Firearm Safety and Patient Health:
A PROACTIVE GUIDE TO PROTECTING PATIENTS AND THEIR FAMILIES

Committee on Trauma
American College of Surgeons
Introduction

The American College of Surgeons (ACS) and the Committee on Trauma (COT) are committed to decreasing firearm injury in the United States using evidence-based strategies to make firearm ownership as safe as possible. Firearm injury in the United States is a complex problem that requires both short- and long-term solutions to lower firearm injury rates.

Studies have shown that many firearms in the United States are not stored safely, and that firearm availability increases risk of suicide, homicide, and unintentional firearm injuries. With the constitutionally protected freedom to own firearms comes the responsibility to do so safely. Firearm-related injuries are preventable when safe ownership is made a priority. Safe firearm ownership requires knowing how to properly handle, transport, discharge, breakdown, clean, and store firearms.

Health care providers can help decrease a patient’s risk of firearm injury by fostering non-judgmental and apolitical discussions on safe firearm storage, handling, and ownership. This approach is supported by shooting sports groups, hunting organizations, and public health experts. This document was developed by firearm-owning surgeons for health care providers, to help link firearm injury prevention to clinical practice in a practical way.

The goal of this guide is to:

1. Provide basic information on firearm safety and handling
2. Strengthen clinicians’ confidence in initiating a conversation about firearm safety with their patients in a positive manner
3. Provide various injury prevention resources for hospitals to utilize or recommend to other stakeholders
Safe Handling

DISCLOSURE: The following two sections are meant to provide foundational information on the safe handling and storage of firearms. The information is not intended to be comprehensive, but rather an overview of the best practices in firearm ownership.

Safe Handling Is CRITICAL

Handling a gun is a responsibility that all gun owners must take seriously. Unintentional shootings comprise about 1% of firearm-related deaths and 18% of firearm-related injuries, and are almost always preventable events. The two most common causes of unintentional firearm-related deaths are “playing” with a weapon and failing to recognize that a firearm is loaded. Of unintentional firearm fatalities, about half were deaths of persons shot by someone else. The unintentional shooters were typically under the age of 25 (81%) and friends (43%) or family (47%) of the shooter. Following these basic rules is an easy way to prevent these types of firearm injuries.

Unintentional discharge of a firearm can happen to anyone, even experienced gun owners. The most effective way to prevent unintentional firearm injury and suicide is to store firearms unloaded and securely when not in use.

It is strongly recommended that every firearm owner take a hands-on training class. Courses vary by state and may be required to obtain a license to carry a firearm. Refer to local laws for the most up-to-date requirements. Local gun ranges often offer courses that cater to specific audiences (for example, children and firearm safety), or they may be able to recommend other training opportunities available in your community.
The 5 Fundamental Rules of Safe Handling

1. Treat every firearm as if it is loaded.
2. Keep your finger off the trigger.
3. Never point the muzzle at anything you do not intend to kill or destroy.
4. Know your target, its surroundings, and what lies beyond it.
5. Confirm that all chambers in the firearm are cleared of shells before starting the process of cleaning the gun.

Additional Rules of Safe Handling

- Understand how each firearm operates prior to use (loading, unloading, safety mechanism [if present], and firing mechanism).
- Do not alter or modify firearms unless done in collaboration with a certified gunsmith.
- Always wear eye and ear protection when handling a firearm.
Safe Storage and Transportation

A recent national survey of firearm owners found that only 46% of gun owners reported safe storage of all their weapons, highlighting an opportunity for clinicians to improve firearm safety in their patients’ homes. Keeping a gun locked, unloaded, and storing ammunition separately are associated with incremental decreases in firearm-related injury and death. Two-thirds of unintentional, firearm-related child deaths might have been prevented if guns had been stored locked and unloaded. “Hiding” firearms does not prevent curious children from locating guns. Firearm-owning parents must understand that children are unable to tell real and toy guns apart and cannot distinguish loaded from unloaded weapons. All children should be taught that if they find a firearm, they should:

**STOP. Don’t touch. Leave the area. Tell an adult.**

Personalized storage practices may need to be adjusted over time and should be reevaluated whenever there is a change in family dynamics in the home, particularly when children are present. In addition, it is recommended to discuss safe storage of firearms with friends and family when children are visiting other homes.

Safe firearm storage options differ in rapidity of access, degree of security, and financial cost. When deciding on what method is best, all three priorities should be considered. State laws and local ordinances may also impose requirements on how firearms must be stored.

_Firearm Storage for Personal Protection_

| Least safe: Loaded and unlocked | Most safe: Secured in a biometric safe |

*Photo from Brendan Campbell, MD, MPH, FACS. Used with permission. This image was staged for illustrative purposes and was taken under close adult supervision.*
Priorities of Storage

Rapidity of access: Ease of access to weapons used for hunting, sport shooting, or collecting can differ than for weapons used in professional duties or for home defense. While a firearm secured in a biometric safe separate from the ammunition is one of the safest means of storage, this method may not be practical if the weapon is owned for home defense. Suggesting this as the only viable storage option is likely to shut down productive conversation about safe storage with individuals who own firearms for protection.

Degree of security: Biometric technology has advanced significantly and become more widely available to the public. For homes with high-risk individuals, such as curious children and potentially depressed adolescents, biometric safes provide an additional level of security from codes that can be cracked or locks that can be cut or picked.

Financial cost: While the cost of biometric security has decreased over recent years, the costs still may remain prohibitive to many households. Many community agencies offer free or low-cost cable locks, but the utility and effectiveness of cable locks is uncertain. The expense of safe storage should be considered as part of the cost of firearm ownership.

Methods of Storage

In-home: Many options exist for gun storage in the home. This list is not intended to be exhaustive. It is recommended to visit a store that sells firearms for options that meet requirements of local laws. Some options are:

- Gun cases with locks
- Lock boxes
- Gun cabinets
- Trigger and cable locks
- Gun safes

To reduce the risk of theft, safes and lock boxes can be bolted down.

In-vehicle: Firearms transported in a vehicle should remain out of reach of all passengers. The preferred location is in a locked case in the trunk. Firearms should remain locked and unloaded to mitigate the risk of unintended discharge. Firearms should not be left or stored in vehicles for extended periods of time as they can be easily stolen. If a firearm is being used for road hunting, where legal, safe transportation must comply with the local laws.

Out-of-home: Storage options for personal firearms outside of the home vary by state. Current firearm safe storage laws can be found at statefirearmlaws.org. Reasons for out-of-home storage
may include that the weapon is not intended for home defense, or the presence of children or other at-risk individuals in the home. Options include:

- Bonded warehouse for gun storage
- Secure storage unit
- Hunting camp or shooting range in a lock box or safe
- Lock box or safe at a family member’s or friend’s home

Special considerations should be made for increased security if there is concern for suicidal ideation or impulsive behavior in a firearm owner or their family member. Options often exist at local law enforcement agencies or firearm retailers for temporary storage during times of crisis.

**Smart gun technology:** The development of “smart gun” technology, which allows only the authorized owner the ability to fire the weapon, is underway. This technology can either use radio frequency identification (RFID) to pair with a wearable device (watch, ring, and so on), or utilize fingerprints to unlock the gun without a removable physical lock. This technology is not currently widely available in the United States.

**Talking to Patients about Firearm Safety**

Healthcare providers should know how and when to talk to patients about firearm injury prevention as part of routine care. Trauma providers are uniquely poised and should capitalize on the opportunity to address these issues at “teachable moments,” including during admissions for acute trauma and outpatient follow-up. Discussing firearm safety in the context of injury prevention can be a positive experience between the provider and patient if a culturally competent approach is used.

**Why Talk to Patients about Firearm Injury Prevention?**

Healthcare providers routinely inquire and counsel patients about health-related behaviors, conditions, and risks, such as cigarette smoking and cancer screening. Asking about firearms should be no exception. Providers have an opportunity to educate patients on how to mitigate risk of firearm injury. Furthermore, evidence suggests that clinician counseling can increase rates of safe firearm storage.

**What Are Provider Rights to Ask about Firearms?** Healthcare providers are legally permitted to ask patients about firearm safety and to record gun safety-related health information in a patient’s medical record. During clinical discussions about firearm safety, providers should know that mandated reporting laws may apply and vary by state; examples include mandated reporting of firearm injuries; abuse of children, elders, or disabled persons; and serious and imminent threats.
What Are the Barriers to Discussing Firearms Injury with Patients? Multiple studies have shown that firearm safety counseling often does not occur in clinical settings. Barriers include a lack of training/information about firearms and firearm safety, time constraints, provider concerns about offending patients, or the mistaken belief that it is unlawful to inquire. These barriers are overcome by utilizing strategies such as education modules for providers to learn how to discuss this topic with patients, using technology-based interventions (for example, tablets) to provide firearm safety education to patients, and integrating these conversations into routine clinical practice.

Why Do People Own Firearms? Reasons for firearm ownership include personal protection, hunting, sporting use, collecting, and/or as an occupational requirement. Understanding the reasons for firearm ownership will make it easier to facilitate a discussion about safe firearm ownership.

How Should Providers Talk about Firearm Injury Prevention? Language and context are critically important. Providers should utilize respectful counseling behaviors that are individualized to the patient. Most gun owners recognize and endorse the idea that safety is a central tenet of responsible firearm ownership. Conversations should convey an understanding of why people own firearms and a respect for their choice to do so. Some patients may not own firearms themselves but may live with someone who does. Ask open-ended questions, avoid being overly prescriptive, and help patients develop practical strategies for safe firearm ownership.

Focus on Health and Injury Prevention to Explain the Reason for Questions. A provider could set the context for questions by saying, “Many families have firearms in the home. Is this the case for you?” followed by mentioning a shared goal to reduce harm, and that a firearm in the home is an independent risk factor for injury and death (a risk that can be reduced with implementing best practices for firearm ownership). If clinicians own firearms themselves (and about 40% of US surgeons do), mentioning this fact to patients may make gun-owning patients more receptive to firearm safety messaging.

Who Are the At-Risk Populations? Risk profiles will vary among patients and their family members. Some at-risk populations to consider when talking to patients include:

- Children <10 - at risk of intentional and non-intentional injury
- Children >10 - at risk of intentional and non-intentional injury, suicide
- >18 - at risk of intentional and non-intentional injury, suicide

Continued on next page
• Older adults (>65 years) – at risk of suicide, decreased cognitive and executive function
• Children visiting homes where firearms are present
• First-time buyers/new gun owners
• Parents/family members of gun owners
• Victim of or exposure to intimate partner violence
• History of substance abuse or mental illness
• Older patients who own guns and suffer from cognitive impairment or dementia

How Can Providers Screen and Counsel At-Risk Populations? Providers must recognize that a large percentage of adolescents, teenagers, and individuals will have transient suicidal ideation and are at significantly increased risk of suicide by firearm.

Risk for firearm-related homicide is highest for adolescents and young adults, whereas suicide is a risk from adolescence through old age. Approximately half of US firearm-related homicides in women are committed by intimate partners, and this risk is highest during pregnancy. Physicians should be aware of all these risk factors and provide safety information empathetically and use anticipatory guidance or proactive counseling to mitigate risk. Questions can be framed in a non-accusatory manner, such as “Some people with suicidal thoughts have guns in the home. Is this the case for you? If so, can we talk about how to keep you safe?”

How to Ask about Storage Practices? The simple question, “Do you have firearms in the home, and if so, how are they stored?” can help begin the conversation. The safest way to store a gun in the home is unloaded, securely locked, with ammunition locked in a separate container. Additional options include temporary, voluntary storage of firearms at retailers, ranges, or law enforcement facilities, or with trusted friends or family (depending on state laws). It is important to avoid words such as “restrict,” “surrender,” “seize,” “de-possess,” and “confiscate,” and instead favor terms such as “hold” and “store.”

Providers can respectfully provide guidance to patients about firearm safety without them giving explicit or proscriptive orders.
**How Can Providers Screen and Counsel on Disposal of Unwanted Firearms?** Healthcare providers should be ready to discuss basic firearm safety and how to dispose of unwanted firearms. Options include sale to a licensed firearms dealer or individual (in accordance with federal and local laws), surrender to the local police department, gun buy-back programs, and/or donation to training programs.

**Community Outreach Programs**

Trauma center and hospital participation in community safety events are an excellent way to educate the public, promote safe firearm practices, and engage with community stakeholders. As with all outreach programs, selecting the appropriate venue, target audience, and messaging is essential to make a meaningful impact and affect community change. Such events can target various aspects of firearm ownership: safe storage, safe handling, lethal means safety, pediatric safety, and buy-back programs. Lethal means safety outreach and buy-back programs are highlighted below.

A list of supporting resources to help your hospital or local community organize an event or program are featured at the end of this document in the Web-Based Resources section.

**Lethal Means Safety and Suicide Prevention**

Many more firearm-related deaths result from intended self-harm compared with interpersonal violence or negligent discharges. Suicide attempts are often performed with little forethought as an impulsive act during an acute crisis with nearly half of those who survived a suicide attempt considering it for less than 10 minutes prior. About 90% of people who survive a suicide attempt will not go on to die by suicide subsequently. Only 5% of suicide attempts involve a firearm; however, they represent more than half of deaths by suicide, as over 80% of attempts are successful.

The Means Matter Campaign from the Harvard School of Public Health utilizes a “friends helping friends” approach to focus interventions on suicide risk mitigation though limiting lethal means access. The program offers evidence-based resources for firearm owners/retailers, clinicians, and community advocates on providing educational events and resources on integrating a “lethal means counseling” approach into conversations about firearm safety and suicide.

**Buy-Back Programs**

Firearm buy-back programs provide incentives for the voluntary surrender of firearms, and the events are typically held in accessible and safe locations, such as community centers, police stations, or houses of worship. The incentive may be cash, a gift card, product voucher, or merchandise, and is usually adjusted according to the type of firearm that is turned in. To promote the collection of illegal guns, these programs often allow firearms to be turned in with no questions asked. The recovered guns are sometimes traced by law enforcement and then, in most cases, stored or destroyed. Voluntary participation and ease of implementation are strong drivers of buy-back popularity, particularly in communities motivated to take action. Moreover,
buy-backs forge partnerships between community stakeholders, such as trauma centers, law enforcement, schools, and other agencies. These alliances raise awareness about gun violence prevention and firearm safety. When integrated into a multi-faceted public health model for firearm injury prevention, buy-back programs are worthwhile interventions.

Important Note

The intent of the ACS COT guides is to provide healthcare professionals with research-based information regarding care of the trauma patient. The guides do not include all potential options for prevention, diagnosis, and treatment, and they are not intended as a substitute for the provider’s clinical judgment and experience. The responsible provider must make all treatment decisions based upon their independent judgment and the patient’s individual clinical presentation. The ACS shall not be liable for any direct, indirect, special, incidental, or consequential damages related to the use of the information contained herein. The ACS may modify the guides at any time without notice.

Web-Based Resources and Tools

1. **American Academy of Pediatrics (AAP)—Gun Safety and Children**
   This AAP toolkit provides a variety of resources that clinicians can use to provide anticipatory guidance to parents/caregivers of teenagers and children about improving firearm safety in the home.

2. **American Association of Family Practice (AAFP)—Gun Safety**
   Family-forward resource discussing gun safety/storage and ideas on how to have discussions about it.

3. **American College of Surgeons Committee on Trauma (ACS COT)—Family Fire Is Preventable**
   This public education video was released through a social media campaign to educate the general public about safe firearm storage in the home.

4. **American College of Surgeons Committee on Trauma (ACS COT)—Gun Safety and Your Health**
   Brochure intended for patients and the general public that offers tips on how providers can keep families and communities safe from firearm injuries and death.

5. **American College of Surgeons Committee on Trauma (ACS COT)—Pediatric Firearm Safety Video**
   Video for parents discussing options to keep children safe from firearm-related injuries.
6. American Foundation for Firearm Injury Reduction in Medicine (AFFIRM)
   This link provides a number of landmark publications about a variety of firearm-injury prevention topics put together by a nonpartisan network of healthcare professionals, public health experts, and researchers who aim to prevent firearm injury through research, innovation, and evidence-based practice.

7. American Medical Association (AMA)—Violence
   Source to obtain continuing medical education (CME) credits through audio files and articles on the latest in science of firearm safety and health sequelae of intimate partner and global violence.

8. Be SMART Campaign
   Resources for a widely promoted framework designed to help parents and adults normalize conversations about firearm safety and take responsible actions that can prevent child deaths and injuries.

9. National Rifle Association—Eddie Eagle Gun safe® Program
   Course designed to teach young children what to do if they come across a gun to keep safe.

10. Veteran Suicide Prevention
    US Department of Veterans Affairs resources for veterans about depression and suicide prevention.

11. Seattle Children’s Firearm Safety Events
    Toolkit to help organizations put on a firearm safety and injury prevention event to promote pediatric firearm injury prevention. The program focuses on safe storage device distribution and hands-on training using lock boxes and trigger locks.

12. Suicide Prevention—Means Matter Program
    Discussion about lethality of suicide attempts involving firearms, extensive resources for suicide prevention, and educational materials.

13. The BulletPoints Project
    Clinical tools for medical and mental healthcare providers to use to reduce the risk of firearm-related injuries in patients.

14. Massachusetts Medical Society—Talking to Patients about Gun Safety
    A free webinar-based education module geared for providers to learn how to talk with their patients about gun safety.

15. Project ChildSafe®—National Shooting Sports Foundation
    A comprehensive firearms safety education program specific to children and a model for partnering with local law enforcement and community organizations to provide safety kits and safe storage.
Bibliography

Introduction


Safe Handling


Safe Storage and Transportation


Talking to Patients about Firearm Safety


*Community Outreach Programs*


Expert Panel

Marian E. Betz, MD
Eileen Bulger, MD
Brendan Campbell, MD
Julia Coleman, MD
Alexander Eastman, MD
Laura Godat, MD
Shelbie Kirkendoll, DO
Deborah Kuhls, MD
Eric Kuncir, MD
Robert Letton, MD
Bindi Naik-Mathuria, MD
Frederick Rivara, MD
Joseph Sakran, MD
Richard Sidwell, MD
Ronald Stewart, MD
Cynthia Talley, MD
Leah Tatebe, MD
Arielle Thomas, MD
Gary Timmerman, MD
Eric Toschlog, MD
Pina Violano, PhD
Firearm Safety and Patient Health:

A PROACTIVE GUIDE TO PROTECTING PATIENTS AND THEIR FAMILIES

ACS
AMERICAN COLLEGE OF SURGEONS