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Washington Permanente Medical Group



# Clinicians' Role in Preventing Firearm Injury

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No financial disclosures

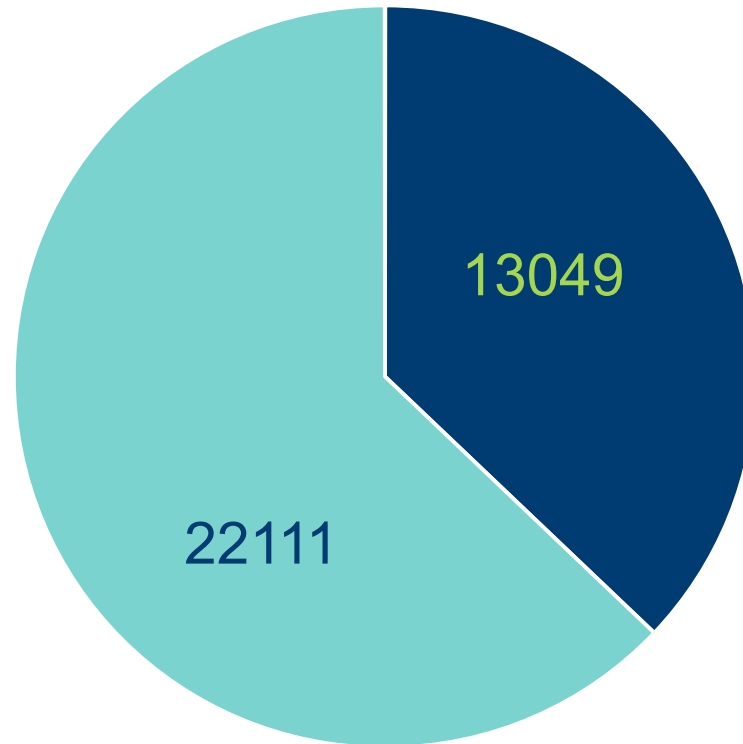
Former member of US  
Preventive Services Task Force

How do violence, firearms and healthcare intersect?

What role can clinicians play to reduce gun injury and death?

# Firearm Deaths, United States 2015

Firearm Deaths (N=36247)



■ Homicide ■ Suicide

# Firearm deaths: Segmentation by Intent

## Suicide

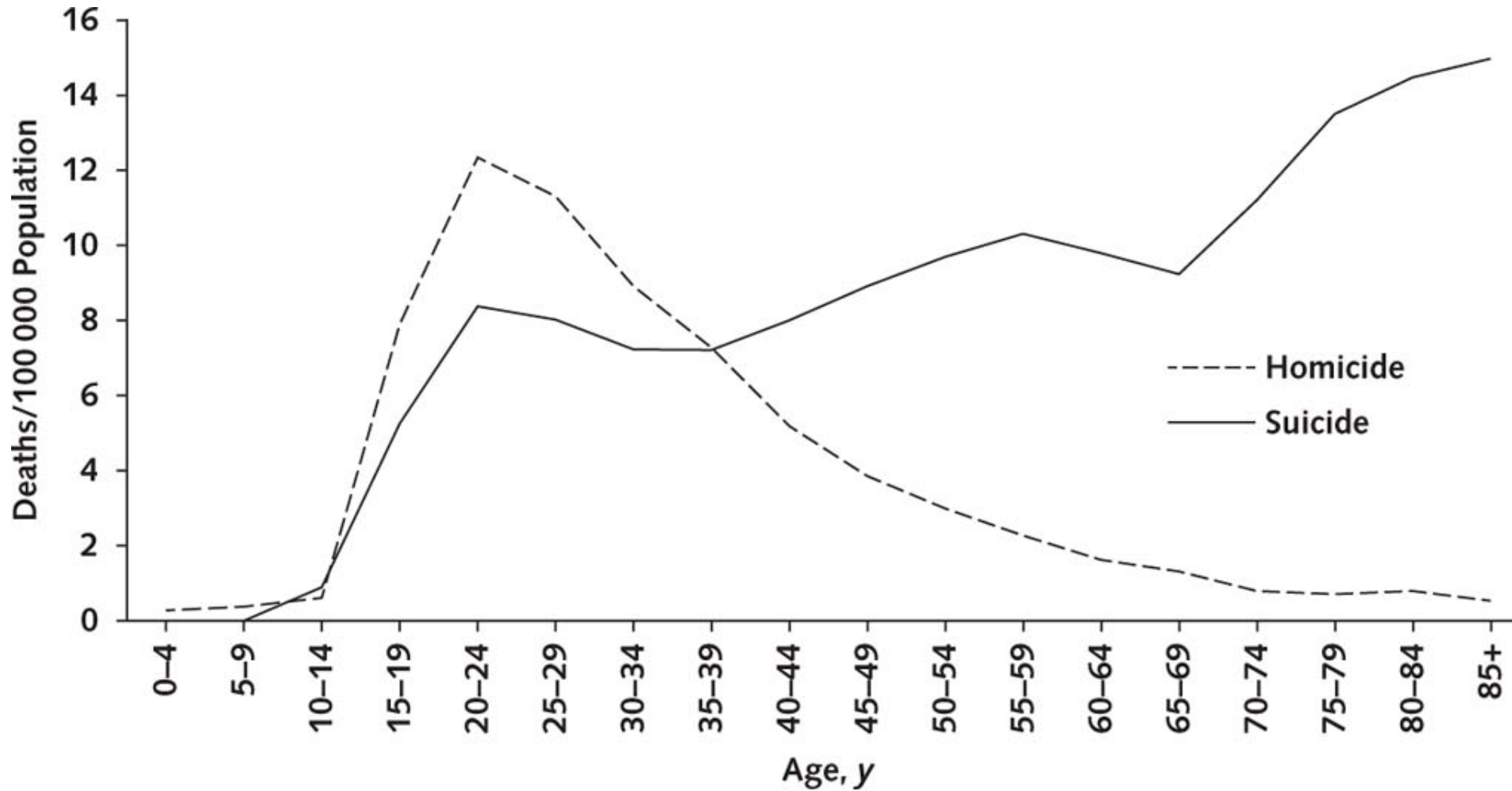
- Adolescent
- Elderly

## Homicide

- Associated with criminal activity
- Intimate Partner
- Other perpetrator known to victim
- Stranger /random
- Legal intervention
- Youth

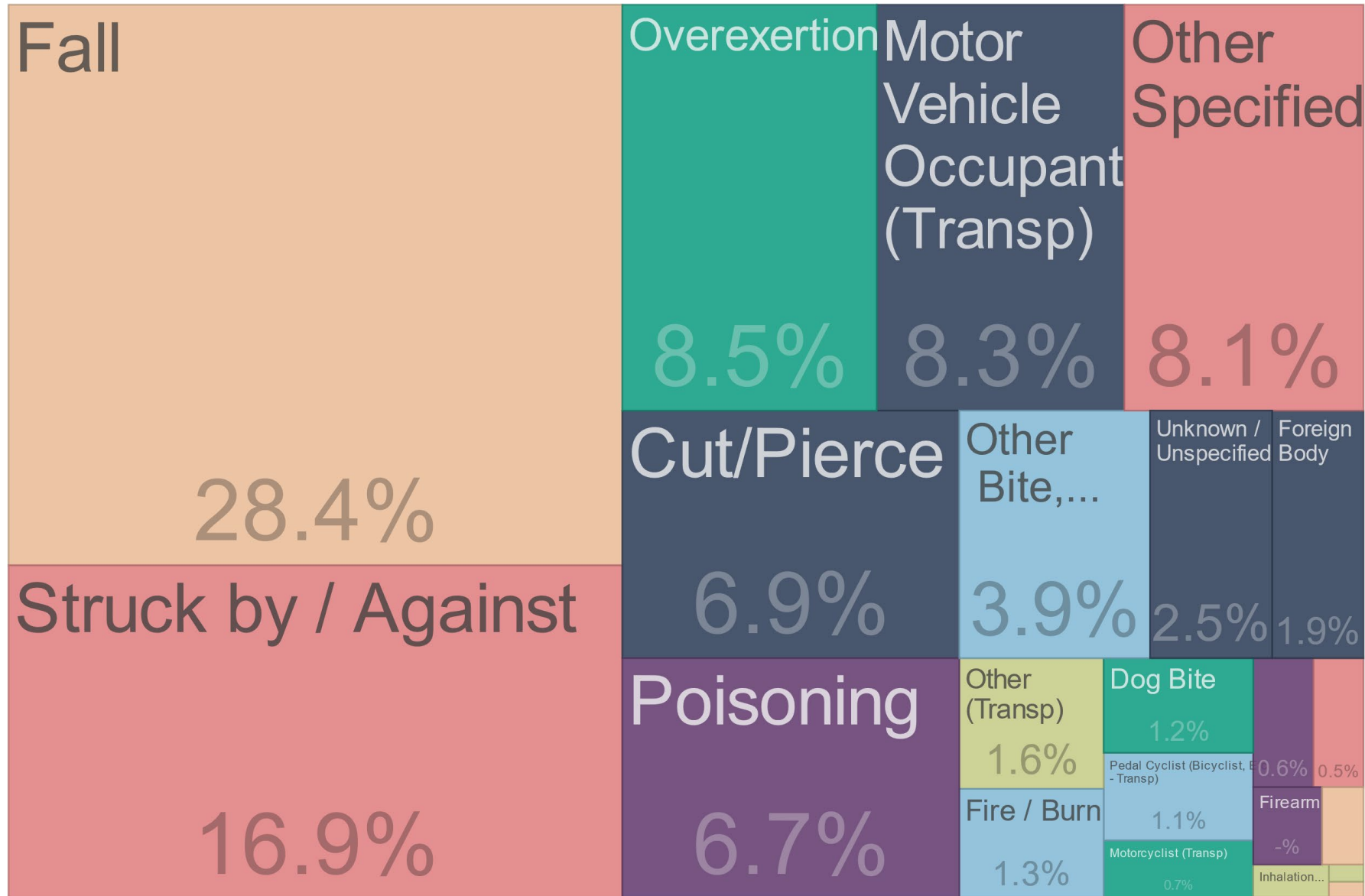
## Unintentional/accidental

# Firearm suicide and homicide rates, by age, 2017



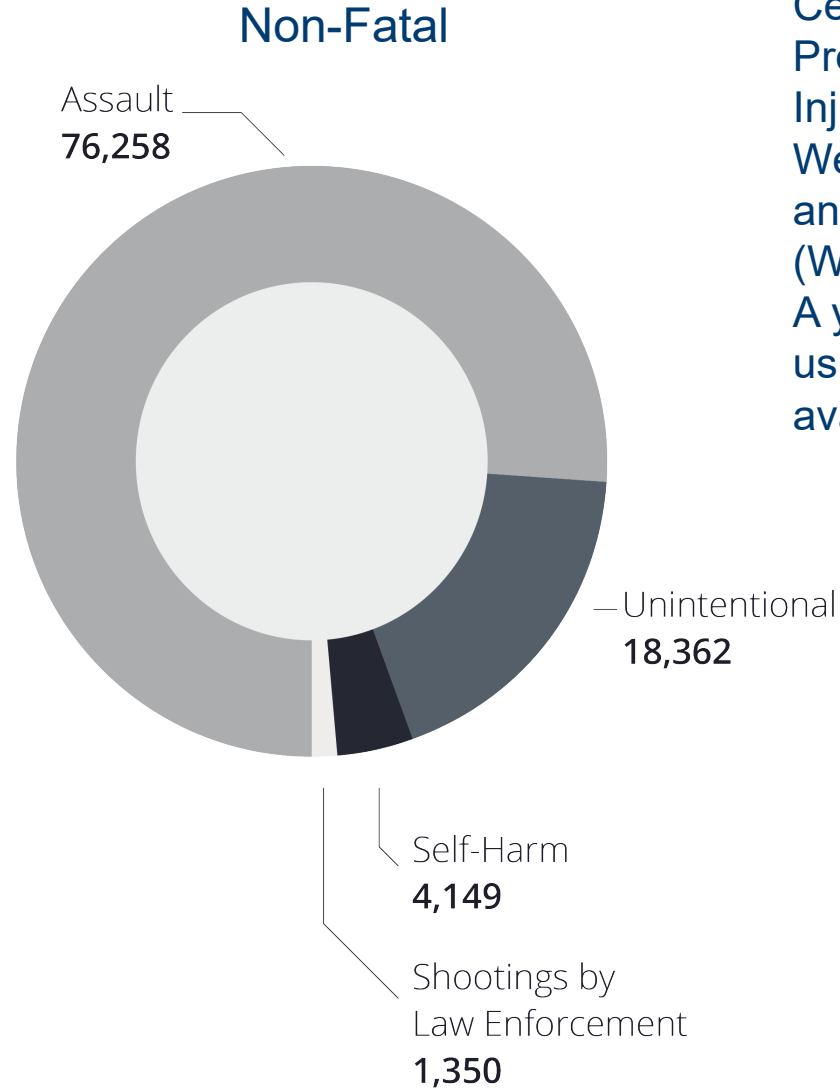
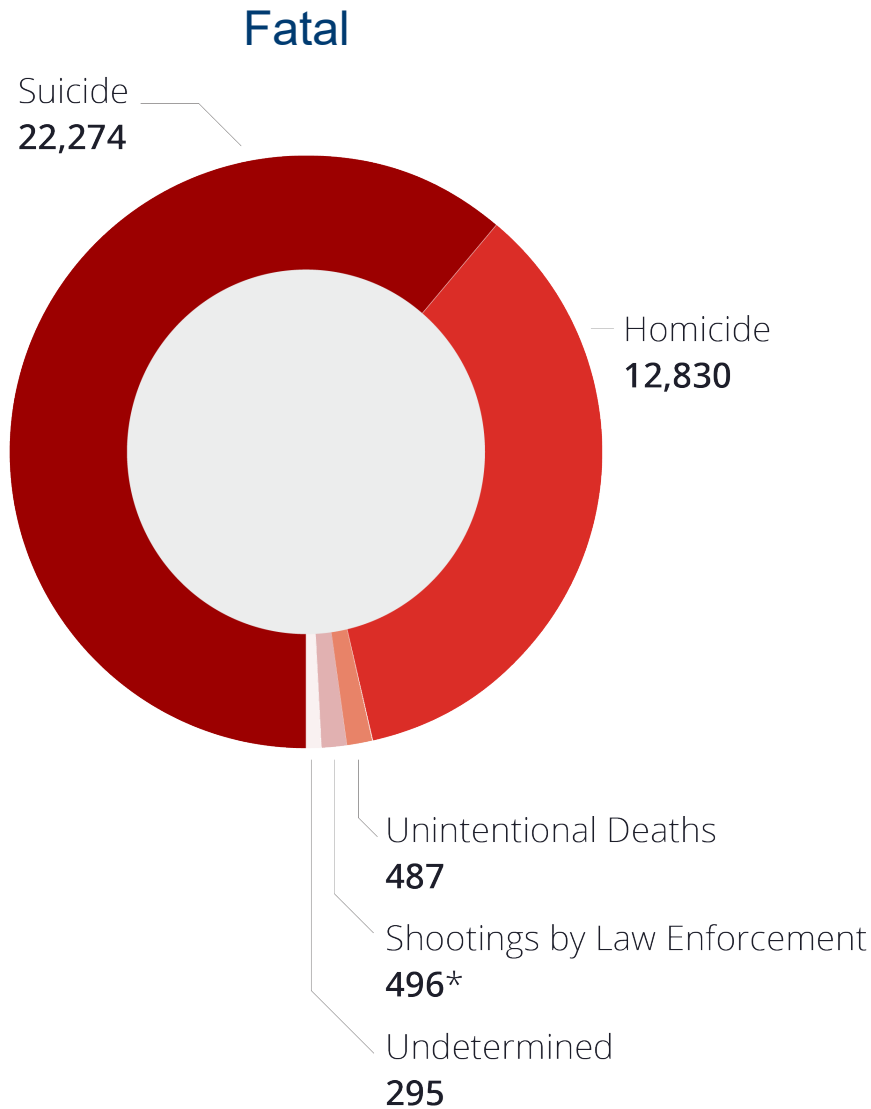
Web-based Injury Statistics Query and Reporting System (WISQARS), CDC

# Firearm deaths: Segmentation by Intent





# Gun Injuries by Intent, USA



Centers for Disease Control and Prevention. National Center for Injury Prevention and Control, Web-based Injury Statistics Query and Reporting System (WISQARS) Fatal Injury Reports. A yearly average was developed using five years of most recent available data: 2013 to 2017.

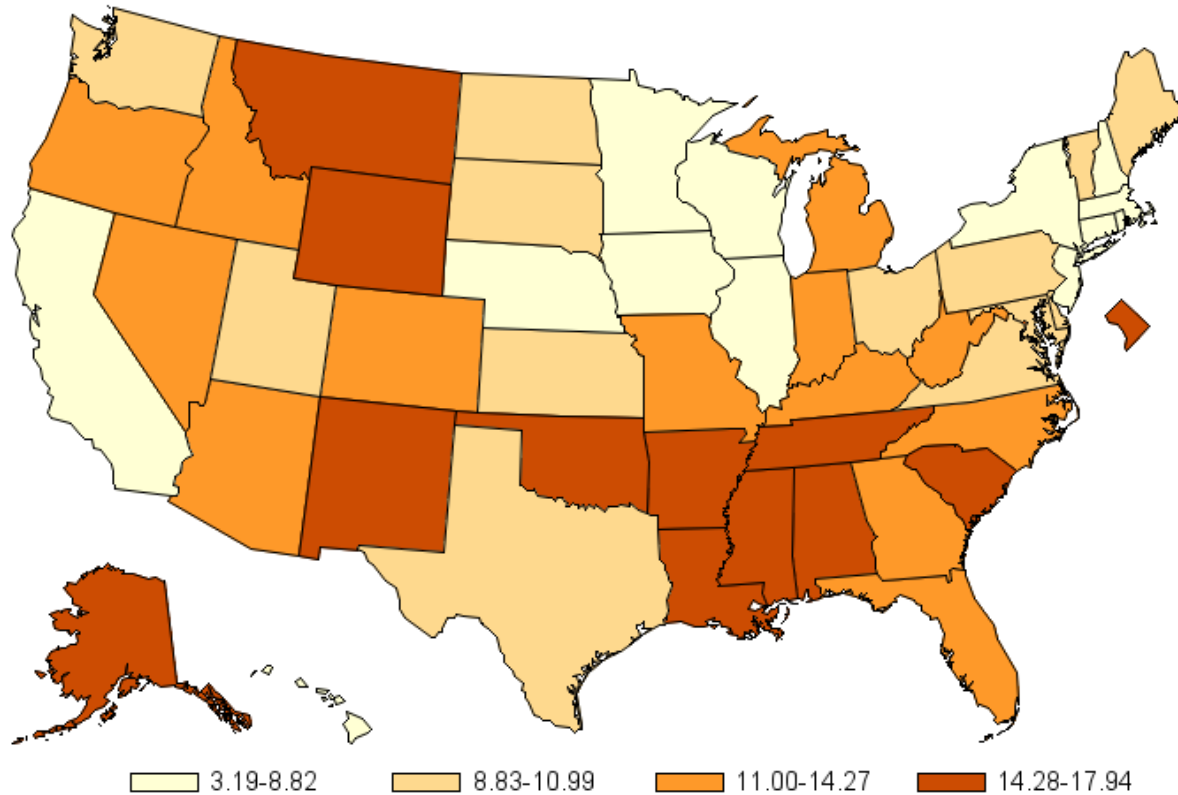
# Geographic Variation in Firearm Injury

2008-2014, United States

Death Rates per 100,000 Population

Firearm, Violence-related, All Races, All Ethnicities, Both Sexes, All Ages

Annualized Crude Rate for United States: 10.18

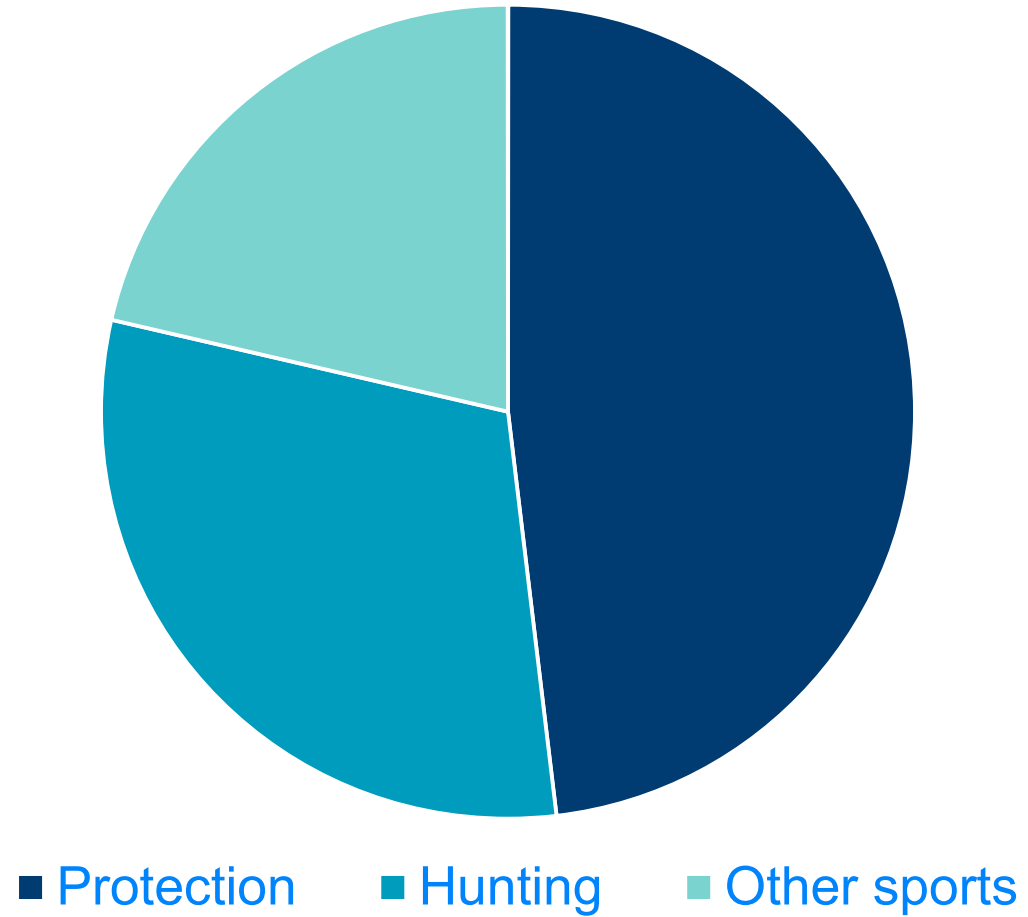


Reports for All Ages include those of unknown age.

\* Rates based on 20 or fewer deaths may be unstable. States with these rates are cross-hatched in the map (see legend above). Such rates have an asterisk.

# Why Do People Own Firearms?

## Reasons



# Association of Ownership with Risk

Household risk is to all members

- ▲ Homicide: OR=3.2
- ▲ Suicide: OR= 2.0

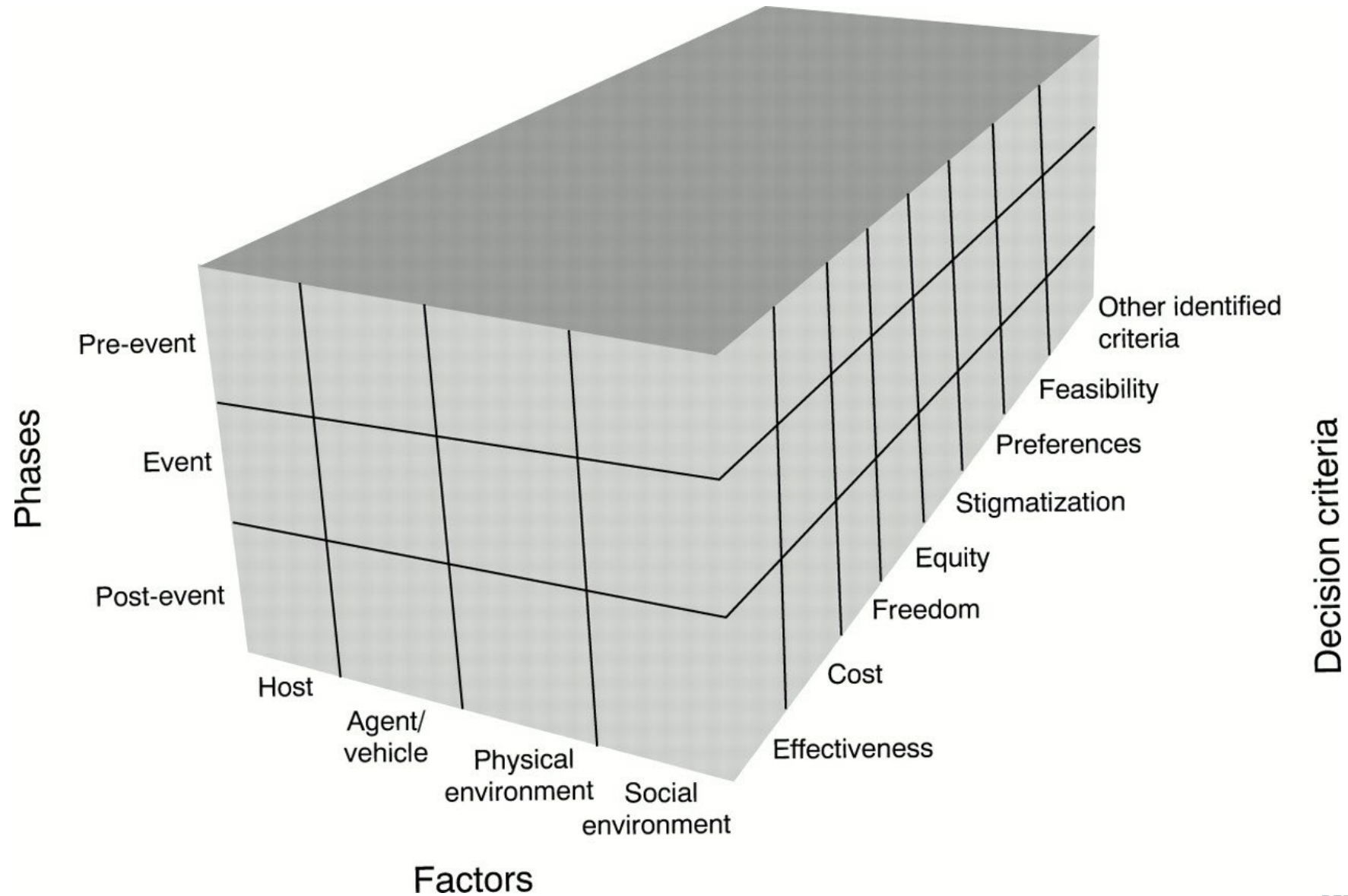
Anglemyer, et al; Ann Int Med 2014

# Haddon's Matrix: A Framework for Injury Prevention



	Pre-event	During event	Post-event
<b>Human Factors</b>	<ul style="list-style-type: none"> <li>• Education and licensing</li> <li>• Driver impairment</li> <li>• Crash avoidance maneuvers (braking, turning, etc.)</li> </ul>	<ul style="list-style-type: none"> <li>• Health at time of crash</li> <li>• Sitting properly in restraint</li> <li>• Impairment</li> </ul>	<ul style="list-style-type: none"> <li>• Response to EMS</li> <li>• Severity of injury</li> <li>• Type of injury</li> </ul>
<b>Vehicle/ Equipment Factors</b>	<ul style="list-style-type: none"> <li>• Crash avoidance equipment and technology (lights, tires, collision avoidance, etc.)</li> <li>• Vehicle design</li> <li>• Vehicle load</li> </ul>	<ul style="list-style-type: none"> <li>• Speed of travel</li> <li>• Functioning of safety equipment (seat belts, air bags, child restraints)</li> <li>• Energy absorption of vehicle</li> </ul>	<ul style="list-style-type: none"> <li>• Ease of extraction from vehicle</li> <li>• Integrity of fuel systems and battery systems</li> </ul>
<b>Physical Environment</b>	<ul style="list-style-type: none"> <li>• Road hazards</li> <li>• Distractions</li> <li>• Weather conditions</li> </ul>	<ul style="list-style-type: none"> <li>• Roadside features</li> <li>• Guardrails</li> <li>• Type and size of object struck</li> </ul>	<ul style="list-style-type: none"> <li>• Distance of EMS personnel</li> <li>• Notification of EMS personnel</li> <li>• Accessibility to crash victims</li> </ul>
<b>Social/ Economic</b>	<ul style="list-style-type: none"> <li>• Enforcement activities</li> <li>• Insurance incentives</li> <li>• Social norming</li> </ul>	<ul style="list-style-type: none"> <li>• Laws concerning use of safety equipment</li> </ul>	<ul style="list-style-type: none"> <li>• Trauma system equipment, personnel, training</li> <li>• Information sharing</li> </ul>

# Haddon's Matrix 3-D



# Role of Clinicians in Preventing Firearm Injury

Which cells in the Matrix are likely to be influenced by clinicians?

- ▲ Host/Pre-event—Reducing Risk behavior
- ▲ Host/Post-event---Trauma Care
- ▲ Agent/Pre-event—Influencing acquisition by host
- ▲ Environment Pre-event--: influence storage by host
- ▲ Environment Post-event: EMS/Trauma systems organization, 911

## Steps you can take today

### Recognize and Mitigate Risk

#### Screening patients

- Depression/ suicidality
- Alcohol Misuse
- Intimate Partner violence



# Screening for Depression/Suicidality

Population	Recommendation	Grade (What's This?)
General adult population, including pregnant and postpartum women	The USPSTF recommends screening for depression in the general adult population, including pregnant and postpartum women. Screening should be implemented with adequate systems in place to ensure accurate diagnosis, effective treatment, and appropriate follow-up.	<b>B</b>

# Depression Screening Cascade



# Reducing Unhealthy Alcohol Use (Nov 2018)

Population	Recommendation	Grade (What's This?)
Adults 18 years or older, including pregnant women	The USPSTF recommends screening for unhealthy alcohol use in primary care settings in adults 18 years or older, including pregnant women, and providing persons engaged in risky or hazardous drinking with brief behavioral counseling interventions to reduce unhealthy alcohol use.	<b>B</b>
Adolescents aged 12 to 17 years	<p>The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of screening and brief behavioral counseling interventions for alcohol use in primary care settings in adolescents aged 12 to 17 years.</p> <p>See the <a href="#">Clinical Considerations section</a> for suggestions for practice regarding the I statement.</p>	<b>I</b>

<https://www.uspreventiveservicestaskforce.org/Page/Document/UpdateSummaryFinal/unhealthy-alcohol-use-in-adolescents-and-adults-screening-and-behavioral-counseling-interventions?ds=1&s=alcohol>

# Screening for Alcohol Misuse



# Screening for IPV and Elder Abuse (Oct 2018)

Population	Recommendation	Grade (What's This?)
Women of reproductive age	<p>The USPSTF recommends that clinicians screen for intimate partner violence (IPV) in women of reproductive age and provide or refer women who screen positive to ongoing support services.</p> <p>See the <a href="#">Clinical Considerations section</a> for more information on effective ongoing support services for IPV and for information on IPV in men.</p>	<b>B</b>
Older or vulnerable adults	<p>The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of screening for abuse and neglect in all older or vulnerable adults.</p> <p>See the <a href="#">Clinical Considerations section</a> for suggestions for practice regarding the I statement.</p>	<b>I</b>

<https://www.uspreventiveservicestaskforce.org/Page/Document/UpdateSummaryFinal/intimate-partner-violence-and-abuse-of-elderly-and-vulnerable-adults-screening1?ds=1&s=intimate>

## Step 2: Incorporate Firearms safety into Injury Prevention counseling

Key populations at risk: adolescents and young adults, elderly, firearm injury victims, dementia

Focus on the household environment

Help patients understand what is known about risk of household ownership, and how little evidence we have about potential benefits of ownership

Counseling regarding safe storage and estimates of protective value

# Safe Storage Counseling

## What is Safe Storage?

- ▲ Firearms are:
  - Unloaded
  - Locked with a device or in a container
  - Ammunition stored separately and locked

## Current Practices

- ▲ 46% of owners report safely storing all guns
- ▲ 30% of owners report storing at least one gun loaded and unlocked
- ▲ 25% store all weapons unloaded and unlocked
- ▲ 46% store weapon either locked and loaded OR unlocked and unloaded

Azrael, et al. 2015 National Firearms Survey

# Tips for Changing Storage Practice

- ▲ Make it easier for patients to access devices
- ▲ Be specific and concrete on how to improve storage
- ▲ Excellent Source: <https://www.kingcounty.gov/depts/health/violence-injury-prevention/violence-prevention/gun-violence/LOCK-IT-UP.aspx>

**Public Health — Seattle & King County**

Violence and injury prevention

Violence prevention

Gun violence

**Lock It Up**

Types of locks and where to buy them

Guns in our community

For parents and community

For health care providers

Home » Public Health — Seattle & King County » Violence and injury prevention » Violence prevention » Gun violence » Lock It Up

## Lock It Up: Promoting the safe storage of firearms

King County firearm storage device retailers partner with Public Health

**LOCK IT UP**  
SIMPLE. SECURE. READY.

Through December 2019, mention **Public Health** or **LOCK-IT-UP** and get 10-15% off select storage devices or lock boxes at participating retailers.

All gun safes and lock boxes are tax exempt in the state of Washington per [RCW 82.08.832](#)

Our mission is to promote the safety of our communities through increasing safe storage of firearms. King County staffs the Lock It Up program.

Here you will find information on:

- the importance of safe storage of firearms
- safe storage device options

Types of locks and where to buy

Guns in our community

For parents and the community

For health care providers

Information for... Do more online Get help Español



# Influence your work environment

Healthcare leads other occupations in rates of violent injury



Work with your institution to develop policies regarding the building environment:

No weapons permitted except law enforcement

No open carry



Ensure robust workplace violence policies in place

USPSTF Recommendations

UC Davis clinician counseling recommendations

OSHA and ACEP workplace violence resources

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IN THE CLINIC | 4 JUNE 2019

## Preventing Firearm-Related Death and Injury FREE

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### FULL ARTICLE

**Abstract**

**Epidemiology**

**Health Benefits, Harms,  
and Risk Groups**

**Screening**

**Prevention**

**Practice Improvement**

**References**

**Figures**

**Tables**

## Abstract

Deaths and injuries from firearms are significant public health problems, and clinicians are in a unique position to identify risk among their patients and discuss the importance of safe firearm practices. Although clinicians may be ill-prepared to engage in such discussions, an adequate body of evidence is available for support, and patients are generally receptive to this type of discussion with their physician. Here, we provide an overview of existing research and recommended strategies for counseling and intervention to reduce firearm-related death and injury.

Firearm-related death and injury are significant public health problems in the



**Thank you**