

Fisher's exact test) and multivariable logistic regression analyses were performed.

Results: 3,206 adolescents of ages 13-18 years participated with 45% reporting they lived on a farm or ranch, 34% lived in the country but not on a farm and 21% lived in town. The vast majority of participants (85%) had fired a rifle/shotgun; 43% reported firing them >100 times. Of those that had fired rifles/shotguns, 41% had done so before 9 years old and 71% before 12 years. Most had also fired a handgun (69%), with 23% having fired handguns >100 times. Of those that had fired handguns, 44% had done so before 11 years of age and 77% before 14 years. Average age for first firing rifles/shotguns was 9.5 (SD 3.1) years, and 11.1 (SD 3.0) years for handguns. Males, non-Hispanic Whites, and those living on farms or in the country had significantly greater percentages that had fired a rifle/shotgun or a handgun. Significant differences were also seen by U.S. Census Region. Over half (64%) reported they had gone hunting with 32% first hunting before 9 years old and 55% before 11 years. Of those that had used a firearm, 67% had completed a firearm safety training course. Overall, 23% were/had been members of a school or club shooting team and of these, 87% had taken a safety course.

Conclusions: Most FFA member participants had fired both rifles/shotguns and handguns, many at very young ages. Significant differences in firearm use were noted by demographic factors including the youth's home setting (i.e., farms and ranches) and their U.S. Census Region. Substantial numbers of adolescents that had used a firearm had not received formal training. Families should be advised when it is developmentally appropriate to introduce youth to firearms, and all should take firearm safety training before using them.

Objectives:

1. To understand at what ages rural youth are starting to shoot rifles/shotguns and handguns, and the frequency of their use.
2. To be able to list two factors that are associated with an increased proportion of rural youth having fired a rifle/shotgun or a handgun.
3. To be able to state the proportion of rural youth that have obtained firearm safety training and describe two factors associated with adolescent firearm users having received training or not.

Impact of Cable Gun Lock Distribution on Firearm Securement after Emergent Mental Health Evaluation: A Randomized Controlled Trial



Bijan W. Ketabchi, MD, MPH
Assistant Professor of Clinical Pediatrics
Division of Emergency Medicine
Perelman School of Medicine at the University of Pennsylvania
Children's Hospital of Philadelphia
ketabchib@chop.edu

Authors: Bijan W. Ketabchi, MD, MPH; Michael A. Gittelman, MD; Yin Zhang, MS; Wendy J. Pomerantz, MD, MS

Background: Suicide-related presentations to pediatric emergency departments (PED) have increased drastically in recent years. PED providers have the opportunity to reduce

suicide risk by counseling caregivers on restricting access to lethal means, such as medications and firearms. Supplementing lethal means counseling (LMC) with safety device distribution is effective in improving home safety practices; however, data on efficacy in high-risk patient populations is limited. The objective of this study was to determine if receiving cable-style gun locks in addition to LMC, compared to LMC alone, improved securement of all household firearms, among caregivers of children presenting to a pediatric emergency department (PED) for mental health (MH) evaluation.

Methods: In this randomized controlled trial, caregivers of patients presenting for MH evaluation completed a survey on current safety practices surrounding firearms and medication in the home. Participants were randomized to receive either LMC (control) or LMC plus 2 cable-style gun locks (intervention). A follow-up survey reassessing safety practices was distributed 1 month after initial encounter. Primary outcome was proportion of households, at follow-up, reporting all firearms secured with a locking device. Secondary outcomes included: removal of firearms and/or medication from the home, purchase of additional safety devices, change from baseline securement practices, and acceptability of PED-based counseling. Additionally, those in the intervention arm were asked about use of PED-provided locks.

Results: Two hundred participants were enrolled and randomized. Comparable portions of each study group completed follow-up surveys. The control and intervention arms had similar proportions of households reporting all firearms secured at baseline (89.9% vs 82.2%, $p = 0.209$) and follow-up (97.1% vs 98.5%, $p = 0.96$), respectively. Other safety behaviors such as removal of medication (19.1% vs 13.2%, $p = 0.361$), removal of firearms (17.6% vs 11.8%, $p = 0.732$), and purchase of additional safety devices (66.2% vs 61.8%, $p = 0.721$) were also alike between the two groups. There were increased odds of medication securement in both control (OR 8.8, 95% CI 3.1–20.9) and intervention arms (OR 8.2, 95% CI 3.8–19.4), compared to their respective baselines. Only the intervention arm had higher odds of firearm securement at follow-up (OR 14.5, 95% CI: 2.9–264), while the control arm did not (OR 3.7, 95% CI: 0.9–24.6). Greater than 92% of caregivers in both groups held favorable views of PED-based counseling. Within the intervention group, 70% reported utilization of PED-provided locks. Preference for different style of gun lock (e.g., lockbox) was the most cited reason among those not using PED-provided cable locks.

Conclusions: ED-based LMC is a favorably-viewed, effective tool for helping families of high-risk children decrease access to lethal means in the home. Providing cable-style gun locks did not produce higher rates of firearm securement than LMC alone—likely due to high baseline rates of firearm securement and preference for different style of lock among non-utilizers. Future studies should assess the efficacy of other devices on different aspects of home safety practices.

Objectives:

1. Understand opportunities and barriers to implementing effective ED-based lethal means counseling.
2. Understand that ED-based lethal means counseling is a valuable tool for improving multiple home safety behaviors, among families of patients at high risk of suicide or unintentional injury.
3. Understand that caregivers are open to discussion of firearm safety and the vast majority viewed ED-based counseling favorably