

UCONN CENTER FOR ADVANCING RESEARCH, METHODS, AND SCHOLARSHIP IN GUN INJURY PREVENTION



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Understanding Physician-initiated Firearm Storage Conversations

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PURPOSE

Evidence suggests safe firearm storage could help limit gun violence, but not all analysts agree on the best way to increase household participation. One strategy that has been studied sparingly in the existing academic literature is for general practice physicians to act as safe firearm storage counselors.

Gun violence persists as a major public health crisis, with the Center for Disease Control and Prevention reporting a total of 45,222 firearm-related deaths in 2020, a 13% increase from 2019 and the single largest increase since 1981. Safe firearm storage habits, supported by the National Rifle Association and National Shooting Sports Foundation, are meant to limit firearm accessibility to unauthorized users and include using trigger or cable locks, locking guns away, and storing ammunition separate from firearms.

Existing research shows that only half of firearm owners safely store their guns. Researchers Jennifer Dineen, Mitchell Doucette, Mekaila Carey, and Kerri Raissian wanted to know more about the barriers to uptake, specifically whether physicians could do an improved job of acting as safe firearm storage advocates.



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BACKGROUND

The public health burden of firearm injury and resulting trauma extends to families, communities, and the entire health care system. Multiple studies have shown firearm presence in the home is a strong determinant of intentional and unintentional violence. In the United States, about 40% of households have at least one firearm. Various studies have demonstrated a decreased risk for self-harm among adolescents when firearms are stored securely as a result of physician counseling. Child access prevention laws have been shown to have beneficial effects on unintentional injuries among small children and reduce intentional self-harm among older adolescents.

A potential avenue to increasing secure firearm storage rates is to encourage physicians to provide anticipatory guidance or patient education. Injury prevention education provided by pediatricians has been linked to decreased rates of home accidents, falls, and automobile passenger injuries. Patient education around chronic disease management has been shown to reduce negative outcomes, including number of hospitalizations. At the same time, emerging research shows that secure storage laws reduce firearm-related deaths.

Messages regarding secure storage may be particularly effective from physicians, as patients often trust them on complex or controversial topics. General practitioners are also uniquely positioned to intervene with patients spanning demographics and exhibiting different types and levels of risk for firearm mortality. They may also be able to intervene at critical times, including when the risk of suicide may be elevated.

Despite the potential for anticipatory guidance conversations to reduce firearm injury, they are rare. Some physicians are eager to provide counseling; others are unaware of or reluctant to engage in it. While many physicians agree providing patients gun safety counseling is important, surveys suggest only 25% follow through. So, what are the facilitators and barriers for the conversations in general practice?

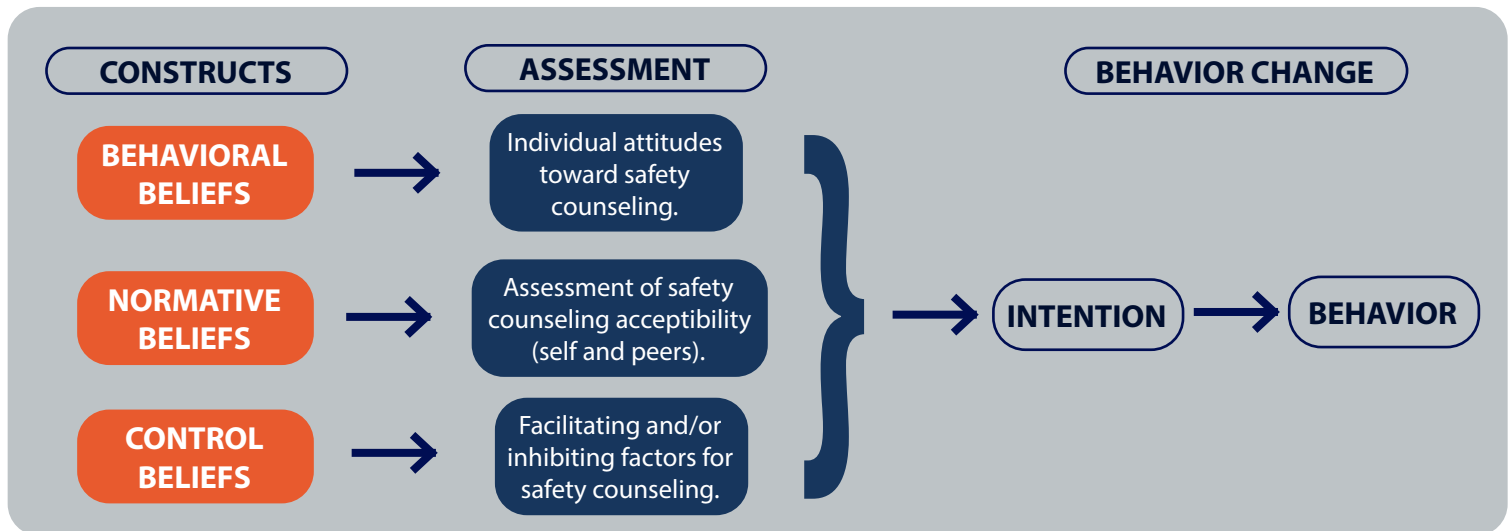
METHODS

Dineen, Doucette, Carey, and Raissian investigate the facilitators of and barriers to physician-initiated patient conversations on secure firearm storage using a qualitative interview process among 18 general practitioners randomly selected from a national panel of healthcare professionals. In addition to physician and patient characteristics, the researchers consider the policy context in which each physician practices.

The 45- to 60-minute interviews consist of questions guided by the theory of planned behavior (TPB), intended to understand each physician’s behavioral, normative, and control belief constructs related to firearm safety counseling. TPB states that beliefs about health behaviors largely shape behavioral intent, social influences are important constructs of behavioral intent, and objective realities may facilitate and/or inhibit behavior changes (see Fig. 1). In other words, if a behavior is perceived as important and norms support it, individuals are more likely to engage in it if they perceive that the change is within their control.

The researchers address the constructs by exploring physicians’ attitudes toward firearm safety counseling, their normative beliefs about such counseling, and perceived controls in counseling. The team balances the 18 participants equally on three stratum and conducts a thematic analysis, with all authors reviewing and coding the transcripts.

FIGURE 1: THEORY OF PLANNED BEHAVIOR IN RELATION TO PHYSICIAN-INITIATED FIREARM COUNSELING



RESULTS

The researchers’ analysis identifies improved screening tools, physician education, and the ability to bill insurance as secure storage conversation facilitators. The team finds five critical conversation barriers (see Fig. 2):

1. Inadequate screening mechanisms to trigger conversations.
2. Physician perception of firearm injury risk.

3. Time pressure.
4. Concern regarding patient receptivity.
5. Lack of training.

Only 2 physicians mentioned gun safety or secure firearm storage when discussing the anticipatory guidance they provide patients. Approximately one third of participants said the available electronic medical records (EMRs) screened for firearms in the home. Participants were clear that a lack of screening leads to a lack of conversation on any topic. When time is limited and physicians must consider many anticipatory guidance topics, they depended on EMRs to determine topics. The physicians said they use a narrow set of criteria, primarily mental health and family violence concerns, to raise firearm safety to priority status. Some participants added parental status. Interviewed participants minimally screened for gun injury risk in the records.

Although researchers have considered interventions to increase physician-initiated firearm safety conversations, existing work is limited by insufficient exploration of potential structural barriers to conversation prior to developing interventions to increase them. In addition to identifying the facilitators and barriers to firearm safety conversations, this study's researchers consider potential intervention mechanisms to inform further study.

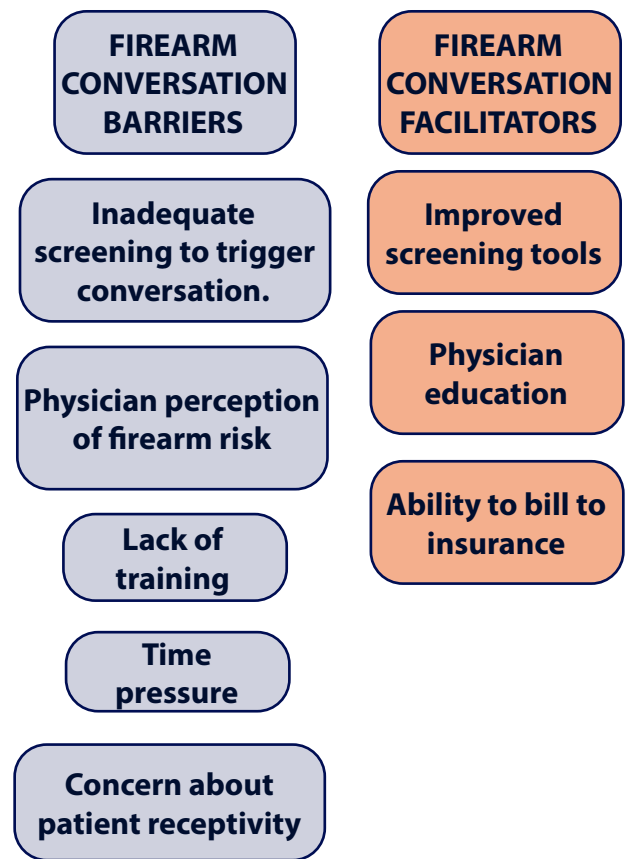
DISCUSSION

Only 15 states, including Washington, DC, currently have legislation requiring secure firearm storage. Even in states that mandate secure storage, caveats like the presence of children may limit the households affected. Increased uptake of secure firearm storage will therefore require some level of voluntary behavioral change.

The results of this study highlight the structural challenges to physician-initiated firearm safety conversations. The challenges must be addressed prior to implementing interventions to increase incidence of the conversations. The findings call for a broadened approach to screening for gun injury risk based on both EMR systems and physician perception. In addition to a revised medical records system, physicians need more training in both medical school and as part of continuing education to better understand who is at risk for gun injury and how to approach firearm safety conversations, regardless of patient receptivity.

Future work could include a nationally representative study to investigate the extent to which this study's findings reflect the facilitators and barriers faced by the full general practice physician population and could extend to other specialties, including preventative medicine like pediatrics and obstetrics/gynecology.

FIGURE 2: THE BARRIERS AND INHIBITORS



This brief is a summary of a published paper available at <https://www.sciencedirect.com/science/article/pii/S0738399123004433?via%3Dihub>. To cite this brief: Dineen, J., Doucette, M., Carey, M., and Raissian, K.M., (2024, February). "Understanding Physician-initiated Firearm Storage Conversations." Storrs, CT: UConn Center for Advancing Research, Methods, and Scholarship (ARMS).

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