Disclosure Statement

- I have no relevant financial relationships to disclose.
- Any opinions expressed are my own and do not necessarily reflect the views of any organization or company.
- I am not an expert.
Learning Objectives

▪ Understand the magnitude of childhood death or injury due to firearms in our state and country.

▪ Recognize the risks and role of guns in adolescent suicide.

▪ Gain confidence in providing patient education on secure gun storage.
Gun Violence: A Public Health Crisis

321 AMERICANS DIE FROM A GUN EVERY DAY IN OUR COUNTRY.

5 DEATHS/DAY IN CHILDREN < AGE 18

12-13 DEATHS/DAY + 18-21 YEAR OLDS

8300 CHILDREN ARE TREATED FOR GUNSHOT WOUNDS EACH YEAR.
Cost of Pediatric Gun Violence

> $270 million per year (pediatric)
  - Emergency and inpatient care

▪ Additional costs
  - Rehabilitation
  - Long term therapy
  - Loss of work wages
▪ Estimated $8 billion/yr in US

▪ Psychological consequences
  - Short and long term
  - Anger, withdrawal, PTSD, depression, suicide risk
  - ACE score: seeing parent threatened with a gun +1

In an average year, gun violence in America kills more than 40,000 people, wounds nearly twice as many, and costs our nation $557 billion.
Ripple Effect of Gun Violence

- Short bowel syndrome, gun shot wound as a child
- Anxiety, weight loss: fear of school shootings
- Teenager with depressed mood: suicidal ideation
- Single mom with young children: co-parent killed
Types of Firearm Deaths in Children

2017 Pediatrics
2002 - 2014, ~1300 deaths (age 0 - 17)

- Homicide: ~900
- Suicide: ~700
- Unintentional: ~90

Fowler et al. 2017 Pediatrics

- Homicide: 53%
- Suicide: 38%
- Unintentional: 6%
- Undetermined: 3%
Firearms Injuries Involving Young Children in the United States During the COVID-19 Pandemic

Joanna S. Cohen, MD,a,b,c Katie Donnelly, MD, MPH,a,b,c Shilpa J. Patel, MD, MPH,a,b,c Gia M. Badolato, MPH,a Meleah D. Boyle, MPH,a Robert McCarter, ScD,a,d Monika K. Goyal, MD, MSCEa,b,c

The COVID factor

2020, 5100 children <18y shot
1000 more than at any point in data collection

2021, as of September
13% more than prior year
Children <12
- 1st 6 months of pandemic: 247 firearm injuries (89 fatal)
- Prior years 6mo avg: 137.5
The absence of guns in homes and communities is the most reliable and effective measure to prevent firearm-related injuries in children and adolescents.

To prevent gun-related death and injuries, the AAP recommends that pediatricians provide firearm safety counseling to patients and their families.

AAP Position on Firearm Safety
Counseling
Counseling about Guns

- 2017 survey of 185 pediatric ED
  - Compared to other injury prevention topics
  - 35% firearm prevention
    - “sometimes”
    - “frequently”
  - Barriers
    - Political concerns
    - Lack of awareness
    - Legal constraints
  - 1/3 unsure if state laws permit discussion

- Farcy et al. 2020 West JEM
Firearm Owner’s Privacy Act

Florida in 2011
Prohibited doctors from “making written inquiry or asking questions concerning the ownership of a firearm or ammunition by the patient or by a family member of the patient.”

- Blocked shortly after passage

Court system
- 2014, 3-judge circuit court of appeals ruled to uphold
- 2017, 11-judge full U.S. Circuit Court of Appeals
  - Act violates physician’s 1st Amendment rights
  - **Doctors must be allowed to discuss guns with their patients**
Counseling about Guns

- Large academic pediatric hospital (Utah)
- 1/2017: EHR template additions
  - 1.5 y follow-up
- Smoke detectors 78%
- Gun safety 54%
  - Infants < adolescents
What's the Reality?

1 in 3 homes with children have guns, many left unlocked or loaded

4.6 million children in the US live in a household with at least one loaded, unlocked gun.

Don't let your child be one of them.

Learn more about secure gun storage BeSMARTforKids.org
Hoosier data

- 2020 Indiana data
  - 17th gun death rate in the country
  - 11th exported crime guns

- Currently, no:
  - Gun owner license requirement
  - Universal background checks
  - Waiting periods
  - Assault weapon restrictions
  - Large capacity magazine ban
  - Concealed carry law

- July 1, 2022: House Enrolled Act 1296
  - “no longer require a handgun permit to legally carry, conceal or transport a handgun within the state.”
Minors and IN Gun Laws

▪ Minimum age to purchase a handgun: 21
▪ Minimum age to purchase a long gun or rifle: 18
  – UNLESS with proper consent by parent or guardian
▪ Minors can possess a firearm
  – Supervised hunting course
  – Supervised target range
  – On premises of own home or property with parent/guardian permission
Child Access Prevention Laws

- Allows a gun owner to be charged if a child accesses a poorly stored gun
- Varying strength
- IN: charged only if gun provided to their child knowing a substantial risk the gun would be used to commit a crime or violent act

Child finds handgun, fires a shot in Fishers Ikea

Justin L. Mack
IndyStar
Published 3:23 p.m. ET June 25, 2018  |  Updated 9:52 a.m. ET June 26, 2018
## Firearm Storage Practices

<table>
<thead>
<tr>
<th></th>
<th>Homes + High Risk Children</th>
<th>Homes - High Risk Children</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unlocked and loaded</td>
<td>11.6%</td>
<td>20.3%</td>
</tr>
<tr>
<td>Locked and loaded</td>
<td>53.5%</td>
<td>48%</td>
</tr>
<tr>
<td>Unloaded</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unlocked</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Locked and unloaded</td>
<td>34.9%</td>
<td>31.9%</td>
</tr>
</tbody>
</table>

Possible Outcomes of Unsecured Firearms

**Unintentional shooting**
- Gun Violence Archives: Jan 1, 2014 – June 30, 2016
- Indiana: 7th highest per capita rate (unintentional shootings involving children)

**Homicide**
- Since 1999, 80% of guns in school shootings
- Taken from shooter’s home or friend/relative

**Suicide**
- Youth suicides by firearm
- 75% gun owned by child’s parents

Of school shooters acquired their firearm from the home of a parent or close relative.
#NotAnAccident

Year of 2022 to date

238 unintentional shootings by children
106 deaths
#NotAnAccident

Year of 2022 to date

238 unintentional shootings by children
106 deaths

2015 – 2022
94 unintentional shootings by children
33 deaths
Unintentional Shootings by Children

Shootings by children most often also shootings of children

• 91% those killed/injured <18

7/10 occurred in homes

• Most often on weekend, summer, school holidays

Most common age groups

• 14-17y
• <6y

Every year, nearly 350 children under the age of 18 unintentionally shoot themselves or someone else—most often another child or teen under 18.

EVERYTOWNRESEARCH.ORG
Adolescent Suicide in Indiana

- >50% completed suicides are by firearm

- Indiana State Department of Health
  - Suicide in Indiana report 2011-2015
    - #1 state: teens who consider suicide
    - #2 state: teens who attempt suicide

- 2021 Youth Risk Behavior Survey (IN high schoolers)
  - 46.7% “feeling sad or hopeless almost every day ... up to 2 weeks in a row”
  - 27.7% - seriously considering attempting suicide.
  - 22.2% - made a plan about attempting suicide.
  - 11.8% - attempted suicide during the preceding 12 months.
Adolescent Suicide

- Impulsivity
- <10min deliberating decision
- Availability of lethal means

3X Access to a firearm in the home triples suicide risk

Bigger risk than known history of mental health disorder
IN Firearm Seizure and Detention Law

- “Red Flag” law since 2005
  - 1 of 14 states

- Law enforcement can remove firearms from “dangerous individuals” and keep until hearing is held
  - Person at imminent risk to self or others
    - OR
  - Risk of personal injury to self or others in future
    - AND
  - Mental illness without willingness to take medication or violent or emotionally unstable behavior

- Hearing must be within 14d, followed by judge determination
Making the Ask
Asking About Guns

Do you own any weapons?

Do you have a gun in your home?

How do you store your gun?
Asking vs. Talking about Guns

- Gun violence – complex and polarizing

- Individual beliefs on guns and gun ownership

- “Sacred Value”
  - Set of values or principles that individuals hold dear to their idea of right or wrong
  - Defines who they are and help guide their daily lives

- Focus on the “why” and “how”
If asking is difficult, make the assumption that guns are in the home.

If you are a gun owner and you have children in your home, the gun needs to be unloaded, locked away, with the ammunition stored separately.
When to Talk about Guns

With each new developmental milestone

• Newborn
  • Home safety checklist
• Toddlers
  • Gross motor skills
  • Lack the concept of danger
  • Can pull a trigger
• Preschool/School age
  • Good motor skills
  • Poor judgment
  • Understanding if/then consequences

Early and Often

• Older school age
  • Concrete thinking
  • Still poor cause/effect
  • Media violence exposure
• Adolescents
  • Impulse, risk taking
  • Exploring independence
  • Mood swings

GUN SAFETY and CHILDREN

Children as young as 3 years may be strong enough to pull the trigger on a handgun.

When to Talk about Guns

With each new developmental milestone

• Newborn
  • Home safety checklist
• Toddlers
  • Gross motor skills
  • Lack the concept of danger
  • Can pull a trigger
• Preschool/School age
  • Good motor skills
  • Poor judgment
  • Understanding if/then consequences

Early and Often

• Older school age
  • Concrete thinking
  • Still poor cause/effect
  • Media violence exposure
• Adolescents
  • Impulse, risk taking
  • Exploring independence
  • Mood swings

GUN SAFETY and CHILDREN

Children as young as 3 years may be strong enough to pull the trigger on a handgun.
Special Risk Factors

- ADHD
- Aggression, behavioral disorders
- Family history of violence
- Mood disorders
- Alcohol use
- Bullying

Discuss with all weapons
- Knives
- Medication
Outside the Home

- Playdates
- Friends and Relatives

Ask About Firearms Before a Playdate

If it’s not safe, invite their child over to your home instead

Mine too! OK.

I always ask families where my kids go about firearms. Do you have guns at home?

Yes, we do have a gun.

Great. Jimmy is so curious, and always getting into things. How are your firearms stored?

We put the gun in a safe and lock up the ammo separately. See you at 3!

healthychildren.org
Powered by pediatricians. Trusted by parents. From the American Academy of Pediatrics

American Academy of Pediatrics
DEDICATED TO THE HEALTH OF ALL CHILDREN®
Secure Storage: What Does This Mean?

Assume children and teens can find guns. Store firearms unloaded, locked, and separate from ammunition.
Gun Locks

▪ Cable or loop lock
  – Threaded through barrel to prevent loading
  – Can be cut, keys stored nearby
  – Often available for free (police dept, safety fairs)

▪ Trigger lock
  – Covers trigger
  – Key or code

▪ Lock box
  – Key or code
  – Fast access, often stored loaded

▪ Gun vault
  – Large, heavy, more expensive
  – Digital code, keypad

▪ Personal lock
  – Fingerprint, other unique ID mechanism
Does Secure Storage Work?

- Mathematical modeling prediction
  - 20% increase in secure storage = 72-135 deaths prevented
  - 50% increase = 204-289 deaths prevented per year
- Overall, 6-32% deaths preventable
Myth: Most firearm deaths are caused by mass shootings by the mentally ill.

Handguns Account for the Bulk of Gun Types Accessed by Children in Unintentional Shootings

- Handgun (85%)
- Rifle (7%)
- Shotgun (7%)
- Assault-Style Rifle (1%)
Myth: A firearm in the home makes the household safer.
Myth: My kids don’t know where the gun is, and they wouldn’t touch it.

- When parents were wrong
  - 40% know gun location
  - 20% had accessed it

Parikh et al. 2017 Hosp Ped
Lack of Evidence Based Research

▪ 1996 Dickey Amendment
  – Prohibits CDC from using federal funding to advocate or promote gun control

▪ 2018 U.S. congress bill
  – Clarifies original amendment does not prohibit federal funding of research on causes of gun violence

▪ 2018 May
  – >150 medical, public health, research groups advocacy work
  – Requested $50 mil for gun violence prevention research
  – Approval $25 mil
AAP Gun Safety and Injury Prevention Initiative

- 3 year initiative
- Expert Summit (May 2019)
- Research
- Dissemination, Implementation, Evaluation
On June 25, 2022 President Biden signed a bipartisan gun safety bill.

This bill is the most significant federal legislation to address gun violence to pass after contested roll-call votes since the assault weapon ban of 1994.

What is Covered Under this Legislation?

Expanded Background Checks

For the first time, juvenile records, including those regarding mental health, will be required in federal background checks for gun buyers under the age of 21 years old. The maximum time for gathering criminal background records has now been extended to ten days.
Be SMART is a program developed by Moms Demand Action for Gun Sense in America to bring together parents and all adults concerned about kids, guns and safety.

BeSMARTforKids.org
More than 1,600 children under the age of 18 are killed with guns in the US every year—an average of 5 children every day.¹

¹ CDC, Underlying Cause of Death, 2015-2019.
In incidents of gunfire on school grounds, up to 80% of shooters under the age of 18 obtained the gun(s) they used from their home or the homes of relatives or friends.¹

A survey of high school students found that 17% had seriously considered attempting suicide within the last year.¹

And one study showed that 41% of adolescents in gun-owning households report having “easy access” to the guns in their home.²

**Be SMART**

**Secure**
- All guns in your homes and vehicles

**Model**
- Responsible behavior

**Ask**
- About unsecured guns in other homes

**Recognize**
- The role of guns in suicide

**Tell**
- Your peers to Be SMART
He isn't allergic to anything.

One other safety question. Do you guys have guns in the home? I know kids are curious & just want to make sure if you do have any that they are securely stored.

Screen time is ok? Just in case they want to play and we have time. If not then that's ok too. No guns.

Great! Yes. Video games are ok.
Additional Resources

- Besmartforkids.org
- Bulletpointsproject.org (UC Davis)
- AAP Gun Violence Prevention Advocacy Toolkit
Thank you!

tz20@iu.edu
@xtzhang
Riley Hospital for Children
Indiana University School of Medicine
Department of Pediatrics, Division of Gastroenterology
A Public Health Crisis

**Gun violence is a major public health problem,** a leading cause of premature death.

In 2020, **45,222 people died** in the United States from gun-related injuries, more than any other year on record.

Every day, **at least 321 people are shot** across the US, resulting in over **117,000 people** a year. For every individual who dies by firearm, more than **two survive**, often with expensive and long-term mental and physical injuries.

**Guns have become the leading cause of death for children and adolescents in America.**

For the first time, gun-related deaths surpassed motor vehicle accidents as the top cause of death for those under 19 years old.

In 2021, **6.1 deaths per 100,000 people under the age of 19 years old** were related to firearms.
Causes of Death, ages up to 24
Causes of Death, ages 1-4

- Accidents (unintentional injury)
- Congenital malformation
- Homicide

CDC Wonder Online Database, 2020
Firearm-related Injuries and Hospitalizations

![Graph showing hospitalization rate for firearm injury]

- Hospitalization rate for firearm injury
- Incidence rate per 100,000
- Calendar year

Data from Simpson et al. 2022 J Surg Res
Causes of Pediatric Death: Recent Trends

![Graph showing recent trends in pediatric deaths by cause over the years 2001 to 2019. The graph plots the number of deaths per 100,000 youth aged 0-19. The causes include MVC (motor vehicle collisions), All Intent, Suicide, Homicide, and Unintentional. The graph indicates a decrease in MVC deaths and an increase in all intent deaths, with suicide and homicide showing fluctuation. The unintentional category remains relatively stable.](image)
Possession of Firearm on School Property

- Not permitted on school property except by
  - Law enforcement agent
  - Approval by local school board
  - Member of shooting sports team with principal’s approval
  - Grounds of house of worship, allowing possession

- Legally possess firearm and
  - Locked in trunk of car
  - Stored in glove compartment in locked vehicle
  - Stored out of plain sight in locked vehicle