

The Wisconsin Research Network Firearm Safety Survey

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ABSTRACT

National surveys have reported information on firearm ownership and storage practices, but primary care physicians question whether such information can be generalized to their communities and the patient populations they serve. In this study, an anonymous survey was distributed to 100 consecutive patients in 11 primary care clinics throughout Wisconsin. Demographic information and information on the patient's willingness to have firearm safety discussed as part of their routine care, firearm ownership in the household, firearm storage practices, and the patient's purpose for owning firearms were collected.

The study found that patients were willing to answer anonymous survey questions about firearm ownership and storage in their homes. The most effective screening question on gun safety was whether firearms were kept in the home for personal protection. Patients at rural clinics were more likely to own firearms than patients in urban clinics. Keeping firearms for recreational purposes was more common than keeping them for personal protection, which was associated with unsafe storage practices. A majority of patients reported not wanting to receive information on firearm safety from their physician. Overall, the study found that it was not possible to generalize national information on firearm ownership and storage to surveyed patients of primary care clinics in Wisconsin.

INTRODUCTION

Published information on the impact of firearms on the health of US citizens is of concern to primary care physicians. Among US youth aged 15-19, firearms account for 20% of all deaths, and fatalities for this age

group reach approximately 3200 each year.¹ Seventy percent of teen homicide and 63% of teen suicide involve firearms.¹ Suicide attempts with firearms are predictably lethal. Case-control investigations show that the homes of suicide victims are twice as likely to have guns than homes of suicide attempts.²

The Centers for Disease Control and Prevention (CDC) has reported a considerable impact of violence on the day-to-day routines of adolescent age groups. Nationwide, 6.6% of students report missing 1 or more days of school in the previous month due to feeling unsafe.³ Similarly, 6.4% reported carrying a weapon on school property during the previous month.³ In Wisconsin, 13.3% of high school students reported carrying a weapon at some time during the previous month; 4.8% of those weapons were guns.⁴

Case-control analysis found an association of increased risk of suicide and homicide in households with handguns. This association was particularly marked in households in which guns were kept loaded and unlocked.⁵⁻⁷ A recent CDC study on firearms associated with violent deaths and used by students in schools found that 37.5% of the perpetrators had unlocked firearms in the home and 23.4% of the perpetrators had unlocked firearms in the homes of relatives and friends.⁸ Expert panel review reported handgun accessibility in the home to be a significant health hazard to children and adolescents.^{9,10}

In 1994, the National Institute of Justice (NIJ) sponsored a nationally representative randomized telephone survey and found that 25% of US adults owned firearms. Of those, 74% possessed more than 2 guns. Firearm ownership was highest among middle-aged and college-educated people in rural and small town America. The NIJ study also found that recreation was the most common reason for owning firearms, although 46% reported owning firearms for personal protection. Half of the firearms reported on in the NIJ study were stored unlocked and 16% were found to be stored loaded and unlocked. One third of firearm owners reported carrying firearms on their

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person for personal protection at least once during the previous year.¹¹ The information from the NIJ study was not state-specific. Therefore, the question still remains as to whether national information on firearm ownership and storage can be generalized to patients and communities of primary care physicians in Wisconsin.

A report published by The National Center for Health Statistics (NCHS) detailed a survey of 19,374 households by the Bureau of the Census that reviewed the US Department of Health and Human Services' Healthy People (2000) health objectives.¹² Interviewers found that there was progress over the past decade in the priority area of violent and abusive behavior, particularly in the areas of reducing homicide, suicide, and firearm-related deaths.¹³ However, only 25% progress was made toward the improved safety target established by the CDC in terms of firearms stored loaded and unlocked in surveyed households.¹⁴

To assess firearm safety and storage methods in clinic populations, and to address the generalizability of national survey findings, the Wisconsin Research Network (WRnN) surveyed patients at 11 primary care clinics throughout Wisconsin. The following questions were investigated:

1. Are patients willing to share information about firearms in their home?
2. Is there variation from one community type to another in the ownership and storage of firearms?
3. For what purposes are firearms owned?
4. How frequently are firearms kept loaded and unlocked?
5. How frequently are children exposed to firearms in their homes?
6. Are patients interested in receiving information about firearm safety from their physicians?

METHODS

Primary care physicians who were members of WRnN were asked to participate in the Wisconsin Research Network Firearm Safety Survey (WRNFSS) on a voluntary basis. Physicians were contacted by telephone, given information about the WRNFSS, and advised that there would be little disruption to the flow of daily clinical practices. Eleven primary care clinics from communities of varying populations were chosen.

A receptionist at each of the 11 primary care clinics distributed 100 patient surveys. Patients over age 18 were given information about the WRNFSS and asked to participate on a voluntary basis. Physicians and pa-

tients were assured that their names and the names of their primary care clinics would not be disclosed.

An introductory paragraph advised patients that they were participating in a survey on firearm ownership and storage. Demographic information on age, marital status, the presence of children in the home, educational level, and insurance coverage was collected. All surveys were returned to a box at the receptionist's station, which was then mailed to the research staff for collation and analysis.

RESULTS

A total of 100 survey questionnaires were distributed at each of 11 sites. Of the 11 clinics, 2 were located in cities with populations greater than 200,000 people, 4 were located in cities with populations between 10,000 and 40,000 people, and 5 were located in towns with less than 5000 people. The populations of the cities and towns in the study characterized a broad geographic distribution across Wisconsin and were not intended to be representative of the state's entire population.

Of 1100 distributed questionnaires, 964 were returned, resulting in an overall return rate of 88%. There were 509 female and 455 male respondents. The majority of respondents reported owning firearms (60%, n=574), 44% (n=253) of which were female and 56% (n=321) of which were male. Men (56%) were more likely than women (46%) to report gun ownership in their home. Firearm ownership was common in all categories, regardless of insurance status and the respondents' level of education, with no particular category drawing attention as a group of considerable deviance.

Representatives from all age groups reported being firearm owners. The most common age group was middle-aged adults. Among the respondents who owned firearms, 46% (n=61) were 18-25 year olds, 55% (n=152) were 26-40 year olds, 66% (n=273) were 41-65 year olds, and 62% (n=88) were 65 years and older. Additionally, married persons were the most common group to report firearm ownership. Among those who owned firearms, 71% (n=376) were married, 48% (n=87) never married, 50% (n=54) were divorced, and 43% (n=17) were widowed.

Firearms were reported in the homes of children in all age groups and were most frequently reported in the homes of older adolescents. Of firearm owners with children in the home, 54% of the children were 0-5 years old, 52% were 6-8 years old, 58% were 9-12 years old, and 70% were 13-17 years old.

The clinic in the city with the highest population reported a low of 26% firearm ownership, while 3 towns

with populations of less than 5,000 people reported high firearm ownership, averaging 81%. The 2 largest cities surveyed, with populations greater than 200,000, reported personal protection as the primary purpose for firearm ownership (47% and 52% respectively), which is consistent with national statistics. The NIJ reported that 46% of gun owners keep firearms for personal protection against crime.¹⁵ The clinic with the smallest population, 526 people, reported the largest percentage of households claiming personal protection as the reason they owned firearms (81%).

The data for respondents who kept firearms for personal protection was further evaluated. Their demographic information was compared to information about owners who kept firearms for other purposes. Males (70%) were more likely than females (30%) to list personal protection as the reason for firearm ownership. Additionally, 56% (n=64) of those who reported keeping firearms for personal protection were married; children in the household and insurance status were not factors. Those who kept firearms for personal protection were more likely to own handguns (30%), rifles (30%), and shotguns (29%). In comparison, only 10% of respondents kept automatic/semi-automatic firearms for personal protection. Lastly, 30% of owners who kept firearms for personal protection stored firearms in loaded conditions, compared to 3% of those who owned firearms for other reasons. When the storage methods of unlocked cabinet, drawer, and closet were combined, 32% of firearms were being stored in unlocked conditions. No particular clinic was exceptional in its response to this question.

The final survey question asked respondents if they would want their physician to provide information about firearm safety and storage. The overwhelming negative response is consistent with other similar investigations.¹⁶ Seventy-six percent of owners who reported keeping firearms for personal protection (n=82) and 77% of respondents who reported keeping firearms for other purposes (n=341) did not want firearm safety information from their doctors. Of particular note was that 27% (n=61) of respondents reported uncertainty in wanting this discussion.

CONCLUSIONS

The results of the WRNFSS showed that nationally reported data on ownership of firearms, firearm storage, and the purpose of firearm ownership were not generalizable to surveyed patients of primary care clinics in Wisconsin.

The survey demonstrated variation among clinics in the percentage of households reporting firearm ownership. Households in rural and mid-size communities reported the highest percentage of firearm ownership. Hunting, target shooting, and collection were the most common reasons given for firearm ownership, especially in rural areas.

Households in larger communities reported less frequency of firearm ownership; however, these households were more likely to own firearms for personal protection. An unexpected finding was noted in the smallest community surveyed, which reported personal protection as the purpose of firearm ownership among 81% of its respondents. Male respondents were more likely to report firearm ownership and that they owned a firearm for personal protection. Respondents education level did not predict whether firearms are kept for personal protection.

Handguns were more likely to be owned in households where guns were kept for personal protection, and in those households guns were less likely to be locked. The survey found that 1.5% of owners acknowledged keeping firearms in a loaded and unlocked condition.

Firearms are found in the homes of children, something that was most notable in the homes of older adolescents. This invites questions about the current status of child access protection laws in Wisconsin.

Lastly, the survey instrument had implications for screening questions that practicing family physicians might consider in their review of patient status, specifically in the areas of health and safety practices. The survey found the most efficient question to ask regarding firearms is not whether firearms are owned in the household, but rather, "Do you keep guns in your home for personal protection?" If the respondents answered yes, further definition of storage practices is warranted, especially if children are present in the home.

DISCUSSION

The National Center for Health Statistics (NCHS) reported a higher incidence of firearms kept in unlocked conditions (55%)¹² compared to the WReN survey (30%). NCHS reported a higher observation of unlocked and loaded weapons in homes of children (9%)¹¹ than could be documented in the WReN survey, which found 1.5% of firearm owners keep their firearms in this unsafe storage condition. The variation among this information could be partially explained by the WReN survey being distributed only in primary care clinics. Additionally, the WReN population sam-

pling may be more health and safety conscious when compared to national telephone survey data.

The variation found among households reporting firearm ownership in communities has been observed in other states. A similar questionnaire utilized by a physician network in eastern Pennsylvania found gun ownership varied by location from 16% to 59%. Furthermore, Shaughnessy et al (1999) conducted a study on family practice patients' attitudes toward firearm safety and found higher percentages of firearm ownership in rural communities than in urban communities.

The NCHS information is not state specific, but did report firearm ownership to be more common in the Midwest (40.2%) and South (41.7%) than anywhere else in the United States. The WRNFSS report is biased toward rural and midsize communities. The firearm ownership rate of 60% in the sample of primary care clinics should not be generalized to the entire state of Wisconsin.

The NCHS report showed that the percentage of children with firearms in their homes increased with the child's age. NCHS reported 28% of homes with children less than 1 year old having firearms. This increased to 38% of homes with children 13-17 years old. This trend was also seen in the WRNFSS, in which firearms were reported in 70% of homes with children 13-17 years old.

Physicians can be advocates for improved firearm storage safety by giving legislative support to improve childhood access protection laws (CAPS). CAPS make firearm owners criminally liable if someone is injured as a result of a child having unsupervised access to a gun. Such laws are in effect in 15 states, including Wisconsin, and the District of Columbia. Literature evaluating CAPS' effectiveness has been mixed. A paper looking at data from 1990 to 1994 showed a 23% reduction rate in unintentional shooting deaths in 12 states that had enacted such laws.¹⁷ However, when unintentional gunshot mortality was examined in the 12 states with CAPS laws, 9 with misdemeanor penalties showed no significant decrease.¹⁷ A subsequent evaluation of CAPS, looking at the interval of 1979-1997, showed that the most notable effect was in Florida, which had a 51% decline in unintentional deaths due to firearms. In the remaining 14 states, the laws showed no evidence of effect.¹⁸ Florida was the first state to institute CAP statutes and has the stiffest penalties of any states that have passed such laws. It is possible that the felony weight of Florida's CAP laws have led to a higher level of publicity than misdemeanor penalties

passed in other states. Wisconsin, which passed CAP laws in April 1992, carries only misdemeanor penalties for children younger than age 14.¹⁷

A recently published national survey on attitudes toward firearm regulation reported public support for regulations that would make firearm ownership safer, particularly handgun childproofing, which was favored by 88% of the respondents. Support for such regulations was also favored among firearm owners.¹⁹

The WReN survey demonstrated that few patients have any interest in receiving firearm storage and safety information from their physicians. This is consistent with previous studies.¹⁶ A negative reply to receiving firearm safety information was particularly strong in those individuals who kept firearms for personal protection.

The assumption that education has an influence on firearm safety behavior has been examined, with discouraging results. In a telephone survey of gun owners in Boston, Mass, investigators found that 21% of firearm owners kept their firearms loaded and unlocked in the home, even after a specific effort at firearm safety training.²⁰ The same authors reported that people who kept firearms for personal protection also stored firearms unsafely,²⁰ similar to the WReN study's findings.

The most acceptable reference to firearm ownership safety for patients remains unclear. Patients do not want such information from their physician. Credible resources from such organizations as the National Rifle Association and the Sporting Arms and Ammunition Manufacturer's Institute are available to gun enthusiasts. Materials from these organizations can be quoted or provided to interested and receptive individuals.^{15,21} The WRNFSS identified such an opportunity, with 14% of firearm owners saying they would want information regarding firearm safety (7% among firearm owners who kept firearms for personal protection). Those who purchase firearms from commercial vendors may not be offered significant safety information. A recently published investigation found that when asked what a consumer should know about purchasing a handgun, the salesperson mentioned safe storage only 15% of the time.²²

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