

Vermont
Medical
Society

2020-2021

THIRD THURSDAY
WEBINAR SERIES

12:00 pm to 1:00 pm

Vermont
Medical
Society

THIRD THURSDAY WEBINAR SERIES

Date: December 17, 2020

Title: A Crisis in Vermont: Gun Violence & Suicide

134 MAIN STREET, MONTPELIER, VERMONT, 05602

TEL.: 802-223-7898

WWW.VTMD.ORG

CME DISCLAIMER

In support of improving patient care, this activity has been planned and implemented by the Robert Larner College of Medicine at the University of Vermont and the Vermont Medical Society. The University of Vermont is jointly accredited by the Accreditation Council for Continuing Medical Education (ACCME), the Accreditation Council for Pharmacy Education (ACPE), and the American Nurses Credentialing Center (ANCC), to provide continuing education for the healthcare team.

The University of Vermont designates this internet live activity for a maximum of *1 AMA PRA Category 1 Credit(s)TM*. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Please watch your email from the Vermont Medical Society providing directions for claiming CME credit.

CME credit must be claimed within 30 days of participating in the event.

VMS Third Thursday Webinar Series: A Crisis in Vermont: Gun Violence & Suicide

Speakers: Rebecca Bell, MD & Thomas Delaney, PhD

Planning Committee Members:

Jessa Barnard, ESQ, Catherine Schneider, MD, Stephanie Winters & Elizabeth Alessi

Purpose Statement/Goal of This Activity: A prevalent discussion on firearm violence, suicide rates, and the work that's being done in Vermont to positively impact these trends!

Learning Objectives:

1. Understand the relationship between access to firearms and suicide risk.
2. Describe the most important messages to include as part of firearm safe storage counseling.
3. Demonstrate a basic knowledge of devices available for safe firearm storage.

Disclosures:

Is there anything to Disclose? Yes No

Did this activity receive any commercial support? Yes No

(The CMIE staff do not have any possible conflicts)

In support of improving patient care, this activity has been planned and implemented by the Robert Larner College of Medicine at the University of Vermont and the Vermont Medical Society. The University of Vermont is jointly accredited by the Accreditation Council for Continuing Medical Education (ACCME), the Accreditation Council for Pharmacy Education (ACPE), and the American Nurses Credentialing Center (ANCC), to provide continuing education for the healthcare team.

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FIREARM INJURY PREVENTION SCREENING AND COUNSELING

Rebecca Bell, MD, MPH
Thomas Delaney, PhD

PROJECT TEAM MEMBERS & ACKNOWLEDGEMENTS

UVM LCOM Educational Technology

Vermont Child Health Improvement Program (VCHIP)

Raj Chawla, MPH

Bruce Kimball

Laurie Gelles, PhD

Rose Martin, MS3

We are grateful for the UVM Larner College of Medicine Frymoyer Scholars award to Dr. Bell that is supporting this work.

CONFLICTS OF INTEREST

Dr. Bell and Dr. Delaney have no conflicts of interest to disclose

OVERVIEW

Epidemiology of firearm injury and death in Vermont

- homicide, suicide, unintentional firearm fatalities

Role of the provider in firearm safe storage counseling

Development of module

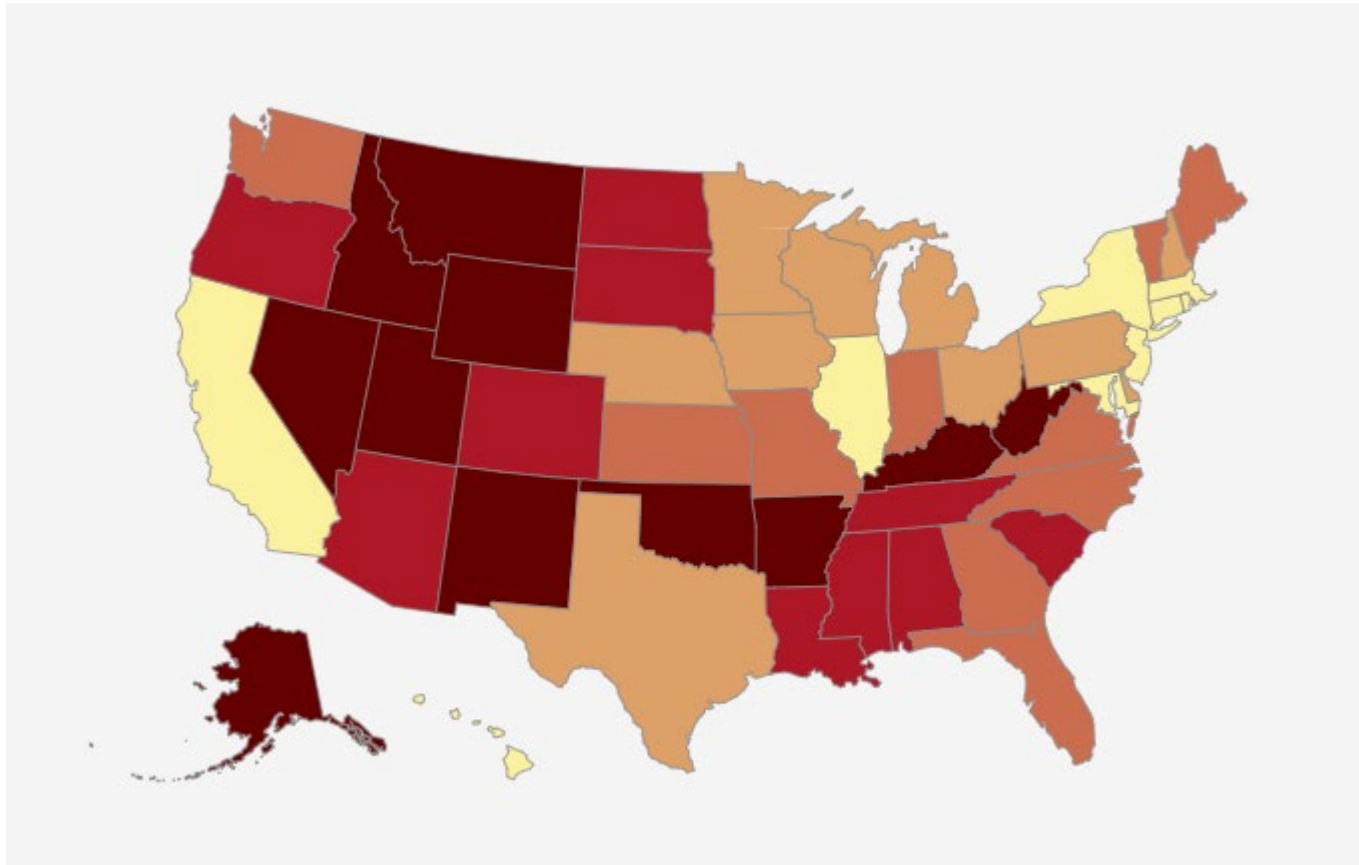
Safe storage options

Counseling example

Discussion

FIREARM FATALITIES - HOMICIDE

2003-2017, ALL AGES



Total deaths
182,911

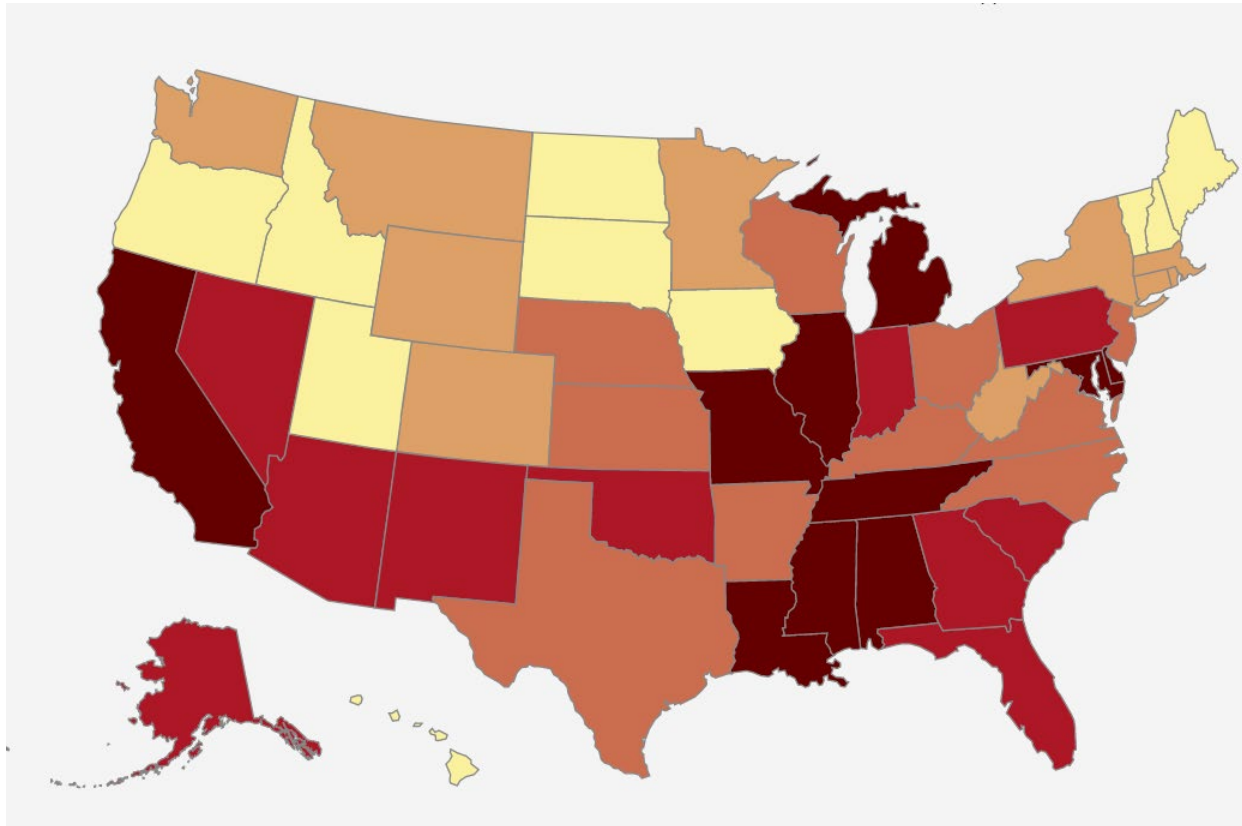
Crude rate

- 0.6 - 1.4
- 1.4 - 2.4
- 2.4 - 4.2
- 4.2 - 5.2
- 5.2 - 14.3
- No Data
- Suppressed Value

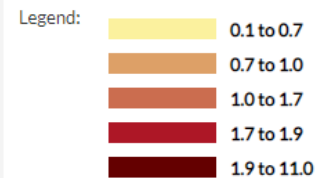
YOUTH FIREARM FATALITIES - HOMICIDE

2003-2017, 0-18 YEARS OLD

Total deaths
19,530



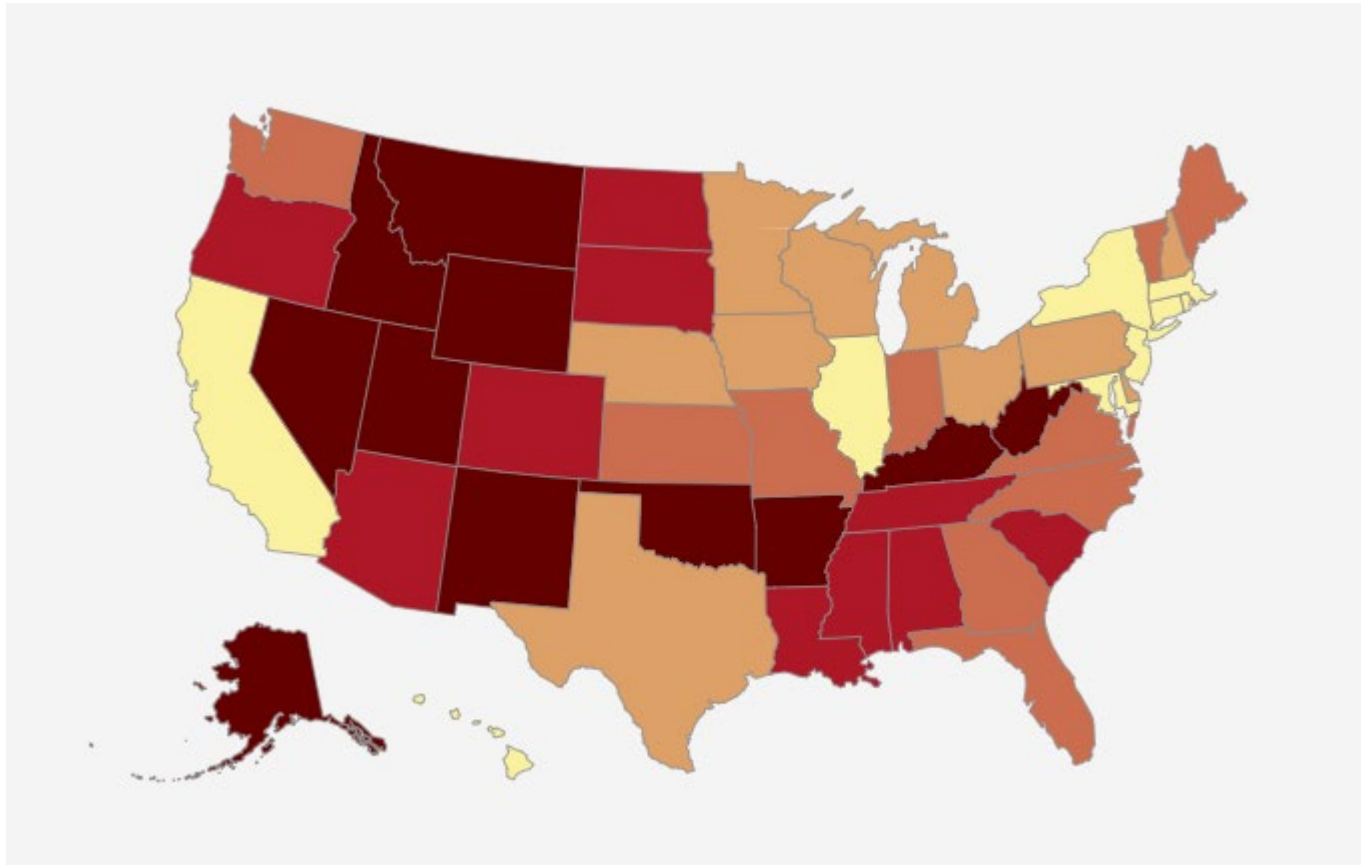
Crude rate



CDC WISQARS

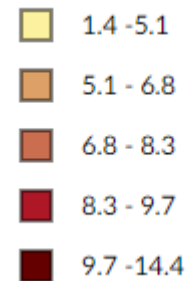
FIREARM FATALITIES - SUICIDE

2003-2017, ALL AGES



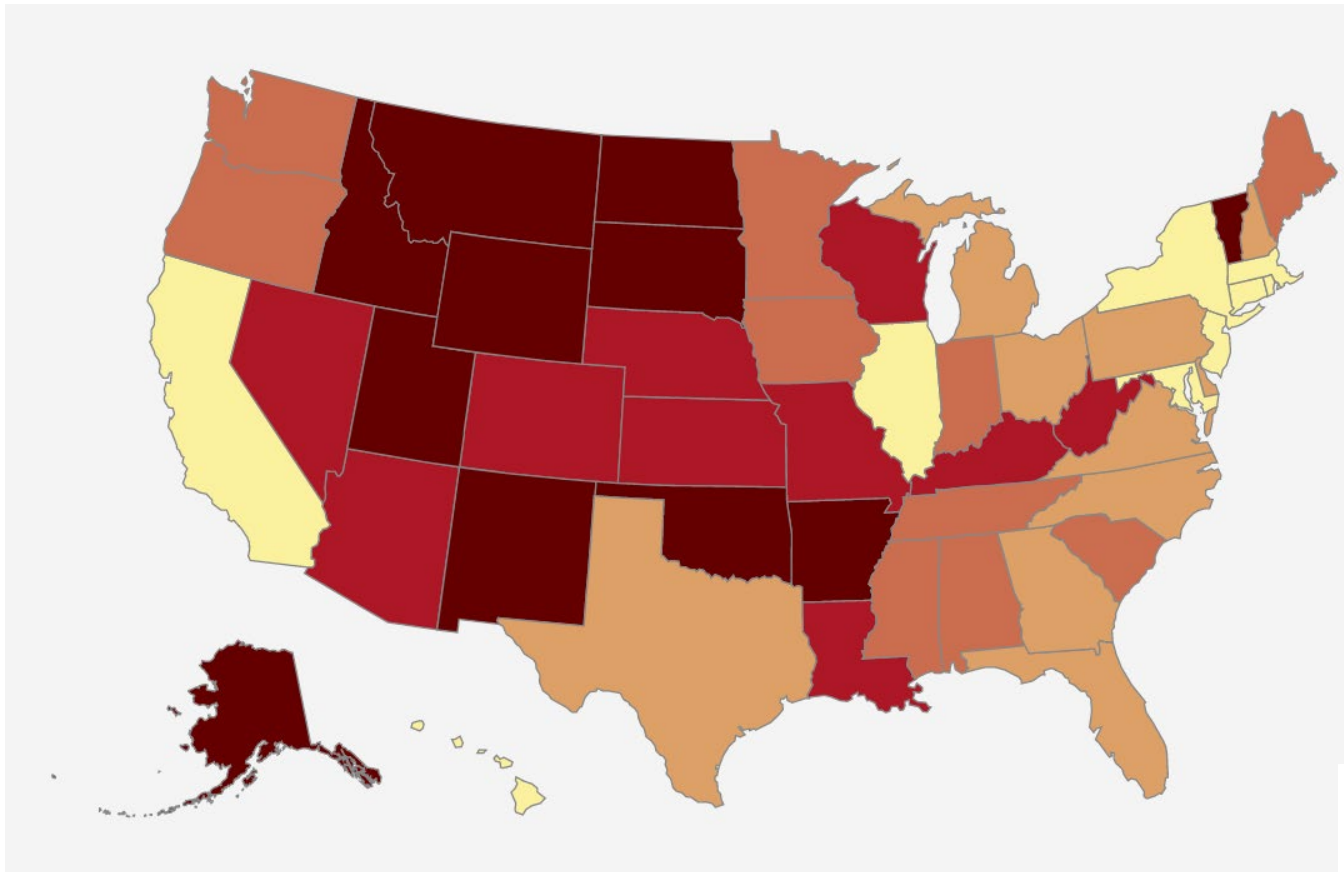
Total deaths
293,242

Crude rate



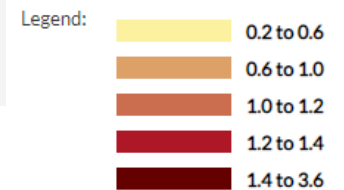
YOUTH FIREARM FATALITIES - SUICIDE

2003-2017, 0-18 YEARS OLD



Total deaths
9,753

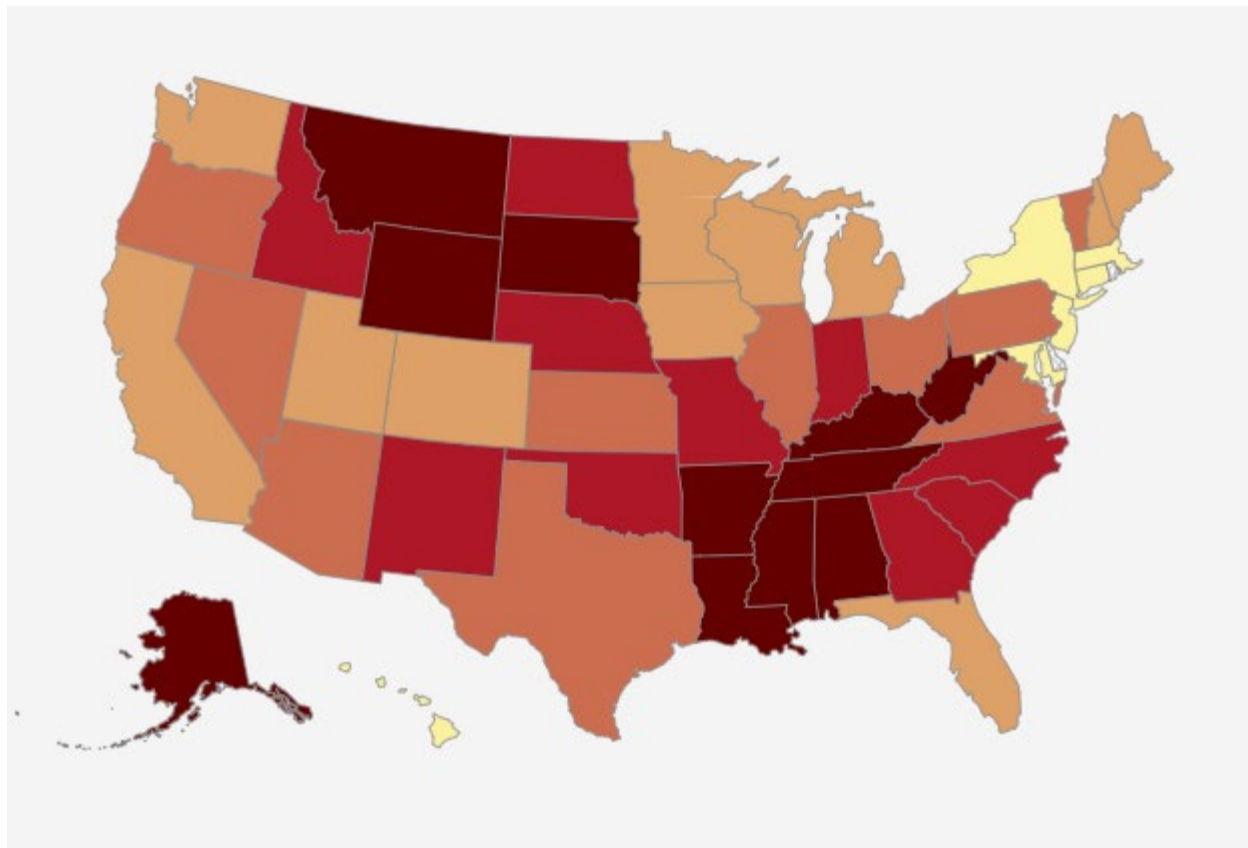
Crude rate



CDC WISQARS

FIREARM FATALITIES - UNINTENTIONAL

2003-2017, ALL AGES



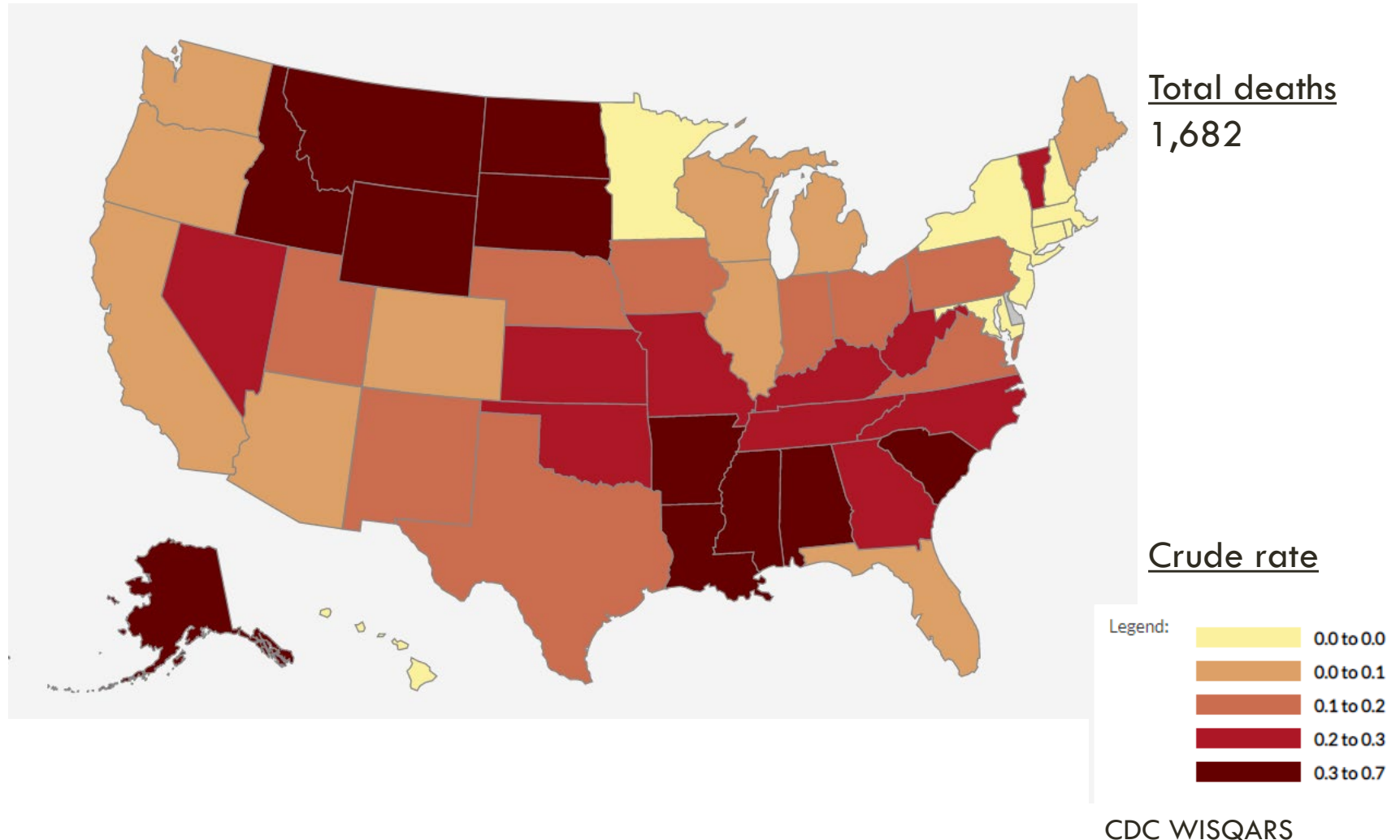
Total deaths
8,750

Crude rate

- 0.0 - 0.1
- 0.1 - 0.1
- 0.1 - 0.2
- 0.2 - 0.4
- 0.4 - 0.7
- No Data
- Suppressed Value

YOUTH FIREARM FATALITIES - UNINTENTIONAL

2003-2017, 0-18 YEARS OLD



WHO?

WHAT?

WHEN?

WHERE?

WHY?

HOW?

How do states compare?

Suicide in States with the Highest and Lowest Gun Ownership Levels, 2000-2002

	High-Gun States *	Low-Gun States **
Population	39 Million	40 Million
% Of Adults With A Gun At Home	47%	15%
Male		
Firearm Suicide	8,489	2,430
Non-Firearm Suicide	3,572	4,007
Total Suicide	12,061	6,437
Female		
Firearm Suicide	1,260	176
Non-Firearm Suicide	1,488	1,439
Total Suicide	2,748	1,615

*WY, SD, AK, WV, MT, AR, MS, IO, ND, AL, KY, WI, LA, TN, UT

** HI, MA, RI, NJ, CT, NY

WHO?

WHAT?

WHEN?

WHERE?

WHY?

HOW?

Where there are more guns, there are more suicides.

Household Gun Ownership and Youth Suicide Rates at the State Level, 2005–2015

Anita Knopov, BA,¹ Rebecca J. Sherman, BA,¹ Julia R. Raifman, ScD, SM,²
Elysia Larson, ScD, MPH,³ Michael B. Siegel, MD, MPH¹

Introduction: Determining whether the prevalence of gun ownership is associated with youth suicide is critical to inform policy to address this problem. The objective of this study is to investigate the relationship between the prevalence of household gun ownership in a state and that state's rate of youth suicide.

Methods: This study, conducted in 2018, involved a secondary analysis of state-level data for the U.S. using multivariable linear regression. The relationship between the prevalence of household gun ownership and youth (aged 10–19 years) suicide rates was examined in a time-lagged analysis of state-level household gun ownership in 2004 and youth suicide rates in the subsequent decade (2005–2015), while controlling for the prevalence of youth suicide attempts and other risk factors.

Results: Household gun ownership was positively associated with the overall youth suicide rate. For each 10 percentage-point increase in household gun ownership, the youth suicide rate increased by 26.9% (95% CI=14.0%, 39.8%).

Conclusions: Because states with high levels of household gun ownership are likely to experience higher youth suicide rates, these states should be especially concerned about implementing programs and policies to ameliorate this risk.

Am J Prev Med 2019;56(3):335–342. © 2018 American Journal of Preventive Medicine. Published by Elsevier Inc. All rights reserved.

State	Suicide rate (per 100,000)	Household gun ownership prevalence (%)	Severe negative affect prevalence (%)	Suicide plan prevalence (%)	Suicide attempt prevalence (%)
Alaska	15.2	59.8	27.7	13.8	9.4
South Dakota	14.9	59.9	24.3	13.5	8.7
Wyoming	11.9	65.5	27.5	15.9	9.9
Montana	11.1	62.6	26.6	13.8	8.2
New Mexico	10.9	39.7	30.4	14.5	11.1
North Dakota	10.6	56.2	22.7	11.6	8.8
Idaho	9.4	55.7	28.7	14.0	7.9
Colorado	8.4	34.6	25.2	10.8	7.2
Utah	8.2	44.8	26.5	12.5	7.9
Oklahoma	7.1	46.5	27.8	11.9	6.9
Arizona	6.8	32.3	34.4	15.1	9.8
Iowa	6.6	45.7	23.4	11.4	6.6
Nebraska	6.4	45.4	22.6	12.2	8.0
Arkansas	6.3	58.8	30.0	14.9	11.1
Kansas	6.2	42.8	22.7	10.2	6.7
Minnesota	6.2	41.2	—	—	—
Nevada	6.0	34.0	29.7	15.1	9.9
Washington	6.0	34.0	—	—	—
Oregon	5.9	39.8	—	—	—
Hawaii	5.9	10.2	30.5	16.0	11.3
Wisconsin	5.8	43.0	23.7	12.1	7.0
Vermont	5.8	43.8	21.9	10.3	5.3
West Virginia	5.7	58.5	29.2	12.8	8.6
Missouri	5.6	44.2	26.2	11.6	7.6
Kentucky	5.5	47.7	28.1	12.7	8.9
Maine	5.3	40.3	23.1	11.3	7.4
Michigan	5.3	40.8	27.4	13.5	9.0
Indiana	5.2	38.5	28.3	14.1	9.4
Louisiana	5.2	45.0	30.8	12.7	10.9
Ohio	5.1	34.0	26.4	12.7	8.5
Delaware	4.8	26.3	25.8	10.2	7.3
Tennessee	4.8	46.6	27.9	12.4	8.1
Texas	4.8	37.1	29.4	12.6	9.2
Alabama	4.7	52.2	27.9	14.0	9.8
South Carolina	4.7	43.3	28.0	12.9	10.0
Virginia	4.5	37.5	26.1	13.4	8.9
Mississippi	4.5	54.6	28.0	12.3	9.8
North Carolina	4.4	39.4	27.5	12.3	12.0
Pennsylvania	4.2	35.1	25.7	11.5	6.6
New Hampshire	4.2	31.0	25.4	10.5	6.1
Florida	4.0	25.2	26.2	10.0	7.2
Illinois	3.9	20.7	27.9	13.0	9.1
Georgia	3.7	40.3	29.3	13.1	8.7
Maryland	3.5	21.7	26.2	12.0	9.5
Connecticut	3.3	18.1	25.1	11.7	8.7
California	3.1	20.1	29.7	15.2	8.2
Rhode Island	3.1	12.4	25.1	11.1	9.8
Massachusetts	3.0	11.5	24.8	11.4	6.7
New York	2.7	18.5	25.5	10.2	7.7
New Jersey	2.6	11.4	27.4	11.2	8.0

State	Suicide Rate (per 100,000)	Household Gun Ownership Prevalence (%)	Severe Negative Affect Prevalence (%)	Suicide Plan Prevalence (%)	Suicide Attempt Prevalence (%)
VT	5.8	43.8	21.9	10.3	5.3
ME	5.3	40.3	23.1	11.3	7.4
NH	4.2	31.0	25.4	10.5	6.1
CT	3.3	18.1	25.1	11.7	8.7
RI	3.1	12.4	25.1	11.1	9.8
MA	3.0	11.5	24.8	11.4	6.7

Characteristics of Impulsive Suicide Attempts and Attempters

Thomas R. Simon, PhD, Alan C. Swann, MD, Kenneth E. Powell, MD, MPH,
Lloyd B. Potter, PhD, MPH, Marcie-jo Kresnow, MS,
and Patrick W. O'Carroll, MD, MPH

Suicide attempts often are impulsive, yet little is known about the characteristics of impulsive suicide. We examined impulsive suicide attempts within a population-based, case-control study of nearly lethal suicide attempts among people 13-34 years of age. Attempts were considered impulsive if the respondent reported spending less than 5 minutes between the decision to attempt suicide and the actual attempt. Among the 153 case-subjects, 24% attempted impulsively. Impulsive attempts were more likely among those who had been in a physical fight and less likely among those who were depressed. Relative to control subjects, male sex, fighting, and hopelessness distinguished impulsive cases but depression did not. Our findings suggest that inadequate control of aggressive impulses might be a greater indicator of risk for impulsive suicide attempts than depression.

Survivors of near-lethal suicide attempt:

- 24% spent <5 mins between decision and attempt
- Impulsive attempts more likely to be violent
- Impulsive attempters less likely to be depressed

Right To Self-Defense Versus Suicide Prevention: Lawmakers Consider Waiting Period For Gun Sales

By PETER HIRSCHFELD • FEB 28, 2019

PROGRAM
VPR News



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Alyssa and Rob Black, whose 23-year-old son died by suicide in December, asked lawmakers Thursday to create a waiting period for gun purchases in Vermont.

PETER HIRSCHFELD / VPR



FIREARMS & SUICIDE

90% of people who survive near-lethal suicide attempts do not go on to die by suicide

Those who attempt suicide with firearms (compared to other methods):

- Almost always die
- Have made the attempt impulsively
- Are less depressed

Important to screen for accessibility to firearms among all adolescents – even if not exhibiting suicidal ideation

Young people who use firearms in a suicide are often experiencing a crisis

**On average, in Vermont,
firearms cause:**

39

**ED Visits and
Hospitalizations, and**

74

Deaths each year.

Gun Storage Practices and Risk of Youth Suicide and Unintentional Firearm Injuries

JAMA. 2005;293(6):707-714.

David C. Grossman, MD, MPH

Beth A. Mueller, DrPH

Christine Riedy, PhD, MPH

M. Denise Dowd, MD, MPH

Andres Villaveces, MD, PhD

Janice Prodzinski, BA

Jon Nakagawara, MHA

John Howard, MD

Norman Thiersch, MD

Richard Harruff, MD

Case-control study

Cases: incident where child/adolescent <20yo shot a firearm intentionally or unintentionally injuring self or others

Controls: homes with children and firearms without shooting incident

Conclusion: 4 methods of storage each had protective plus additive safety effect:

- Storing gun locked
- Storing gun unloaded
- Storing ammunition locked
- Storing ammunition in separate location

Firearm Storage Safety

2018 Behavioral Risk Factor Surveillance System

December 2019

43%

of all Vermont households store firearms in or around the home.

17%

of households with firearms in the home keep a firearm loaded.

65%

of households with a loaded firearm in the home keep a firearm **unlocked**.

7% of all Vermont households have a loaded firearm in the home.

5% of all Vermont households have a loaded firearm in the home that is unlocked.

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↓
About 13,000 Vermont Households

WHY FIREARM SAFE STORAGE COUNSELING?

Firearms are the most common method used in suicide deaths in Vermont – more than any other method combined

At the state level, the percentage of household gun ownership more predictive of youth suicide death rate than percentage of youth screening positive for symptoms of depression, suicide planning, or suicide attempts

Storing firearms safely reduces risk of firearm injury or death generally, including suicide and accidental injury

5% of all VT households have a firearm that is loaded and unlocked

INCREASED FIREARM SALES

US gun control

This article is more than 1 month old

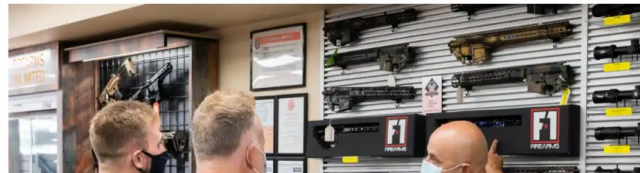
Americans have bought record 17m guns in year of unrest, analysis finds

Sales surged in the spring amid coronavirus fears and climbed higher during protests for racial justice

Lois Beckett

@loisbeckett

Fri 30 Oct 2020
02:00 EDT



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BUSINESS

Sales Of Guns To First Time Owners Rise Amid COVID-19 Pandemic

July 16, 2020 · 7:17 AM ET
Heard on Morning Edition



CHRIS ARNOLD



ARTICLE IN PRESS

American Journal of
Preventive Medicine

RESEARCH ARTICLE

Suicidal Ideation Among Individuals Who Have Purchased Firearms During COVID-19

Michael D. Anestis, PhD,^{1,2} Allison E. Bond, BA,³ Samantha E. Daruwala, MA,³ Shelby L. Bandel, MS,³ Craig J. Bryan, PsyD, ABPP⁴

Introduction: Given the increase in firearm purchases during the COVID-19 pandemic, this study seeks to determine the extent to which COVID-19 firearm purchasers differ in terms of suicide risk from nonfirearm owners and firearm owners who did not make a purchase during COVID-19.

Methods: Participants (N=3,500) were recruited through Qualtrics Panels to participate in an online survey examining methods for self-protection. ANCOVAs were utilized to assess suicidal ideation. Multivariate ANCOVAs were used to examine firearm storage practices and storage changes during COVID-19. Data were collected in late June and early July 2020, and analyses were conducted in July 2020.

POSSIBLE COVID-19 IMPACTS & REBOUND EFFECTS

US and VT suicide and self harm rates have *not* increased since March 2020. However, negative mental health impacts associated with COVID-19 have increased¹:

- Overall increased negative impacts, 32% - 53% (sleeping, substance use, worse chronic conditions, etc.)
- Increased social isolation

Job losses and economic stresses

October 2020 review study² (n=8) showing *some* evidence for increased suicidal ideation and acts following previous pandemics:

- Increased suicide deaths and attempts, particularly in older people, in the year following pandemic start
- Linkage between COVID-19 related distress and past month suicidal ideation

1. Kaiser Family Foundation: <https://www.kff.org/coronavirus-covid-19/issue-brief/the-implications-of-covid-19-for-mental-health-and-substance-use/>; 2. Zortea et al (1992) Crisis.

ROLE OF PROVIDER IN FIREARM SAFE STORAGE SCREENING AND COUNSELING

Healthcare providers are in a strong position to support families around safely storing firearms.

- Typically see children at least annually
- Conducting safety screenings already
- Evidence for the effectiveness of firearm safe storage interventions
- But, screening and counseling are not occurring as often as they could

Reasonable to expect that similar screening and counseling efforts by non-physician providers will also provide a benefit

ROLE OF PROVIDER: POSSIBLE BARRIERS

Barriers to effective screening and counseling:

- Lack of provider knowledge/confidence regarding firearm safe storage
- Not knowing an effective approach to starting the conversation
- Not wanting to alienate patients/clients

Promising solution: Self-directed e-learning modules on firearm safe storage

UNIQUE COMPONENTS OF LEARNING TOOL

Short

Concisely reviews firearm safe storage options

Focuses on “How” to counsel rather than “Why”

Demonstrations of scripts with unique components:

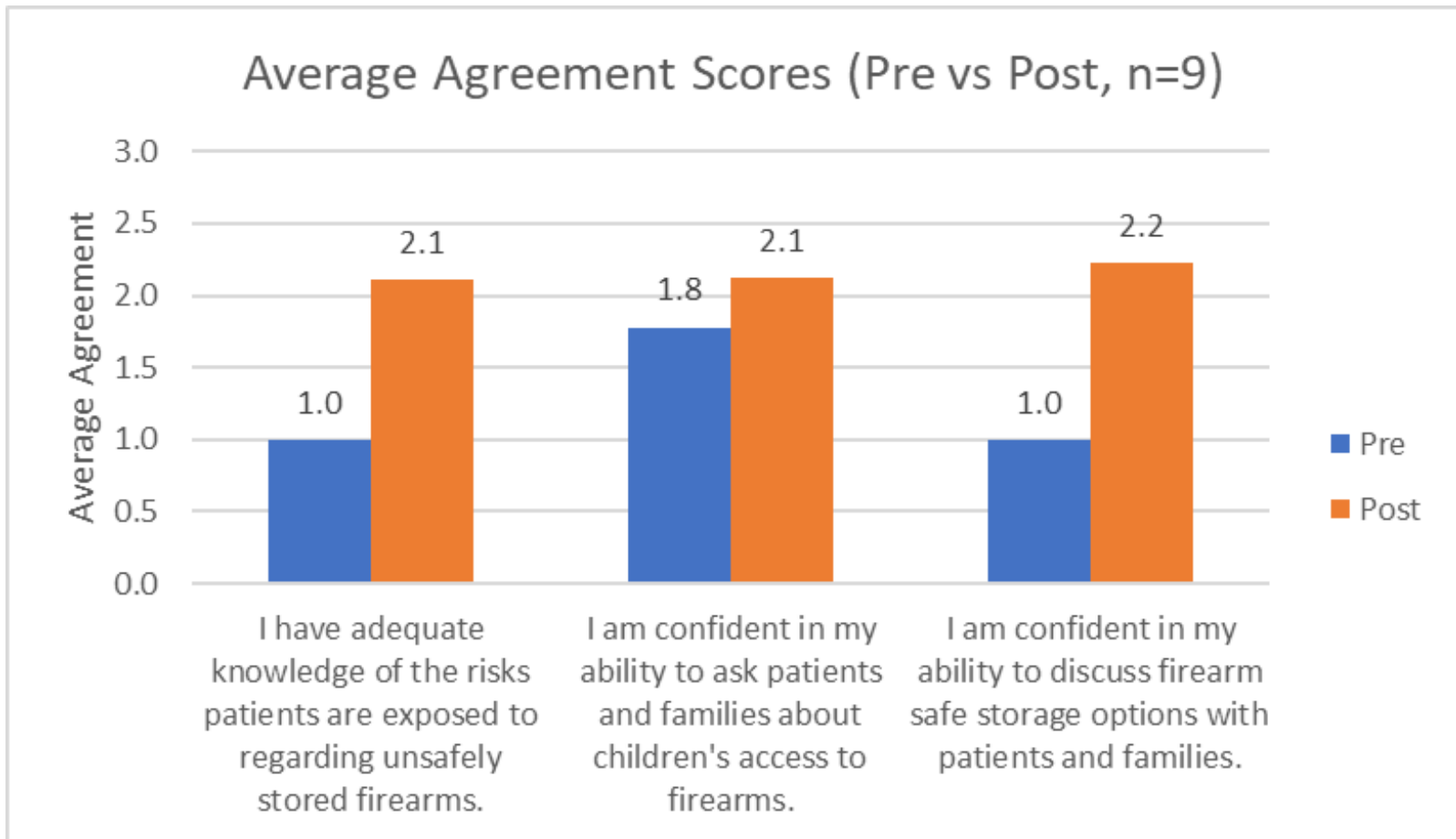
“How are firearms stored in and around the home?”

- Presumes firearms present
- Open-ended question to facilitate discussion
- No active recording of response

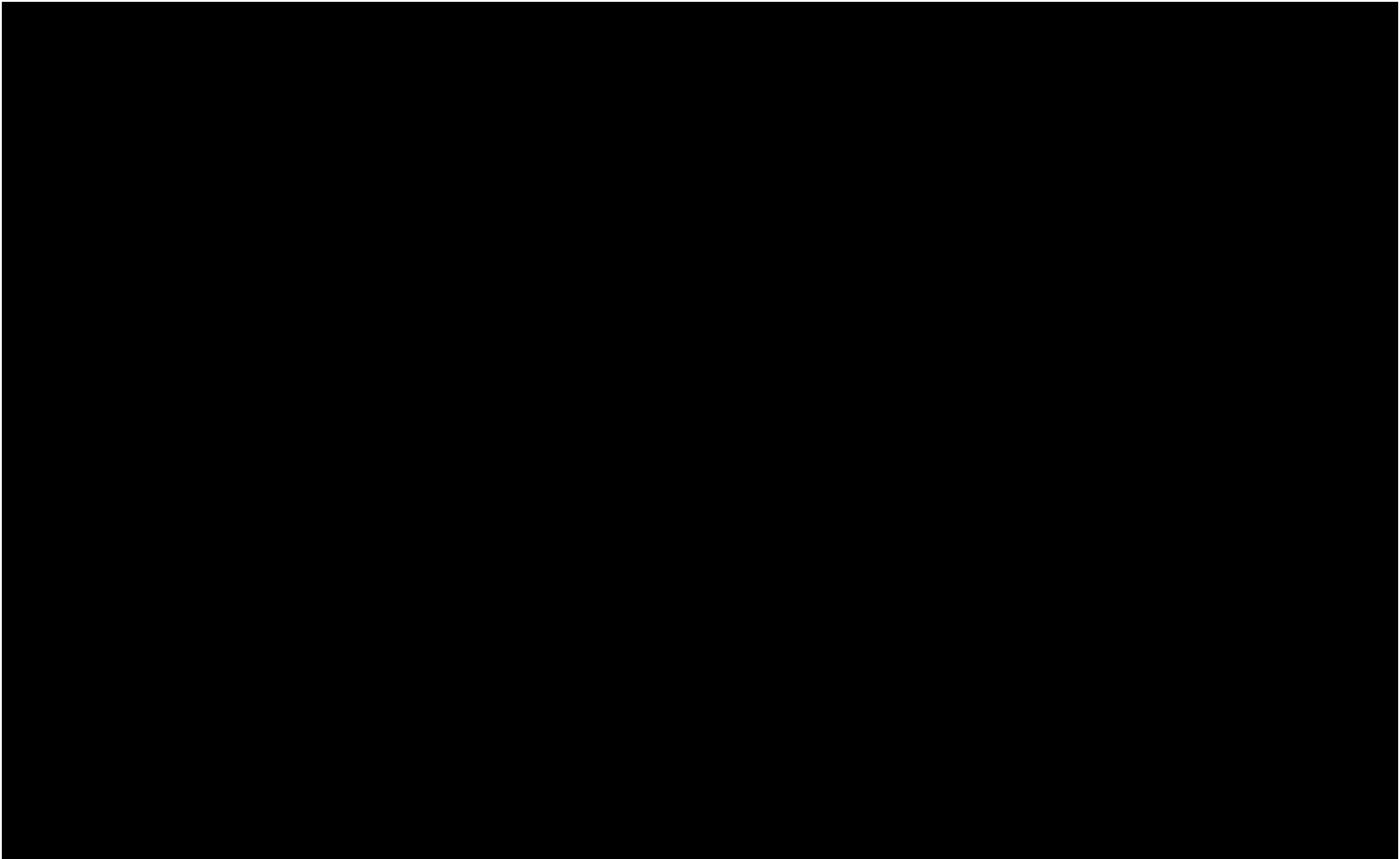
Discuss prevention of theft as motivator for safe storage

Encourages families without firearms to ask about unsecured firearms where their kids play

FOCUS GROUP FINDINGS



SAFE STORAGE OPTIONS



FIREARM STORAGE OPTIONS




To prevent avoidable injury and to protect our families and children, firearm safety must be a priority. You can help to ensure that firearms do not get into the wrong hands by using proper firearm storage in your household. The 5 most common storage solutions available are listed here for your review.


CABLE LOCK

PRICE RANGE | \$10-\$20



A cable runs through the barrel or action of a firearm to prevent it from being accidentally fired, requiring either a key or combination to unlock it.

 Long cables may be threaded through several guns; inexpensive.


 Thin cables could be cut.


TRIGGER LOCK

PRICE RANGE | \$5-\$35



A trigger lock is a two-piece lock that fits over the trigger guard so that the trigger cannot be pulled. A push-button keypad, combination, or key will open the lock.

 Inexpensive; widely available; quick access (keypad models).

 Some models will not prevent access by older children or teens; may not prevent theft, as some locks may be removed later; may break easily.

LOCK BOX

PRICE RANGE | \$40-\$200+



A lock box is a small safe designed to store a handgun and other valuables. Using a key, a push-button, or a combination unlocks the safe. Electronic lock boxes are also available and allow access through a digital keypad or fingerprint.

+ Quick access if the lock is push-button or digital; difficult to steal if permanently mounted; may allow storage for more than one handgun; keeps gun out of sight.

- Costs more than trigger locks or chamber locks.

GUN VAULT / SAFE

PRICE RANGE | \$100-\$2,000



A gun vault or safe allows for the safe storage of multiple firearms in one place. Safes come in a variety of sizes designed to store long guns, handguns, or other valuables. Access is gained through a push-button, combination, or digital key pad.

+ Allows storage of numerous long guns and handguns; difficult to steal; allows storage of other personal items; Usually fire resistant; keeps valuables out of sight.

- Costs more than chamber locks or lock boxes; heavy and difficult to move.

PERSONALIZED LOCK

PRICE RANGE | \$200+

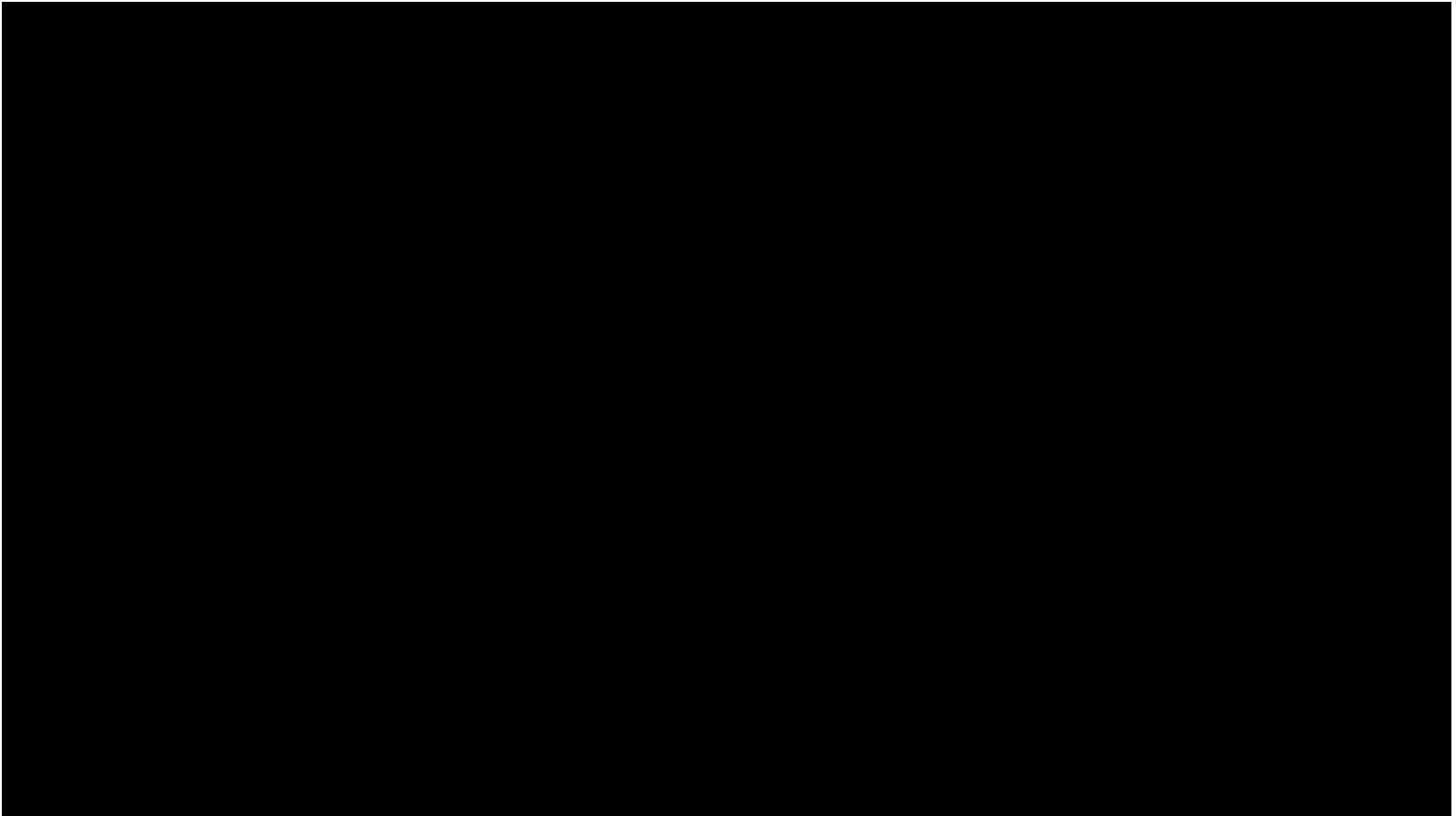


Gun makers or owners can install a permanent safety device on their gun. These types of special locks vary. Some locks may be a built-in key or combination lock, while others are specially designed with a magnetic or electronic lock that only the owner can fire while wearing a special ring or bracelet. Some personalized locks use fingerprint recognition technology.

+ The safety device is permanently attached to the gun.

- Custom addition to a gun and often expensive.

COUNSELING EXAMPLE VIDEO



KEY POINTS

Firearms are a highly lethal and prevalent means used by young people and adults to take their lives

Health care, mental health, substance abuse treatment and other clinicians are well positioned to screen and counsel for safe storage of firearms

Storage Best Practices

- All firearms locked and unloaded
- Ammunition locked up and stored separately

Contact: Thomas.Delaney@uvm.edu
Rebecca.Bell@uvmhealth.org

DISCUSSION

How do you currently approach firearm safe storage counseling in your practice?

- Which patients do you counsel?
- How did you determine your approach?

What have been the barriers to screening and counseling? Successes?

- Are there particular scripts you use or avoid when having this conversation?
- Do you provide materials to patients?

Is this training format (online module) useful for your practice?

What other resources do you need to make changes in this area?

Besides safe storage, what other firearm-related topics are you interested in exploring?