

Firearm Storage Practices Among American Veterans

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Introduction: Interventions that reduce access to highly lethal and commonly used methods of suicide (e.g., limiting firearm access) are considered essential elements of effective suicide prevention programs. Scant epidemiologic data are available to inform such efforts among Veterans. The aim of this study is to describe firearm storage practices and correlates of those practices among a nationally representative sample of U.S. Veteran firearm owners.

Methods: The authors used a probability-based online survey of Veteran firearm owners in 2015 (data analyzed in 2017; 54.6% response rate). The primary outcome was firearm storage practices. Additional items assessed individual and household-level sociodemographic characteristics, firearm-related characteristics, and risk perceptions related to firearm ownership.

Results: One in three (33.3%, 95% CI=28.6%, 38.4%) Veteran firearm owners stores at least one firearm loaded and unlocked. The prevalence of this practice ranges substantially (9%–65%) across individual, household, and firearm ownership characteristics, and is strongly related to other firearm-related behaviors (e.g., carrying handguns); reasons for firearm ownership (e.g., protection versus other); number of firearms owned; and perceptions about the utility of guns stored safely and whether guns make homes safer.

Conclusions: Storing a firearm loaded and unlocked is common among Veterans. Storage practices are strongly related to reasons for ownership and potentially malleable perceptions including beliefs about firearm-related risks. Suicide prevention initiatives among Veterans should incorporate communication strategies that address common misperceptions about household firearm risk and whether safe storage practices may better align with reasons most Veterans own firearms (i.e., safety)—especially when someone in their home is at increased risk for suicide.

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INTRODUCTION

Interventions that reduce access to highly lethal and commonly used methods of suicide, such as limiting access to firearms during high-risk periods, are considered an essential element of effective suicide prevention programs.¹ These efforts are particularly relevant for Veterans of the U.S. Armed Forces because nearly one in two Veterans own firearms and two of every three Veteran suicides are firearm-related.^{2,3} In 2014, when Veterans accounted for nearly one in five adult suicides and rates among Veterans were approximately 20% higher than among age- and sex-matched U.S. adults, 68% of male Veteran and 41% of female Veteran suicides were firearm-related (whereas 56% and

32% of male and female suicides overall among all U.S. adults, which includes Veterans, involved firearms).^{3,4}

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As part of its continued focus on addressing suicide risk among Veterans, the Veterans Health Administration (VHA) is expanding its efforts to promote firearm safety by developing materials to support lethal means safety counseling by VHA providers and by distributing firearm locking mechanisms to at-risk patients.^{5–7}

Developing and implementing firearm safety initiatives to prevent suicides within VHA, generally referred to as lethal means safety, is more likely to be effective if such programs take into account a better understanding of how Veterans store their firearms and whether perceptions about firearm-related risks are associated with such practices. To date, published information about firearm storage practices among Veterans has been limited to studies of small samples of Veterans receiving care from the VHA.^{8–12} In fact, no published study has comprehensively described firearm storage practices among a nationally representative sample of the overall or VHA-enrolled Veteran population. Studies assessing firearm-related risk perceptions in the general population have shown that only 6% of firearm owners agree that household firearms increase suicide risk,¹³ and that the intensity of such beliefs, along with reasons for ownership, are related to how firearms are stored.¹⁴ How these beliefs relate to storage practices has not been assessed among Veterans. Such information would be informative for the U.S. Department of Veterans Affairs initiatives aiming to address the high burden of suicide among all Veterans, including those not receiving VHA healthcare.¹⁵

This study describes firearm storage practices among a nationally representative sample of U.S. Veteran firearm owners and examines how those practices differ across individual, household, and firearm-ownership characteristics and risk perceptions.

METHODS

Study Sample

Data for this study are from a web-based survey (The National Firearms Survey) designed by the investigators to assess firearm ownership, storage practices, and related perceptions and behaviors among a nationally representative sample of U.S. adults. The survey research firm Growth for Knowledge (GfK) conducted the survey in April 2015. GfK maintains an online sampling frame (GfK Knowledge Panel) comprising \cong 55,000 U.S. adults selected using address-based sampling methods and adjusted with base weights representative of the U.S. population according to the most recent U.S. Census Current Population Survey.^{16–18} Participants are selected on an ongoing basis using equal probability sampling. For this study, Veterans and firearm owners

were oversampled by GfK from the Knowledge Panel to ensure reliable national estimates. Study-specific post-stratification weights were adjusted based on survey nonresponse, under- or over-coverage imposed by the study-specific sample design, and benchmark demographic distributions from the Veteran supplement to the 2014 U.S. Census Current Population Survey and the 2014 American Community Survey.^{19,20} Detailed information about study design and survey weighting is available elsewhere.^{21,22}

All panel members were eligible for participation except those serving on active duty in the U.S. Armed Forces. Survey e-mail invitations were followed by reminders to nonresponders 3 days later. Response to GfK surveys is incentivized through a point system by which respondents accumulate points to redeem for cash, merchandise, or sweepstakes participation. For this study, respondents were included if they self-identified as Veterans; reported living in a home with a firearm and personally owning a firearm in working order (not including air guns, BB guns, starter pistols, or paintball guns); and responded to items assessing their household firearm storage practices. The IRB at Northeastern University approved the study.

Measures

The primary outcome of this study was personal firearm storage practices that were assessed by asking, for each type of firearm owned, how many firearms were owned, and how each firearm was stored: loaded and unlocked, loaded and locked up, unloaded and unlocked, and unloaded and locked up. Firearm owners were then categorized into one of three mutually exclusive, hierarchical groups: (1) those who stored at least one gun loaded and unlocked (the least safe storage method); (2) those who stored at least one gun loaded and locked or unloaded and unlocked but none loaded and unlocked (the intermediate risk category); and (3) those who stored all guns unloaded and locked (the safest method). Additional items assessed individual, household, military service, healthcare utilization, and firearm-related characteristics including what types of firearm storage devices respondents owned (but not necessarily used). Veterans were categorized as recent service members if they separated from military service in 2002 or later to dichotomize Veterans based on whether they served during the era of Operations Enduring Freedom, Iraqi Freedom, and New Dawn.²³ Likert items developed by the investigators assessed respondents' perceptions about firearm-related risk using 3- (more dangerous, it depends, safer) or 5-point scales (strongly disagree, disagree, neither, agree, strongly agree).

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