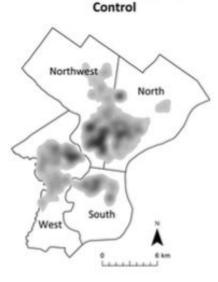
Youth (10-24 y/o) assault offenses (p<0.05) and injury presentations to the Level-1 ED (p<0.001) were lower overall for the intervention neighborhood than the comparison neighborhood





# VACANT LOT AND COMMUNITY GREENING







- Improved green space enhance neighborhood safety and promotes positive, healthy social activity, improves economic opportunity, social connections, and social organization
- Impact of Green Space Modifications in Philadelphia
  - Decreased firearm assaults and robberies (p<0.001)
  - Decreased Vandalism in one area of the city (p<0.001)</li>
  - Resident's report feeling safer, less stress and more exercise (p<0.01)



#### PUBLIC POLICY APPROACHES

- Preventing high-risk people from obtaining firearms at high-risk times
  - Expanding background checks
    - States stricter background check enforcement: 38% lower IPV risk / 39% less risk of law enforcement being killed
    - States weakening background checks have experienced increased risk of subsequent violent crime
  - DVROs and Extreme Risk Protection Orders (ERPOs) / Red Flag Laws
    - DVROs and ERPO differ in potential petitioners (family/household; law enforcement) and protections (firearm access only vs. broader protections [e.g., no contact, counseling, firearm access]
    - DVROs: In states restricting firearm access as part of DVRO, 25% reduction in risk of IPV homicide
    - ERPOs: Evidence base is being developed / examined
  - Focused deterrence for illegal firearm carriage (Hot-spot Policing / Social Media Surveillance)
    - Studies demonstrate hot-spot policing can have an effect (29-71% decrease) in urban shootings
    - Implementation Issues (differentially implemented / enforced among certain populations affecting disparities)
  - Preventing illegal firearm diversion
    - ATF studies demonstrate unlicensed sellers, straw purchasers, and small portion of licensed dealers account for large portion of diversion (i.e., <5% of licensed dealers sell 60% of firearms used in violent crimes)
    - Gun Show Loophole Unlicensed firearm dealers > 50% sales

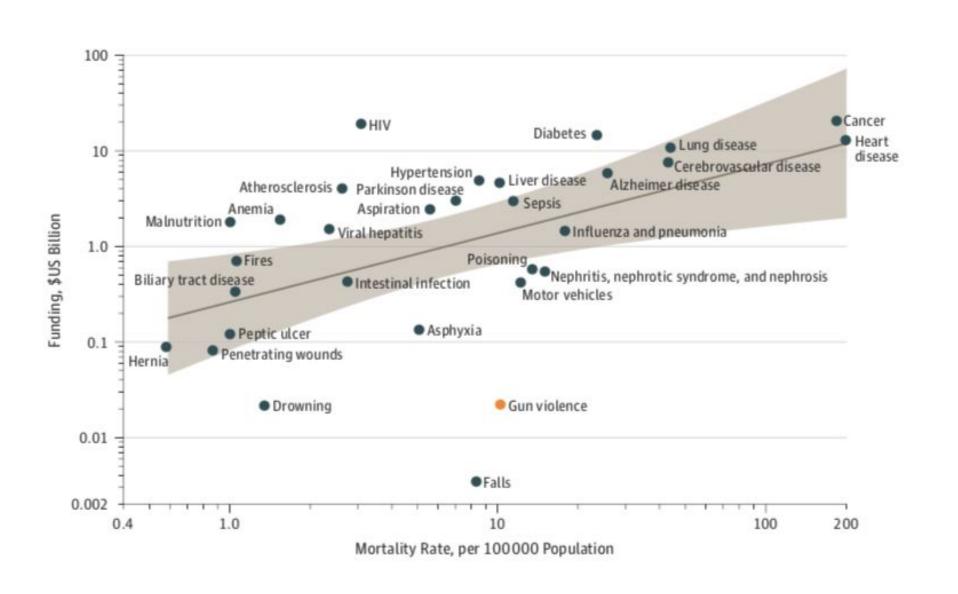
Wintemute 2001; Rudolph et al 2015; Webster 2014; Vigdor & Mercy 2006; Zeoli & Webster 2010; Swanson 2013





GENERATING NEW KNOWLEDGE AND ADVANCING
INNOVATIVE SOLUTIONS TO REDUCE FIREARM DEATH AND
INJURY ACROSS THE UNITED STATES

# WHY HAS FIREARM PREVENTION SCIENCE LAGGED BEHIND OTHER HEALTH ISSUES?



#### Disparity in NIH research awards

Cholera, diphtheria, polio and rabies

**2,068** total cases, 1973-2012

**486**NIH research awards

Injuries from firearms

Over 4 million total cases, 1973-2012

**3** NIH research awards



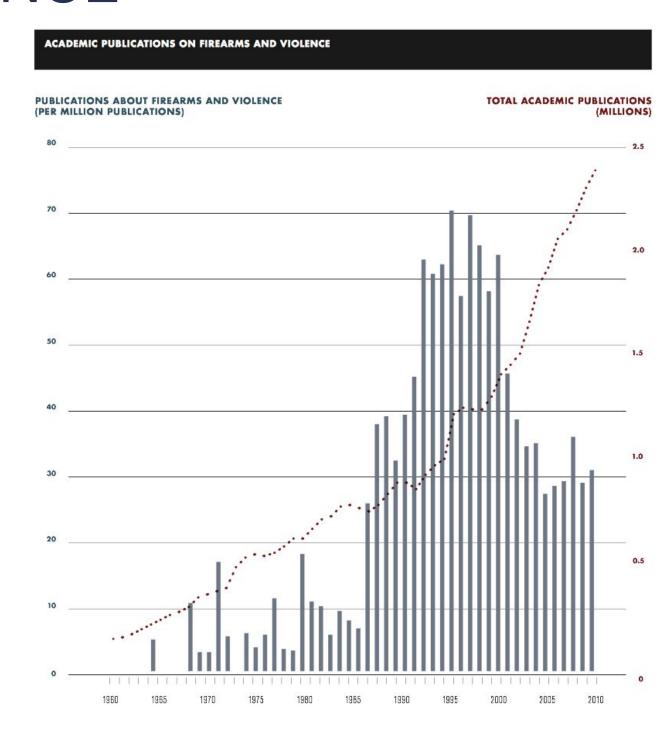
## EFFECT OF DECREASED RESEARCH FUNDING ON THE SCIENCE

#### Peer-reviewed Publications

- Firearm injuries accounted for 12.6% of all fatalities among U.S. youth; <0.3% of peer-reviewed publications (1991-2010)
- 25% lower than it might have been when compared with publications in non-firearm related disciplines with similar public health impact

#### • Senior Research Mentorship

- <12 active senior research investigators</p>
  - 2 within medicine





#### RENEWED RESEARCH FOCUS NATIONALLY

- Driven largely by Increased Need to Address the Growing Problem of Deaths / Injury
  - Turning point = 2012 / Newtown School Shooting
  - Increasing Rates of Firearm Homicides / Suicides
  - Increasing Rates of School / Mass Shootings (e.g., Las Vegas, Pulse Nightclub, etc.)
- Initial Federal Investment Small
  - Across Agencies: NIH; NIJ; CDC
- Increased Foundation Focus on Funding
- UM Leader in Federal Funding for Research
  - FACTS Consortium
  - 25% of all Federal Funding

### Congress agrees on historic deal to fund \$25 million in gun violence research

"This funding hangs out a sign that says we're open for business."



Congress has reached a spending agreement that includes \$25 million for gun violence research, the first funding in more than 20 years to study a problem that kills 40,000 people annually.

The money will be split evenly between the Centers for Disease Control and Prevention and the National Institutes of Health.

COLLABORATIVE ON
GUN VIOLENCE
RESEARCH



#### BECOMING AN INSTITUTE

To engage the breadth of expertise across the University of Michigan, with input from nonacademic stakeholders, to generate knowledge and advance solutions that will decrease firearm injury in the United States



#### **Presidential Initiative**

Steering Committee Representing 12 Schools

2021



#### Prior to 2019

U-M Faculty Have Decades of Research in the violence, suicide, and firearm space



**National Center** 

for School Safety







2019

#### **Institute Launched**

The only comprehensive university-wide firearm injury prevention institute that currently exist nationwide



## WHY BUILD A UM INSTITUTE FOCUSED ON FIREARM INJURY PREVENTION?

- Consolidate existing multi-disciplinary faculty expertise in firearm injury prevention to develop synergy and build momentum toward solutions
- Engage new faculty across campus, allowing for growth in previously understudied areas
- •Stimulate new research directions and collaborations that aid future funding for developing / testing evidence-based research programs
- Engage students and trainees across Campus to develop and expand the pipeline of faculty and practitioners focused on this area
- Serve as a resource and bridge between academia and communities, injury prevention practitioners, and policy-makers



#### **Diverse Perspectives, Common Goals**

#### Decrease injury and death by firearms











Grandparent

Hunter

High-school Student

Parent

Neighborhood Watch





Law Enforcement



Teacher



Elected Official



**Business Owner** 



#### Mission/Vision/Structure

To engage the breadth of expertise across the University of Michigan, with input from nonacademic stakeholders, to generate knowledge and advance solutions that will decrease firearm injury in the United States



Research and Scholarship



Education and Training



Community and Engagement



Data and Methods



Policy

#### Areas of focus

The institute has six main domains of interest and focuses across the translational research spectrum (basic science to translation / implementation), as well as across socio-ecological levels (individual, family, community, or policy).



AREAS OF FOCUS

#### **SECTIONS**

Suicide

**School Safety** 

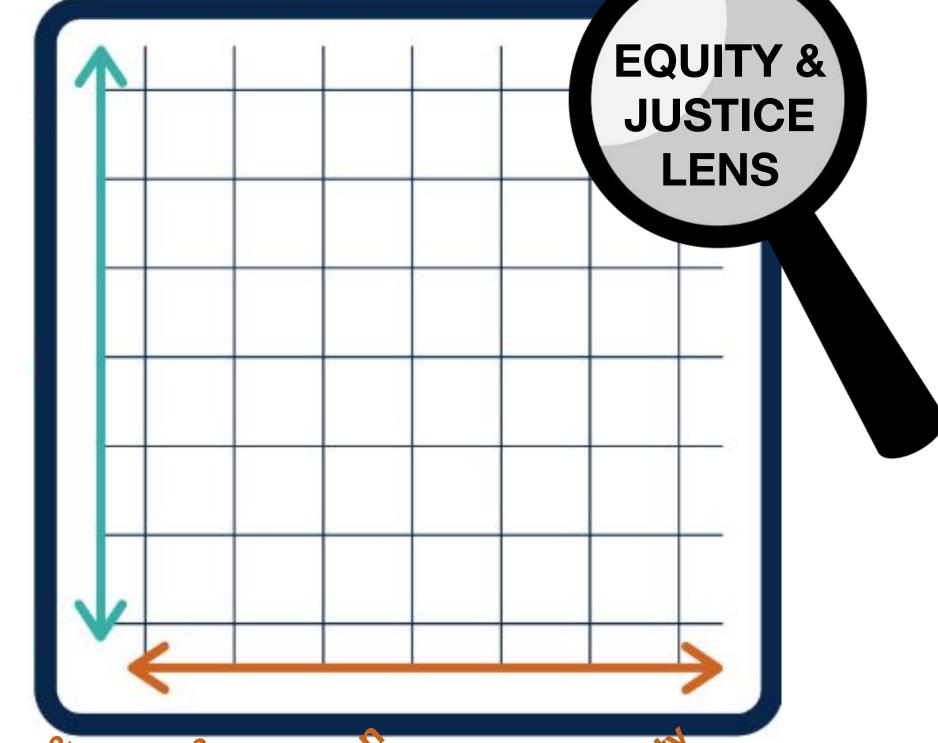
**Mass Shootings** 

**Intimate Partner Violence** 

**Community Violence** 

**Unintentional Injury** 

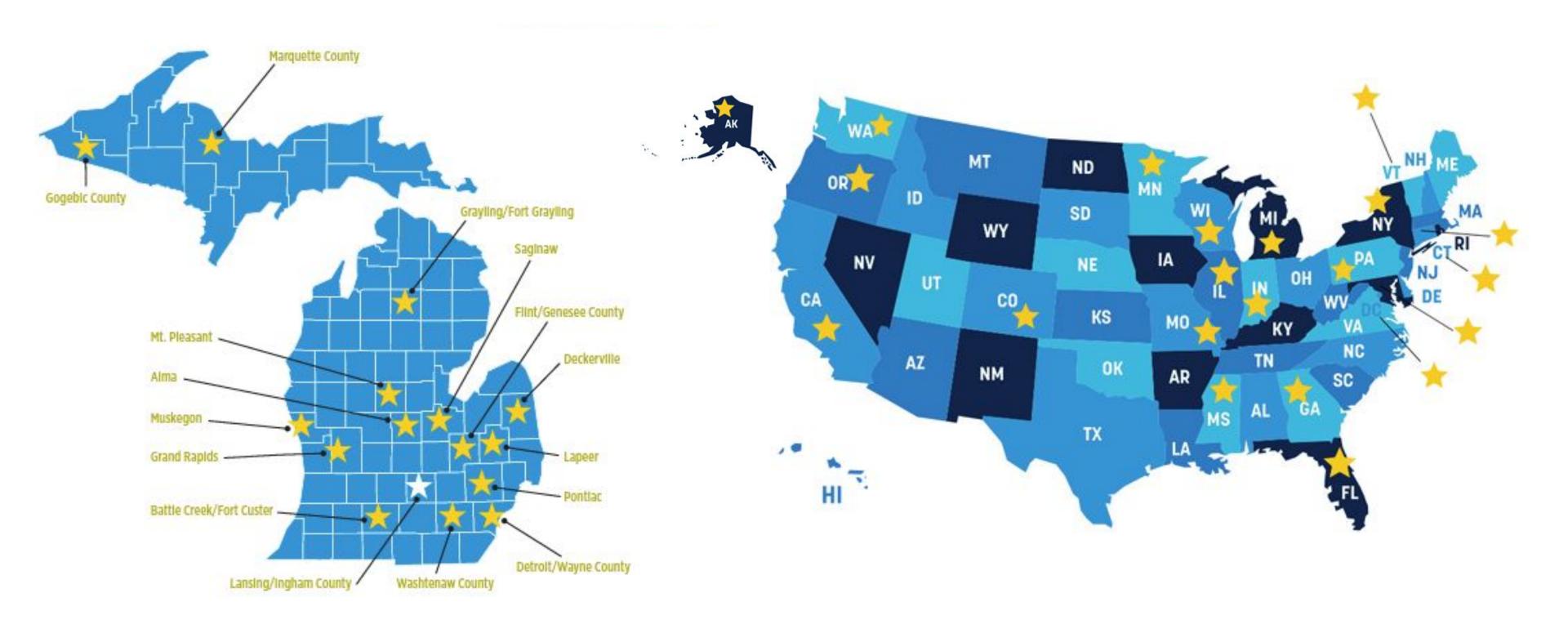
Officer-Involved **Shootings** 



CORES charship ing & policy as & ds mining the policy of t



### Programs & Projects





## RESEARCH & SCHOLARSHIP National Survey of Firearm Behaviors & Attitudes

SURVEY INSTRUCTIONS			EXAMPLE				
Please carefully follow the steps below when completing this surve	V.			RIGI	HT WAY	1000	NG WAY
Use only a blue or black ink pen that does not blot the paper					▼	,	▼
Make solid marks inside the response boxes     Do not make other marks on the survey				<b>&gt;</b> [	$\mathbf{x} \mathcal{D}$	<b>☆</b>	19
Thank you for participating in this survey. Remember, your reidentify you, or how you personally respond to any items in the		complet	ely confi	idential.	No one v	vill be ab	ole to
First, we have some questions about you and your beliefs on	a few issues.	Strongly		Slightly	Slightly		Strongly
Please rate your level of agreement with the following state	ments.	disagree 🔻	Disagree	disagree 🔻	agree 🔻	Agree	agree 🔻
a. People in my community help each other out		[					
b. In general, I feel that people have clear moral standards the	nat they follow						
c. In general, people do not know who they can trust and rel	y on	[]					
d. The police treat everyone fairly, regardless of who they ar	e						
e. The police enforce the law consistently when dealing with	people						
f. The police make decisions on facts and law, not their pers	sonal opinions	🔲					
g. The police explain their actions to people		🗆					
h. Owning a gun decreases a person's chances of being a c		📙					
i. People are more likely to commit suicide when guns are re	eadily available	🔲			$\Box$		
j. Easy access to guns is likely to result in an increased crim  The following questions are about activities that you may have engaged with in the past 12 months.	Next we h		7.0		5	ving situ	lation.
The following questions are about activities that you may	Next we h	is your h do not ha thers, in a	w question ousing single housing single housing a hotel, in	ons about ituation to ng (for ex	ut your li oday? ample: l a r, living ou	ving situ am stayin atside on	nation.
The following questions are about activities that you may have engaged with in the past 12 months.  Over the past 12 months, about how often did you volunteer at a religious institution, hospital, senior center,	Next we h	is your h do not ha thers, in a reet, on	w question ousing si	ons about ituation to ng (for ex a shelter in a car, a	ut your li oday? ample: l a r, living ou	ving situ am stayin atside on	nation.
The following questions are about activities that you may have engaged with in the past 12 months.  2 Over the past 12 months, about how often did you volunteer at a religious institution, hospital, senior center, or any other organization?  Never  A few times or once in the past 12 months	Next we h	is your h do not ha thers, in a treet, on ain statio	w question ousing single housing a hotel, in a beach,	ons about ituation to ng (for ex a shelter in a car, a park)	ut your li oday? ample: l a r, living ou bandone	ving situ om stayin otside on d buildin	ng with the g, bus o
The following questions are about activities that you may have engaged with in the past 12 months.  2 Over the past 12 months, about how often did you volunteer at a religious institution, hospital, senior center, or any other organization?  Never  A few times or once in the past 12 months  Once or twice a month	Next we h	is your h do not ha thers, in a treet, on ain statio	w question ousing since housing a hotel, in a beach, or, or in a sing todal the futur	ons about ituation to ng (for ex a shelter in a car, a park)	ut your li oday? ample: l a r, living ou bandone	ving situ om stayin otside on d buildin	ng with the g, bus o
The following questions are about activities that you may have engaged with in the past 12 months.  2 Over the past 12 months, about how often did you volunteer at a religious institution, hospital, senior center, or any other organization?  Never  A few times or once in the past 12 months  Once or twice a month  Once or twice a week	Next we h	is your h do not ha thers, in a creet, on ain statio have hou busing in	w question ousing since housing a hotel, in a beach, or, or in a sing todal the futur	ons about ituation to ng (for ex a shelter in a car, a park) ny, but l ar	ut your li oday? ample: l a r, living ou bandone	wing situ m stayin ttside on d buildin d about lo	ng with the g, bus o
The following questions are about activities that you may have engaged with in the past 12 months.  2 Over the past 12 months, about how often did you volunteer at a religious institution, hospital, senior center, or any other organization?  Never  A few times or once in the past 12 months  Once or twice a month  Once or twice a week  Nearly every day	Next we h	is your had not had thers, in a creet, on a can static nave hou ousing in a care hours of the nare	w question ousing single housing a hotel, in a beach, on, or in a sing todal, the futur sing	ons about ituation to ng (for ex a shelter in a car, a park) y, but I ar	ut your li oday? ample: I a r, living ou bandone m worried	wing situ om stayin otside on d buildin d about lo	ng with the g, bus o
The following questions are about activities that you may have engaged with in the past 12 months.  2 Over the past 12 months, about how often did you volunteer at a religious institution, hospital, senior center, or any other organization?  Never  A few times or once in the past 12 months  Once or twice a month  Once or twice a week  Nearly every day  At least once a day	Next we h  4 Whati ordinates the control of the con	is your hido not hat thers, in a creet, on ain static nave hou ousing in nave hou often are tons true thin the p	w question ousing since housing since housing a hotel, in a a beach, on, or in a sing toda the future sing the follor for you?	ons about ituation to ing (for ex- a shelter in a car, a park) yy, but I are wing	oday? ample: I a moday? ample: I a moday often true weel	wing situ om stayin otside on d buildin d about lo	ng with the g, bus o
The following questions are about activities that you may have engaged with in the past 12 months.  2 Over the past 12 months, about how often did you volunteer at a religious institution, hospital, senior center, or any other organization?  Never  A few times or once in the past 12 months  Once or twice a month  Once or twice a week  Nearly every day  At least once a day  3 Over the past 12 months, how often did you provide unpaid assistance or help to people who do not live with	Next we h  4 Whati 10 of of of itr III 5 How of situati a. Wiffor	is your hido not hat thers, in a creet, on ain static nave hou ousing in nave hou often are tons true thin the p	w question ousing sinve housing a hotel, in a beach, or in a a sing toda, the future sing the follor for you?	ons about ituation to ing (for ex- a shelter in a car, a park) yy, but I are wing	oday? ample: I a moday? ample: I a moday often true weel	wing situ om stayin otside on d buildin d about lo	ng with the g, bus o
The following questions are about activities that you may have engaged with in the past 12 months.  2 Over the past 12 months, about how often did you volunteer at a religious institution, hospital, senior center, or any other organization?  Never  A few times or once in the past 12 months  Once or twice a month  Once or twice a week  Nearly every day  At least once a day  3 Over the past 12 months, how often did you provide	Next we h  What  I wha	is your had not hathers, in a creet, on a lain station have hou busing in have hou offen are sons true thin the pod you but to more	w questing single housing sing hotel, in a beach, on, or in a sing todath the future sing the following the following the following that the future is the future sing the following the	ons about tuation to the state of the state	oday? ample: I a ample: I a bandone  Often true	wing situ om stayin otside on d buildin d about lo	ing with the g, bus o
The following questions are about activities that you may have engaged with in the past 12 months.  2 Over the past 12 months, about how often did you volunteer at a religious institution, hospital, senior center, or any other organization?  Never  A few times or once in the past 12 months  Once or twice a month  Once or twice a week  Nearly every day  At least once a day  3 Over the past 12 months, how often did you provide unpaid assistance or help to people who do not live with you and are not family, such as free babysitting or help	Next we h  What i  I to old old old old old old old old old ol	is your h do not ha thers, in a reet, on ain static nave hou busing in have hou often are tions true thin the p d you b d you did t more thin the p rried tha	w question ousing size housing a hotel, in a beach, in a beach, in a beach, in grant of the future sing the following the follow	ons about ituation to the state of the state	oday? ample: I a r, living ou bandone m worried	wing situ om stayin otside on d buildin d about lo	ing with the g, bus o
The following questions are about activities that you may have engaged with in the past 12 months.  2 Over the past 12 months, about how often did you volunteer at a religious institution, hospital, senior center, or any other organization?  Never  A few times or once in the past 12 months  Once or twice a month  Once or twice a week  Nearly every day  At least once a day  3 Over the past 12 months, how often did you provide unpaid assistance or help to people who do not live with you and are not family, such as free babysitting or help with shopping?  Never	Next we h  What i  I to old old old old old old old old old ol	is your had not hat hers, in a reet, on a nain static have hou busing in have hou busing in have hou busing in the pod you did to more	w questing single housing sing hotel, in a beach, on, or in a sing todath the future sing the following the following the following that the future is the future sing the following the	ons about ituation to a shelter in a car, a park) but I are wing on this, the tidin't la money to anonths, by dod would	oday? ample: I a r, living ou bandone m worried	wing situ om stayin otside on d buildin d about lo	ing with the g, bus o
The following questions are about activities that you may have engaged with in the past 12 months.  2 Over the past 12 months, about how often did you volunteer at a religious institution, hospital, senior center, or any other organization?  Never  A few times or once in the past 12 months  Once or twice a month Once or twice a week Nearly every day At least once a day  3 Over the past 12 months, how often did you provide unpaid assistance or help to people who do not live with you and are not family, such as free babysitting or help with shopping?  Never  A few times or once in the past 12 months	Next we h  4 Whati 16 of st tr 18 19 19 5 How of situati a. Wife for ann get b. Wife wo our	is your had not hat here, in a creet, on a	w question ousing since housing since housing a hotel, in a beach, in, on, or in a sing todat the future sing the following the following the for you? Doast 12 mought justifut have reported to the future of the form of the	ons about ituation to the second seco	oday? ample: I a r, living ou bandone n worried  Often true  true  ou run buy	wing situ am staying stside on d buildin d about lo	uation.  Ing with the g, bus of the true with the true wit
The following questions are about activities that you may have engaged with in the past 12 months.  2 Over the past 12 months, about how often did you volunteer at a religious institution, hospital, senior center, or any other organization?  Never  A few times or once in the past 12 months  Once or twice a month  Once or twice a week  Nearly every day  At least once a day  3 Over the past 12 months, how often did you provide unpaid assistance or help to people who do not live with you and are not family, such as free babysitting or help with shopping?  Never  A few times or once in the past 12 months  Once or twice a month	Next we h  4 Whati 16 of st tr 18 19 19 5 How of situati a. Wife for ann get b. Wife wo our	is your h do not ha thers, in a reet, on ain static nave hou ousing in nave hou often are ions true thin the p od you did t more thin the p tried tha t before y ore	w question ousing size housing size housing a hotel, in a beach, or in a sing toda the future sing the folloof for you?  Doest 12 mought justin't have in the folloof ous the folloof out the following the following out the foll	ons about ituation to the second seco	oday? ample: I a r, living ou bandone n worried  Often true  true  ou run buy	wing situ am staying stside on d buildin d about lo	uation.  Ing with the g, bus of the true with the true wit
The following questions are about activities that you may have engaged with in the past 12 months.  2 Over the past 12 months, about how often did you volunteer at a religious institution, hospital, senior center, or any other organization?  Never  A few times or once in the past 12 months  Once or twice a month  Once or twice a week  Nearly every day  At least once a day  3 Over the past 12 months, how often did you provide unpaid assistance or help to people who do not live with you and are not family, such as free babysitting or help with shopping?  Never  A few times or once in the past 12 months  Once or twice a month  Once or twice a month  Once or twice a week	Next we h  What:  I who is to start the start	is your h do not ha thers, in a reet, on ain static nave hou ousing in nave hou often are ions true thin the p od you did t more thin the p tried tha t before y ore	w question ousing si we housing si we housing a hotel, in a beach, in, or in a sing todat the future sing the follor of or you? Oast 12 m ought justin't have a past 12 m ought justin't have a past 12 m ought justin't house for your for y	ons about ituation to the second seco	oday? ample: I a r, living ou bandone n worried  Often true  true  ou run buy	wing situ am staying stside on d buildin d about lo	uation.  Ing with the g, bus of the true with the true wit
The following questions are about activities that you may have engaged with in the past 12 months.  2 Over the past 12 months, about how often did you volunteer at a religious institution, hospital, senior center, or any other organization?  Never  A few times or once in the past 12 months  Once or twice a month  Once or twice a week  Nearly every day  At least once a day  3 Over the past 12 months, how often did you provide unpaid assistance or help to people who do not live with you and are not family, such as free babysitting or help with shopping?  Never  A few times or once in the past 12 months  Once or twice a month	Next we h  What:  I What:  I How or situati  a. Wi foo ann ge b. Wi wo our me  How h  How h  I ke fo basis?	is your had not had here, in a reet, on a re	w question ousing si we housing si we housing a hotel, in a beach, in, or in a sing toda the future sing the follor of for you? Death 12 mought justin't have a past 12 m t your for you for you got in the for your of for your of the for your of your of the for your of yo	ons about ituation to the second seco	oday? ample: I a r, living ou bandone n worried  Often true  true  ou run buy	wing situ am staying stside on d buildin d about lo	uation.  Ing with the g, bus of the true with the true wit





### RESEARCH & SCHOLARSHIP \$10M National NIH Coordinating Center for Community-Level Firearm Violence Interventions

**DATA & METHODS** 

**Data Archiving Team** 

IMPLEMENTATION & ECONOMIC EVALUATION

**COMMUNITY ENGAGEMENT** 

The coordinating center for the NIH's community-level firearm interventions

Providing training and technical assistance to NIH-funded firearm grants

Includes U-M faculty experts from SPH, Michigan Medicine, the School of Social Work & ISR

Currently working in Chicago, Mississippi, & D.C., Michigan, Texas, Arkansas



## TRAINING & EDUCATION 1st T32 Training Grant Solely Dedicated to Firearm Injury Prevention

#### 27 Mentors Represent 15 U-M Departments / 7 Schools

Development & **Behavioral Pediatrics** 

**Emergency Medicine** 

Surgery

**Psychiatry** 

**Pediatrics** 

Learning Health Science

School of Nursing

School of Social Work

Psychology

Institute for Firearm Injury Prevention

Health Behavior & Health Education

Health Management & Policy

Industrial & Operations Engineering

Survey Research Center

Research Center for **Group Dynamics** 

#### **Trained/Training 9 Postdoctoral Fellows**



























### Free Massive Open Online Course



**Six Topical Modules** 

https://firearminjury.umich.edu/mooc



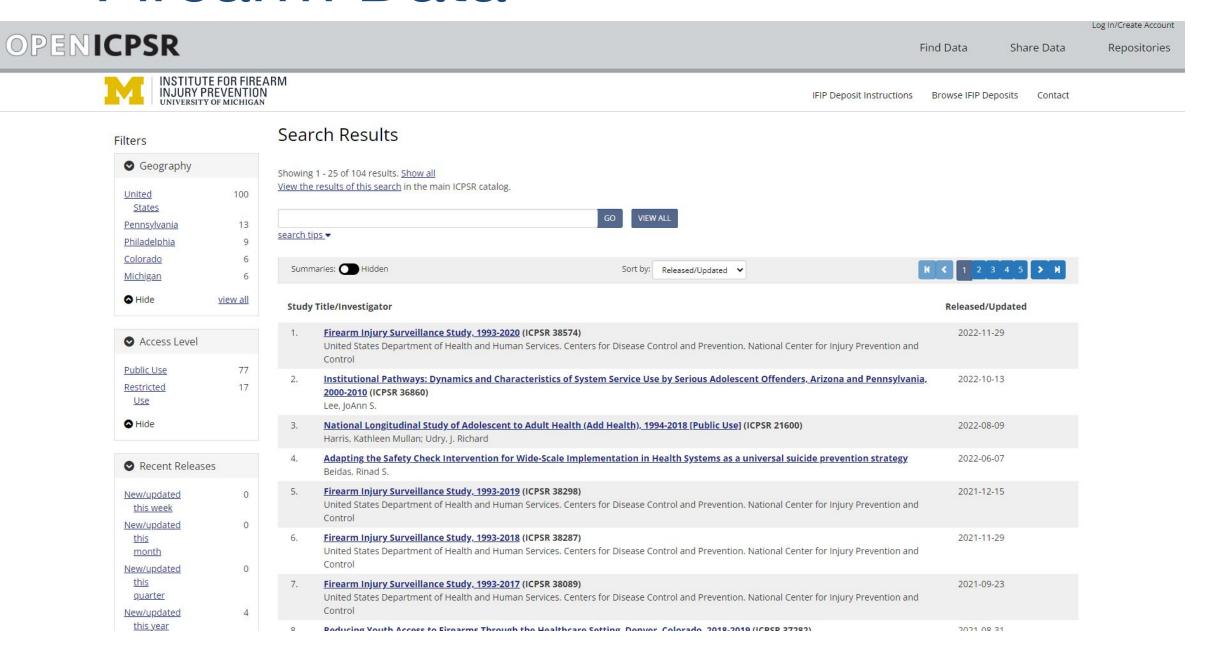


# DATA & METHODS Largest National Repository for Firearm Data

Over 100 data sets

Meets requirements for NIH data archiving

In partnership & housed at ISR

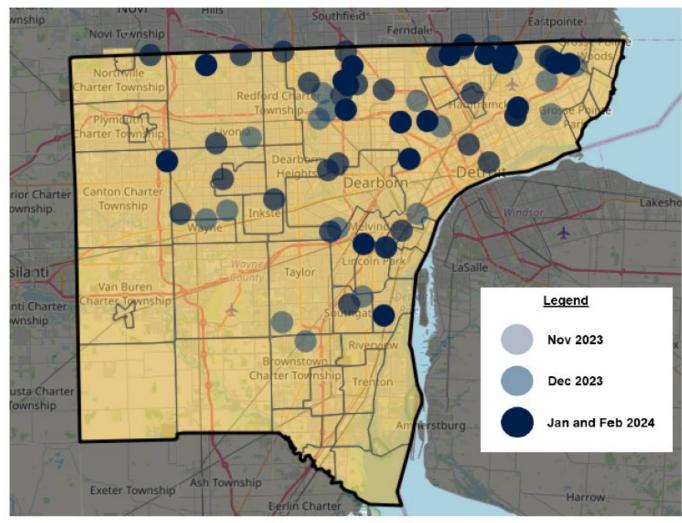




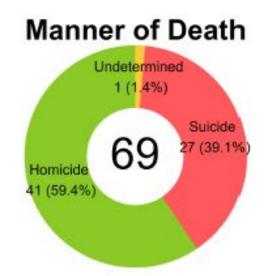
### Real-Time Surveillance System of Firearm Incidents

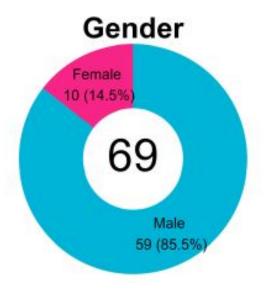
#### Wayne County

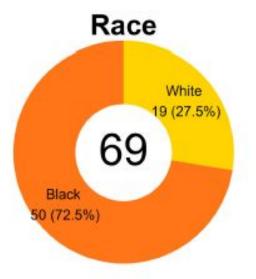
Firearm Mortality Incidents
November 2023 - February 2024

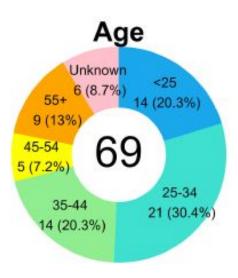


\*Based on available data provided by Wayne County Medical Examiner office











## DATA & METHODS Evaluation

State Evaluator for Community Violence Intervention Programing

Evaluator for MDHHS Suicide Programs Policy Evaluation for Michigan's New Firearm Bills









#### **POLICY**

## Provided Education & Testimony for Three Firearm Safety Bills

HOUSE SUBSTITUTE FOR SENATE BILL NO. 83

(b) House Bill No. 4147.

prescribe

council a

22

25

1 (j) To the extent ascertainable from available state court
2 data, the number of individuals who were prosecuted for knowingly
3 placing a firearm or ammunition in the possession of a restrained
4 individual.
5 (k) Demographic data regarding the individuals who are
certain s: 6 petitioners and respondents in actions for extreme risk protection

8 (3) The state court administrative office, acting under the
9 direction of the supreme court, shall publish a report prepared
10 under this section annually and provide the report to the
11 legislature and the legislative committees with jurisdiction over

judicial matters.

(4) The state court administrative office shall make the data used to prepare the report under this section available annually to individuals, including, but not limited to, the Institute for Firearm Injury and other researchers affiliated with institutions of higher education, who are conducting academic or policy research, including, but not limited to, any disproportionate or discriminatory impact of this act on members of protected classes.

Enacting section 1. This act does not take effect unless all of the following bills of the 102nd Legislature are enacted into law:

(a) House Bill No. 4146.

## Extreme Risk Protection Orders (ERPOs) An Extreme Risk Protection Order (ERPO), also known as a Red Flag order, is a civil cour order that temporarily prohibits individuals who pase a danger to themselves or others from purchasing and possessing firearms. Implementation of ERPOs differs from state to state Currently, 19 states and the District of Columbia have enacted ERPO laws. Firearm Background Checks aring of which the res WHAT ARE FIREARM BACKGROUND CHECKS?





### Extreme Risk Protection Order (ERPO) Toolkit

## Extreme Risk Protection Order Information and Implementation Toolkit

treme risk protection orders (ERPOs), also known as red flag orders, are a tool to prevent firearm violence, including mass shootings, suicides, and firearm assaults.

This toolkit is a collection of resources from various organizations covering general information on ERPOs as well as specific information on how and when to use ERPOs. This toolkit also provides guidance on how to implement ERPO policies and protocols in healthcare settings, schools, and beyond.

What is an FRPO?

When to File an ERPO

Crisis Help Resources

Served an ERPO?

ERPO Laws By State

Michigan ERPO Information and Resources

Community Information and Implementation Resources



#### Schools

Schools work hard to ensure that they are safe spaces for students to learn and grow. Teachers, administrators, school health professionals, and School Resource Officers (SROs) can see when students are in distress or even at-risk of harming themselves or others. Learn more about how Extreme Risk Protection Orders enables school workers to promote school safety and protect students.



#### Healthcare Workers and Networks

Healthcare providers are uniquely poised to offer someone at-risk of harming themselves or others an opportunity for harm reduction and prevention. Extreme Risk Protection Orders are a vital tool healthcare providers can use in responding to critical patient needs.



#### Families and Household Members

Family and household members are often the first to know is their loved one is in crisis and may be at risk of harming themselves or others. In many states with Extreme Risk Protection Orders, family and household members are able to petition for an ERPO themselves, and if not, can contact ast an ERPO.



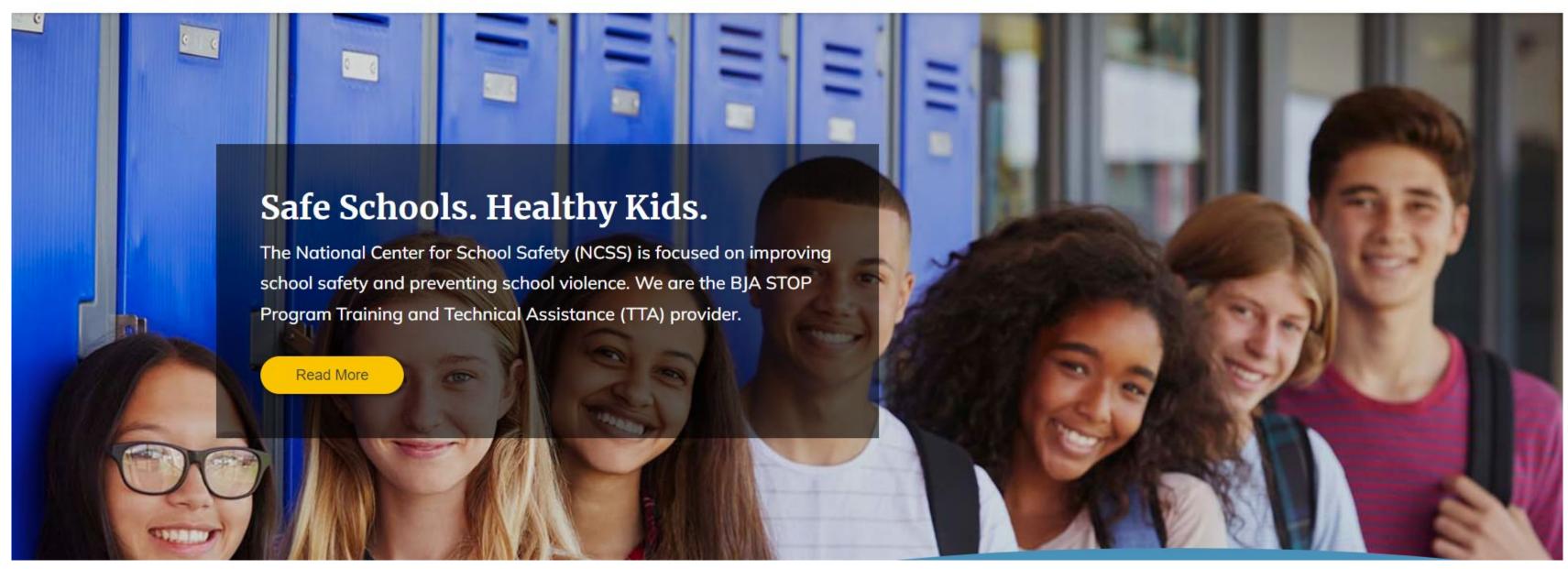




## IMPLEMENTATION National Center for School Safety



About Us v Trainings v Resources v Topics TA Services v Upcoming





## IMPLEMENTATION Michigan School Safety Initiative

A resource for all schools in the State of Michigan–Funded by State of Michigan

Comprehensive school safety needs assessment

Training and technical assistance to implement evidence-based safety initiatives

Evaluating school safety initiatives

Michigan-specific school safety advisory board

Statewide conference

Disseminating evidence-based tools and resources



#### Resources



## After a School Shooting

Resources
highlighting key
areas of support
for communities
after a school
shooting event.



#### **Programs**

Access a range of evidence-based programming proven to reduce and prevent the cycle of violence that can lead to firearm injuries.



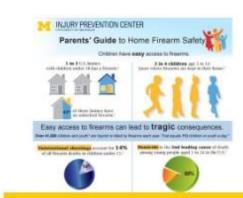
#### Online Learning

Access training videos and self-paced online courses.



#### **Podcasts**

Educational podcasts about firearm injury prevention.



#### Guides

Download
educational
resources and
handouts.

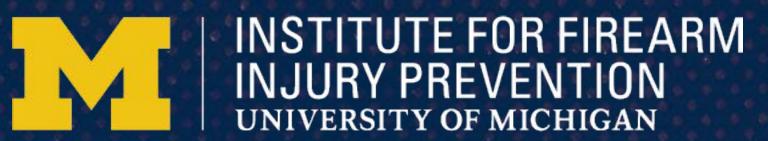
https://firearminjury.umich.edu/resources-communities



## ACCOMPLISHMENTS TO DATE Released 2-Year Impact Report







### THANK YOU / DISCUSSION

WEB

firearminjury.umich.edu

**EMAIL** 

firearminjuryprevention@umich.edu

