FIREARM INJURY IN AMERICA: An overview
Outline

1. Epidemiology: “Just the facts”
2. Scope of the problem
3. Public health precedents
4. The need for research
5. The evidence for in-clinic interventions
6. The evidence for policy changes
7. What can you do today?
1. EPIDEMIOLOGY

The American landscape of firearm injury and death.
US Firearm Mortality, 2016

- Suicide: 22,938
- Violent: 14,925
- Unintentional: 300
- Undetermined: 495
Deaths are the tip of the iceberg

For every 2 people injured by guns, 1 is killed.

This is a higher fatality rate than any other type of injury.
U.S. firearm morbidity and mortality over time
Mass shootings

*Noun.* An incident in which *4 or more* people, excluding the shooter, are *killed* with a firearm.

- **848** killed
- **349** injured

in mass shootings since 2009

- **54%** of incidents are domestic
- **25%** of victims are children
Suicide and firearms: a flipped statistic

10% of suicide attempts with non-firearm methods are fatal

90% of suicide attempts with a firearm are fatal
Urban vs. rural: all-cause firearm mortality
Urban vs. rural: all-cause suicide

![Graph showing the age-adjusted rate of all-cause suicide in Metro and Non-metro areas over the years 2000 to 2015. The graph shows an increasing trend in both areas, with Non-metro showing a steeper increase.]
Who’s at greater risk

**Being a man.** > 85% of gunshot victims are men.

**Being a minority.** Black Americans are 10x more likely to die in firearm homicide than White Americans.

**Being young.** Young people between the ages of 15-25 have the highest rates of firearm death.

**Access to a gun.** Individuals are 3x more likely to die by suicide when there is a gun in the home.
2. SCOPE OF THE PROBLEM

Firearm injuries cause more than gunshot wounds
Our intervention paradigm is under-developed
But this ignores the secondary victims
... and the effect on the healthcare workers
Violence has infectious qualities
Firearm injuries cause exponential harm
Opportunities for prevention: A parallel to other disease entities
3. A PRECEDENT OF PUBLIC HEALTH SUCCESS

Treating epidemics is our job
Our toolbox

Public Health Approach

- Define the problem
- Identify risk and protective factors
- Develop and test intervention strategies
- Assure widespread adoption
It works! Motor vehicle deaths
It works! HIV

Rate per 100,000


0 5 10 15 20 25 30

It works! HIV (cont.)

Behavioral preventive interventions

Effective anti-HIV therapeutics

http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2919237/

http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5021a2.htm
It works! Child abuse

U.S. Maltreatment Trends: 1990-2013

- Neglect: 13% Decline
- Physical Abuse: 55% Decline
- Sexual Abuse: 64% Decline

Rate per 10,000 for Population < 18 years

- Sexual abuse rates (x3)
- Physical abuse rates (x2)
- Neglect rates

The foundation of public health success:

Research

- What is the scope of the problem?
- What are the causes?
- What is protective?
- What works and for whom?

Guidelines

- Peer-reviewed consensus on the best of our knowledge to date

Education

- Teach what is known to those who can help
- Creating standards of best practice

Practice

- Optimize care at every opportunity
- Patient-centric
- Outcomes-oriented

Policy

- Systems change to support care
What doesn’t work: what we’re currently doing for gun violence
4. THE STATE OF THE RESEARCH

Why gun violence is different.
The Dickey Amendment

1996: "none of the funds made available for injury prevention and control at the Centers for Disease Control and Prevention (CDC) may be used to advocate or promote gun control."

What happened next

1996: Dickey amendment

2001: similar restriction on NIH

2013: Sandy Hook. NIH starts funding small amounts of research.

2018: Congress votes against funding AGAIN
<2% of what would be expected in federal spending based on burden of firearm injury

2/3 Reduction in published studies since 1994

6 “High quality” medically relevant studies of interventions
Current funding: Only **1.6%** of predicted
($1.4 billion predicted vs $22 million observed)
Funding resources for ALL medical research

Charitable foundations

Biotech
Med Device
Pharma

58%

CDC
NIH

State, Municipal

38%

4%
Funding resources for GUN VIOLENCE prevention

Have no profit incentive to fund firearm injury prevention research

Biotech
Med Device
Pharma

Charitable Foundations
Fund gun policy almost exclusively

CDC
NIH
States
Municipal

Minimal contribution
SAFE + AFFIRM + Partner organizations
= an alternate path

1. Philanthropy
2. Corporate social responsibility programs
3. Private individuals
4. Industry with vested financial interest
5. WHAT CAN WE DO?

What we already know, and what we still need to learn
Disclosure

There is currently limited evidence assessing the effectiveness of clinical interventions.
The biggest thing you can do is to talk about it

Talk to patients who are at risk of firearm injury:

- Depressed
- Suicidal
- Victims of domestic violence
- Victims of assault
- Parents
What should I say?

It’s no different from talking about sex or alcohol use.

Eg: “What do you think about storing your guns off-site until the situation improves?”

Eg: “Have you thought about how to keep your kids safe around your guns?”

Eg: “Let’s talk about how to lower the risk of your boyfriend hurting or killing you.”

Make it a judgment-free zone.
Want to learn more about What You Can Do in the clinic or hospital?

http://www.ucdmc.ucdavis.edu/vprp/WYCD.html
Advocate for policy change:
Know the evidence

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https://www.rand.org/research/gun-policy.html
Tell your stories
#docs4gunsense & www.standsafe.org

Megan Ranney MD MPH
@meganranney

Over the past 2 days, hundreds of doctors have shared heartbreaking accounts of how #gunviolence is a #publichealth issue. These are the stories of #docs4gunsense ... May their words make a difference.

@choo_ek @physicianwomen @darakass @gitapensa

10:18 PM  26 Feb 2018
634 Retweets  805 Likes

Megan Ranney MD MPH @meganranney  Feb 26
The result of a bullet ricocheting inside the skull and destroying the brain on CT scan. The worst trauma I have seen. GUNS ARE A PUBLIC HEALTH ISSUE – Gen Geller MD. NY #docs4gunsense @highergeller

3 Retweets  46 Likes

Megan Ranney MD MPH @meganranney  Feb 26
The damage a bullet does to a 1 year old brain as it ricochets back and for. The guilt the family feels. The sadness we all feel.
Melissa Miller MD. Missouri
Peds EM #docs4gunsense

3 Retweets  35 Likes
Spread the word

@researchaffirm
@standsafe
3. Stay involved. Don’t let this end today.
Questions? Email us or interact online!:

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Thank you!
Optional extra slides
ASK campaign (Asking Saves Kids)

ONE QUESTION COULD SAVE YOUR CHILD’S LIFE.

“IS THERE AN UNLOCKED GUN WHERE MY CHILD PLAYS?”

FOR MORE INFORMATION ON HOW TO KEEP YOUR CHILD SAFE, VISIT www.askingsaveskids.org

http://www.askingsaveskids.org/
Data behind ASK

827
unintentional shootings of children

61%
at home

2/3preventable

124incidents so far

2015

40%
mortality

2018

73%
minor shooter
Violence intervention programs

Community-based programs that work with hospitals to help patients and families who have been impacted by violence to receive equitable trauma-informed care.

Over 30 programs in cities around the USA.

http://nnhvip.org/

http://www.healingjusticealliance.org/ (Conference info for NNHVIP)
Violence is a preventable health care issue
Domestic violence “danger assessment”

**What it is:** A validated scoring system for determining the level of danger an abused woman has for being killed by her partner.

Free assessment and training available [online](#).

**Why we need it:** Every year, **1,500-1,600** abused women are killed by their abusers.
Counseling on access to legal means (CALM)

Free online course through SPRC
Data behind CALM

71% of people who attempt suicide will NOT go on to die by suicide.

- 24% > 5 min
- 24% 5–19 min
- 23% 20–1 hr
- 16% 2–8 hrs
- 13% 1+ days

Time between decision and attempt

9 in 10 suicide attempters will NOT go on to die by suicide.
Existing resources

http://www.askingsaveskids.org/

http://nnhvip.org/

https://www.sprc.org/resources-programs/calm-counseling-access-lethal-means
Permit-to-purchase (PTP)

**Gist:** To buy a firearm, you must first possess a permit.

To obtain permit:

- Background check
- Criminal-record check
- Fingerprints
- Photograph

**Where it stands:** Only 6 states require PTP for long guns. 13 states require PTP for handguns.
In 2007, Missouri repealed its PTP law.

Since then:
- **25%** increase in guns used in crimes that were legally purchased within the state
- **2x** share of guns recovered at crime scenes within 2 years of sale
- **16%** in murder rate
Universal background checks

**Gist:** Require everyone who sells or transfers a gun to perform a background check on prospective buyers.

**Currently:**

- ✔ Background checks
- X Background checks

Licensed dealer + Private seller =

- 22% of gun owners acquired most recent firearm without a background check.
- 96% of criminals obtain guns this way.

**Where it stands:** 9 states currently require universal background checks at point of sales and transfers for all classes of firearms.
States that require universal background checks have:

- 35% Fewer gun deaths per capita
- 53% Fewer firearm suicides
- 52% Fewer mass shootings
Domestic violence prohibitions

**Gist:** Strengthen federal laws prohibiting individuals convicted of domestic violence from obtaining or retaining firearms.

**Current limitations:**
- Does not cover abuse against non-spouse partners or other family members
- Does not apply to convicted stalkers
- Does not require abusers to surrender firearms
- Not all states report abusers

**Where it stands:** 29 states have broadened prohibitions to all individuals convicted of violent misdemeanors
Data behind stronger domestic violence prohibitions

The evidence is weak, largely because of difficulty studying the issue.
Safe storage laws

**Gist:** Require gun owners to keep firearms out of reach of others

**Where it stands:** Only Massachusetts requires that generally requires for guns to be locked when not in use
Data behind safe storage

An estimated **31%** of accidental firearm deaths could be prevented with safe storage precautions.

**65%** of school shooters obtain the gun from their home.

In Massachusetts:

- **9%** Of youth suicides use guns
- **39%** Youth suicides nationally
Extreme risk protection orders (ERPOs)

**Gist:** Temporary firearm prohibitions for individuals who pose significant danger to themselves or others.

Healthcare professionals can rarely report.

**Where it stands:** Currently enacted in 13 states. Limited evidence, but may be associated with decreased SUICIDE and HOMICIDE.
SlidesCarnival icons are editable shapes.

This means that you can:

- Resize them without losing quality.
- Change line color, width and style.

Isn’t that nice? :)

Examples:
Now you can use any emoji as an icon!
And of course it resizes without losing quality and you can change the color.

How? Follow Google instructions
https://twitter.com/googledocs/status/730087240156643328

and many more...