

Development of a Patient Decision Aid to Prevent Firearm Suicide Among US Women Reserve and National Guard Veterans



Anne G. Sadler, PhD^{1,2,3,14} , Michelle A. Mengeling, PhD^{1,2,4}, Brian L. Cook, DO^{3,5}, James C. Torner, PhD^{6,7}, Mark Vander Weg, PhD^{1,2,8}, Alison B. Hamilton, PhD, MPH^{9,10}, Jonathan Platt, PhD⁶, Amanda Heeren, MSW^{1,3,11}, Lindsey Fuhrmeister, BA^{1,3}, and Jeffrey L. Smith, BS^{12,13}

¹VHA Office of Rural Health Veterans Rural Health Resource Center (VRHRC), VA Iowa City Health Care System, Iowa City, IA, USA; ²Center for Access & Delivery Research and Evaluation (CADRE), VA Iowa City Health Care System, Iowa City, IA, USA; ³Department of Psychiatry, University of Iowa Carver College of Medicine, Iowa City, IA, USA; ⁴Department of Internal Medicine, University of Iowa Carver College of Medicine, Iowa City, IA, USA; ⁵VA Iowa City Health Care System, Iowa City, IA, USA; ⁶Department of Epidemiology, University of Iowa College of Public Health, Iowa City, IA, USA; ⁷Departments of Neurology, Surgery, and Neurosurgery, University of Iowa Carver College of Medicine, Iowa City, IA, USA; ⁸Department of Community and Behavioral Health, University of Iowa College of Public Health, Iowa City, IA, USA; ⁹VA Center for the Study of Innovation, Implementation & Policy (CSHIP), VA Greater Los Angeles Healthcare System, Los Angeles, CA, USA; ¹⁰Department of Psychiatry and Biobehavioral Sciences, David Geffen School of Medicine, University of California Los Angeles, Los Angeles, CA, USA; ¹¹School of Social Work, University of Iowa, Iowa City, IA, USA; ¹²VA Behavioral Health Quality Enhancement Research Initiative (QUERI), Central Arkansas Veterans Healthcare System, Little Rock, AR, USA; ¹³VA Center for Mental Healthcare & Outcomes Research (CeMHOR), Central Arkansas Veterans Healthcare System, Little Rock, AR, USA; ¹⁴University of Iowa Hospitals and Clinics, Iowa City, IA, USA

ABSTRACT

BACKGROUND: Firearms are the leading method of suicide death among women Veterans, accounting for nearly half of such deaths. Interventions addressing firearm suicide prevention for women Veterans are under-studied.

OBJECTIVE: To develop a patient decision aid (PtDA) tailored for Reserve and National Guard (RNG) women Veterans to promote safe firearm storage and suicide prevention through informed decision-making.

DESIGN: Multi-phase mixed-methods study including qualitative interviews, semi-structured surveys.

PARTICIPANTS: 86 stakeholders: 60 women Veterans, 26 providers.

APPROACH: Phase 1 qualitative interviews obtained RNG women Veterans' (n = 35) and providers' (n = 26) preferences and recommendations for conversations about firearm suicide risk mitigation. Phase 2 surveyed members of a women Veterans engagement group about the PtDA prototype's acceptability and utility. Phase 3 interviewed RNG women Veteran gun owners (n = 20) about their satisfaction with using the PtDA alone or with shared decision-making (SDM).

KEY RESULTS: Phase 1 findings informed the PtDA prototype development, refined in Phase 2. In Phase 3, Veterans reported high satisfaction with the PtDA's

information, tone, and preventative approach. Most agreed Veterans could complete the PtDA safety plan without provider assistance. Nearly half (9/20; 45%) reviewing the PtDA using SDM reported having loaded guns accessible at all times. Most (14/20; 70%) indicated SDM made them more likely to identify and act on a safety plan than if they received the PtDA alone. Nearly all (19/20; 95%) agreed VA providers should routinely use SDM when discussing firearms and suicide risk. All would recommend SDM to other Veterans. Most (19/20; 95%) indicated they would follow their plan to talk with someone about holding their firearms. All indicated they would hand off their firearm if their suicide risk escalated.

CONCLUSIONS: Veterans' high satisfaction with this PtDA indicates its potential to encourage firearm safety planning, engage support, and foster firearm safety conversations to prevent suicide among women Veterans.

KEY WORDS: women veterans; firearm safety; suicide prevention; shared decision-making; patient decision aid

J Gen Intern Med 41(8):2182–94

DOI: 10.1007/s11606-025-09942-4

© The Author(s) 2025

Prior Presentations: Components of this work have been presented at: VA's Center for Women Veterans Suicide Conference, Virtual, July 2024.

The Military Women's Health Research Program Symposium: The Society of Federal Health Professionals, May 2024

Received June 11, 2025

Accepted October 14, 2025

Published online November 13, 2025

INTRODUCTION

Firearm suicide has increased in the USA over the past two decades, now accounting for six in ten gun-related deaths in 2023.^{1,2} Among women Veterans, this crisis is especially pronounced; their firearm suicide rate is nearly 1.5 times higher (144.4%) than that of non-Veteran women—a disparity more than twice that seen between male Veterans

and their non-Veteran counterparts (69.9%).³ Firearms are the leading cause of suicide death, involved in nearly half (44.4%) of all suicides among women Veterans.³ Despite these stark figures, interventions specifically tailored to address firearm suicide among women Veterans remain under-studied.

Notably, many military members and Veterans who attempt suicide have no prior mental health diagnosis,^{4–6} e.g., due to the stigma of seeking mental health care, low perceived need for treatment, and other barriers.⁷ This highlights the critical role of non-mental health care providers in preventing suicide, with opportunities to intervene across the continuum of suicidality, from ideation to attempts. A systematic review reported that, on average, 45% of individuals who died by suicide had contact with primary care within 1 month prior to their death.⁸ Similar findings have been observed among Veterans receiving care through Veterans Health Administration (VHA) primary care.⁹ A national study of suicide decedents found that women who died by firearms were less likely to seek mental health treatment.¹⁰

Whether they receive care through VHA or elsewhere, women Veterans are more likely than non-Veteran women to experience suicidal ideation and repeated suicide attempts.^{11,12} They are also more likely than male Veterans to contact the Veterans Crisis Line, screen positive for suicide risk, receive a higher suicide risk rating, and be referred to a VA suicide prevention coordinator,¹³ but less likely than men to accept this referral.¹⁴

Access to firearms is associated with increased suicide risk.¹⁵ Firearm lethal means safety planning, which focuses on increasing time and space between a person in crisis and access to their firearm, is an evidence-based suicide prevention strategy.¹⁶ This approach is particularly urgent given that nearly half of suicide attempts happen within 20 min of initial suicidal thoughts^{17–19} and most firearm-related attempts are fatal.²⁰ Yet, community and VHA providers do not routinely screen for firearm access or engage in safety planning discussions due to their limited training, uncertainty about its effectiveness and legality, time constraints, lack of decision supports, and belief that such conversations are unnecessary.^{21–27} Even lower rates of provider documentation of firearm access screening have been found among women compared to men Veteran patients in their first year of VHA care, although the study did not report reasons for this disparity.²⁴

Low screening rates are a particularly relevant concern for Reserve and National Guard (RNG) Veterans, whose suicide risk is elevated in the first 2 years after leaving the military and who face multiple stressors associated with increased risk, e.g., military traumas, rapid transitions into civilian life, and identity and social support readjustment.²⁸ RNG Veterans comprise approximately 38% of the US armed forces. They transition between active military service—including deployments that may confer Veteran status—and civilian

life, where health care systems may not consistently recognize them as Veterans.^{28,29} These transitions can create gaps in care, which are particularly concerning for women Veterans, as they are more likely than non-Veteran women to own firearms. Like male Veterans and the general US population, women cite self-protection as the primary reason for gun ownership.^{1,30,31} Women Veterans frequently keep firearms accessible, loaded, and unlocked,^{30–32} a practice associated with significantly increased suicide risk. Firearm owners who store their guns locked and/or unloaded are at least 60% less likely to die by firearm suicide than those who do not.²⁰

Women Veterans also experience overlapping and interacting morbidities and stressors, including chronic illness, pain, trauma exposure, mental health disorders, and interpersonal violence.³³ US suicide death analyses show precipitating events often co-occur across health, relational, and social domains,³⁴ underscoring women Veterans' elevated suicide risk when firearms are accessible and the need for prevention strategies that address trauma exposure and motivations for protection. Existing firearm-related suicide interventions remain sex-neutral, without consideration of the distinct perspectives and needs of women Veterans.³⁵

Patient decision aids (PtDAs)³⁶ may offer a promising strategy to support safer firearm storage and suicide prevention. PtDAs are evidence-based tools that support people by “making their decisions explicit, providing information about options and associated benefits/harms, and helping clarify congruence between decisions and personal values.”³⁷ When applied to firearm means safety, PtDAs can help Veterans make safety choices aligned with their individual values and circumstances, potentially reducing their suicide risk while respecting their rights and autonomy. Additionally, PtDAs may mitigate concerns among women Veterans and providers that firearm-related discussions could cause unintended harm or disrupt therapeutic relationships, by treating them as a routine, preventative health matter.^{22,25–27,38}

PtDAs play a pivotal role in supporting shared decision-making (SDM), a collaborative process whereby patients and providers work together to consider options and make health-related decisions.³⁹ Recent guidance emphasizes the importance of providers developing cultural competence around firearms and presenting risks and protective factors related to gun safety neutrally and nonjudgmentally to support SDM.³⁸ This approach is directly advanced by PtDAs designed to empower Veterans through patient-centered care.

The objectives of this research were to (1) develop a PtDA, using international standards and stakeholder input, to support women RNG Veterans in understanding their risk for firearm suicide and to consider firearm lethal means safety options; and (2) iteratively alpha test the PtDA with women Veterans to assess its acceptability, usability, and perceived value when used independently or when paired with a SDM process. We also sought to evaluate if the PtDA activated Veterans to complete a firearm safety plan and discuss it with

their providers or other trusted individuals. This work was grounded in the patient-centered care model, which emphasizes personal agency—the ability of individuals to make informed choices.⁴¹ This work was also guided by the Health Belief Model, which posits that preventive action occurs when individuals recognize their risk and its seriousness, perceive the benefits of taking action as outweighing barriers, and feel confident in acting and receive cues to act.⁴²

METHODS

This program of research used mixed qualitative and quantitative methods consisting of three phases (7/7/21–4/18/23), involving 86 stakeholder interviews (60 women Veterans, 26 providers). It was funded by the VHA Office of Rural Health and approved by University of Iowa IRB (IRB #201911171). Participants received study information including informed consent elements; consent was implied by participation, per IRB approval.

Phase 1: Patient Decision Aid Development

A national ten-member multi-disciplinary Steering Committee developed and iteratively refined a prototype PtDA focused on firearm lethal means safety planning for women Veterans. Committee members had extensive expertise in military women's occupational health, trauma-informed care, military culture, service-type, and women-centric approaches to engage and educate Veterans (Fig. 1).

*PtDA development followed International PtDA standards. † Steering Committee members included: 2 VA mental health (MH) provider-researchers; 1 injury epidemiologist; 1 social epidemiologist; 2 implementation scientists, one with qualitative expertise; 1 psychometrician; and 1 social worker. Ad hoc members included 1 VA suicide prevention coordinator and 1 National Guard MH provider (both Veterans). Steering committee member firearm ownership ranged from zero to multiple firearms. Guiding the PtDA evolution, the Ottawa Decision Support Framework (ODSF)⁴³ emphasizes preparing and supporting patients and providers to use SDM with “difficult” decisions involving multiple options that patients might value differently.⁴⁴ Consistent with the ODSF, we adhered to International Patient Decision Aid Standards (IPDAS) for PtDA development to support a quality decision. We also followed the Standards for UNiversal reporting of patient Decision Aid Evaluation studies⁴⁵ criteria, to ensure transparency in describing our PtDA development process (Appendices 1–2). IPDAS steps include defining the purpose, audience, and scope⁴⁶ of our “Firearm Lethal Means Safety Decision Aid: Options to Prevent Suicide in Reserve and National Guard Women Veterans.”

Purpose To help women Veterans understand their risks of suicide by firearms, make informed choices about their options to prevent it, and assist them in completing a

personalized safety plan based on their unique circumstances and preferences, the PtDA focuses actions upstream, prior to precipitating events that might elevate firearm suicide risk. The PtDA is intended to (a) support Veterans' independent completion of a safety plan without requiring assistance from a provider, and (b) support SDM in discussions with their provider.

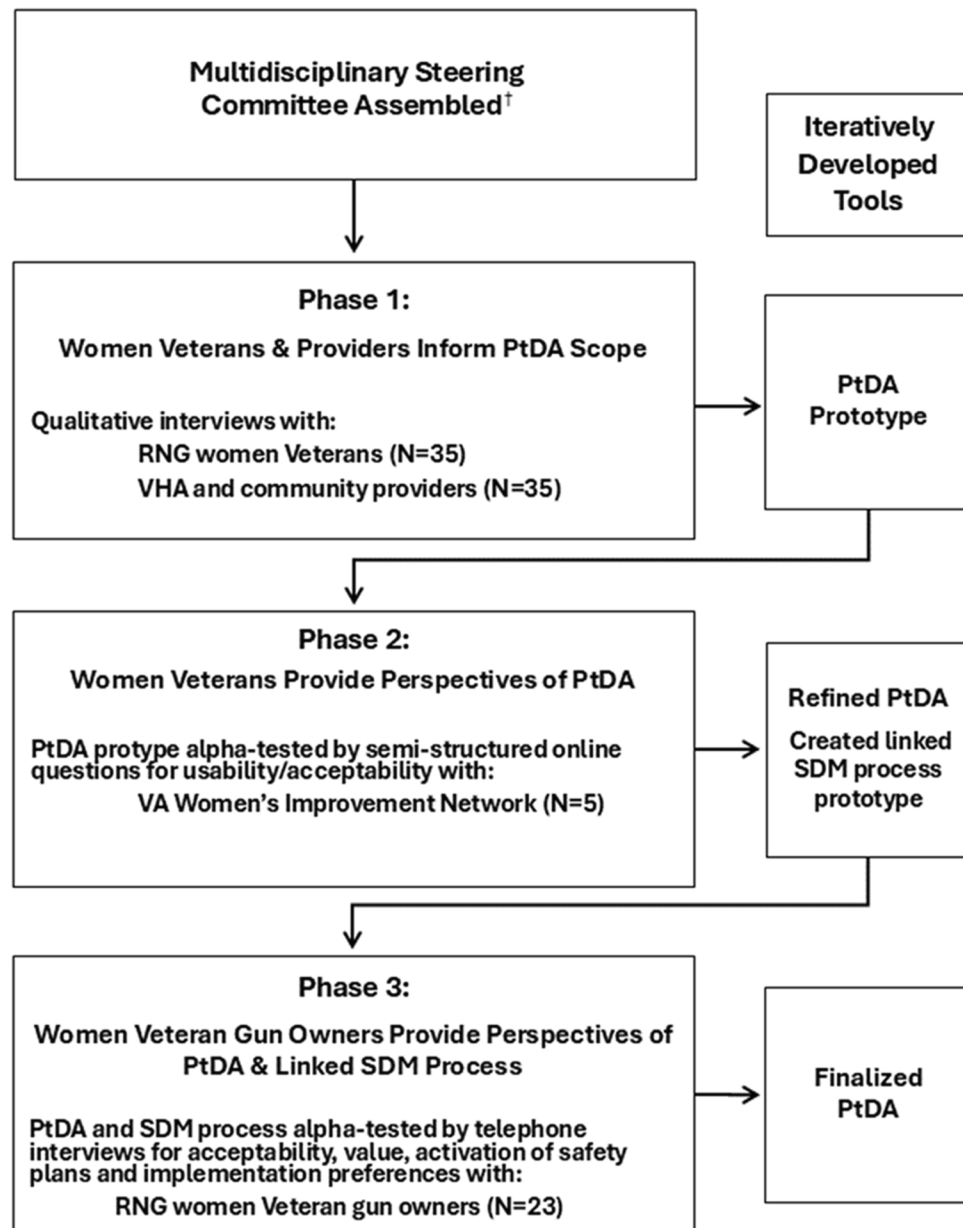
Audience RNG women Veterans with access to a firearm.

Scope The scope of the firearm screening and suicide risk mitigation decisional needs and preferences for safety options was informed by current evidence, Steering Committee expertise, and key stakeholders.

Veteran Stakeholder Feedback Methods The VA-DoD Identity Repository identified a community sample of women Veterans residing in Iowa, Arkansas, and California (chosen for racial/ethnic diversity, rurality, and prevalence of post-9/11 RNG Veterans). We over-sampled women Veterans living in rural areas (83%) as they represent a known high-risk population for firearm suicide.⁴⁷ Eligibility criteria included current or prior RNG service; female sex; answering yes to “Do you personally own any guns currently (not including air guns, such as paintball, BB or pellet guns)?”; willingness to be contacted to participate in research; and a valid email. Telephone interviews were completed 5/7/21–6/23/21. Analysis focused on responses to the question: “How would you prefer that a provider screen for or talk with you about guns and suicide?” Veterans received \$40 for participation.

Provider Stakeholder Feedback Methods Providers caring for RNG women Veterans were identified by Veteran participants and the VA Women's Health Practice-Based Research Network, which supports multi-site VA women's health research.⁴⁸ We recruited 91 community providers by postal mail/phone and 163 VA providers by email and Microsoft Teams messages. Interviews were completed between 12/30/2021 and 7/18/2022. Analysis focused on providers' responses to, “What approaches have you found work best in engaging your women Reserve or Guard patients in conversations about gun suicide risks and risk mitigation?”

Interviews were completed with women Veterans and providers by experienced qualitative interviewers who participated with the interview guide development. Recorded interviews were transcribed. A rapid qualitative analytic approach⁴⁹ (commonly used in health services research) was used in which two team members independently reviewed and summarized the transcripts, documenting their observations in memos. The analysts then compared and consolidated their summaries and observations, identified themes, and subsequently discussed them with the team to synthesize findings.



*PtDA development followed International PtDA standards. † Steering Committee members included: 2 VA mental health (MH) provider-researchers; 1 injury epidemiologist; 1 social epidemiologist; 2 implementation scientists, one with qualitative expertise; 1 psychometrician; and 1 social worker. Ad hoc members included 1 VA suicide prevention coordinator and 1 National Guard MH provider (both Veterans). Steering committee member firearm ownership ranged from zero to multiple firearms.

Figure 1 Patient Decision Aid (PtDA) Development Process*.

Phase 1 Findings. Of 81 eligible Veterans, 50 were contacted by email and telephone to reach the 35 completed interviews goal; four (5%) refused and 11 (14%) did not respond. The median age of Veterans interviewed ($n=35$) was 42 years (range 28–59); most had college and/or graduate/professional degrees (74%); and over a quarter were non-white (29%).

Twelve (13.2%) community and 35 (21.5%) VA providers declined; 75 (82.4%) community and 106 (65%) VA providers did not respond. Twenty-six provider interviews

were completed ($n=4$ community; $n=22$ VA providers). Providers included four primary care, eight mental health, and 14 specialty care.

Key themes informing the PtDA scope were found to be congruent between Veterans and providers (Table 1), and included the following:

- (1) Gun ownership does not indicate a Veteran is suicidal;
- (2) misperceptions about firearms and suicide risk persist;

Table 1 Phase 1 Qualitative Findings: Exemplar Quotes from Reserve and National Guard (RNG) women Veterans (N = 35) and Providers (N = 35)* Informing Patient Decision Aid Development

Key themes	Veteran quotes	Provider quotes
Gun ownership is not an indicator that a Veteran is suicidal	"I think that taking an approach that would realize that not just because somebody owns a gun that means they're suicidal."	"People have a lot of guns, they know people with guns, family members with guns. Access to arms is higher in rural areas."
Misperceptions about firearms and suicide risk persist	"When somebody commits suicide it's usually not like an impulsive thing, it's something that they've been considering."	"Usually women don't use them (guns) as often as men."
Providing Veterans with a straightforward rationale about why providers address firearm safety planning is critical	"Just explaining to them (Veterans), that this is part of our screening process, we just want to make sure that you're safe." "The best thing to do is ask them (Veterans) directly, are you thinking of hurting yourself, do you have access to something so you can hurt yourself and what is the plan to remove this object if possible."	"Have a frank discussion with them (Veterans) about how common suicide risk is. Talk about how firearms (suicide) can be an impulsive act and recommend that they don't have access to weapons until they feel better."
Owning guns for self-protection is a vital issue to address in firearm safety planning	"...you know, with the news lately,... you just never know where you might be when you need to defend yourself so... when I'm out in public, I usually carry. And again, it's self-defense."	"For a lot of the female patients, there is a history of trauma, so they see the gun more as a protection than a risk." "Many feel they need them (guns) to protect their safety."
Engaging trusted individuals in lethal means safety planning is key	"I mean, giving it to a friend (firearm), have them hold on to the combination" (gun lock) "...the people within their circle of friends have to be really aware, and if they see a situation that doesn't look right, maybe they can approach the Veteran and say 'hey, I'm not feeling like you're being safe right now, would it be okay if I kept/took your gun?'"	"If they are having (suicide) thoughts, have a normative open dialog, it's not that guns are bad or that I am anti-gun- I just want to educate Veterans on the fact that with guns it's important to put a barrier between them and the gun." "Providers often bring in a family member to form a plan to safely remove firearms if there was a need to."

*Veterans: community sample; providers who serve RNG service members or Veterans: community (N = 5), VHA (N = 25)

(3) providing a straightforward rationale for addressing firearm safety planning is critical; (4) owning guns for self-protection is vital to address in firearm safety planning; and (5) Veteran engagement of trusted individuals is key to lethal means safety planning.

PtDA Design. The Steering Committee members integrated their expertise, current research, and Phase 1 findings to inform the key elements of the PtDA prototype (Table 2). It was written in English, at an eighth grade reading level (Flesch-Kincaid Grade),^{50,51} using words, numbers, and visual diagrams to present scientific information. We developed a paper format to better integrate with clinic workflow and to sidestep barriers associated with digital tools (e.g., access, usability, literacy, and privacy risks). Paper decision aids are often viewed by clinicians as easier to embed in practice compared to digital tools.⁵²

Phase 2: PtDA Prototype Acceptability and Utility to Women Veterans. We surveyed the VA Women's Improvement Network (WIN)⁵³ with a brief (six items) survey to assess how acceptable and useful they found the PtDA prototype content and approach (alpha testing). The WIN is a virtual national group of women Veterans who provide feedback

to researchers and policymakers on initiatives specific to women Veterans (Appendix 3).

Phase 2 Findings. Five WIN members provided survey responses by email January 2023. All responded "yes" to each of these questions: (1) "Is this decision aid content potentially useful?"; (2) "Do you think this information could help women Veterans address firearm safety and suicide?"; and (3) "Would you recommend this (decision aid) to a relevant peer?"

Additionally, WIN participants responded to open-ended questions about the acceptability, potential for the PtDA to engage women Veterans in safety planning, and recommendations for implementation (Table 3). All but one indicated they would complete the proactive firearms safety planning supported by the PtDA. That Veteran indicated she would do so with family or provider encouragement. All participants recommended the PtDA be widely available within VA for provider interfaces, waiting rooms, outreach, and appointment mailings; and within Department of Defense (DoD) settings. Suggested improvements included citing additional statistics specific to women Veterans and editorial changes. Notable themes included (a) the importance of the statistics ("Knowledge is power! If you know better you can do better"); (b) the tone ("direct yet caring"); and (c) agreement with its upstream approach ("It's good to have a plan before you are in crisis").

Table 2 Summary of Patient Decision Aid (PtDA) Elements and Goals: *Firearm Lethal Means Safety Plan Options: Reserve and National Guard Women Veterans*

Elements	Goals
Background/education	To inform and activate women Reserve and National Guard Veterans in firearm safety planning “This decision aid can assist you in creating your own unique firearm safety plan that can be discussed with your provider or trusted friends and family.” “Military members are accustomed to anticipating the unexpected and making contingency plans.” “To help you make choices about your best options to prevent suicide with firearms.”
Purpose of the PtDA	To identify as a decision aid to support informed values-based firearm safety decisions to prevent suicide To promote personal agency in firearm safety decisions To engage Veterans by aligning firearm safety planning with military values of readiness and personal responsibility for safety To promote Veterans' collaboration with providers and trusted individuals in support of firearm safety
“Why is this important to me as a Reserve or National Guard Woman Veteran?”	To support risk recognition and instill hope that suicide is preventable, while supporting autonomy to take proactive steps to reduce suicide risk
US firearm suicide death statistics	To help women Veterans, who view firearms as a means of safety, contextualize firearm suicide as a health risk for all Americans
Statistics about elevated firearm suicide deaths among women and Reserve/Guard Veterans	To raise awareness in these high-risk Veteran sub-populations and of the unique risks of firearm suicide to activate firearm safety planning among them
Statistics about firearms as the most lethal means of suicide; brief time from thought to suicide action	To emphasize the urgency of upstream, proactive safety planning before a crisis occurs and provide a context for why providers ask about firearm access
Statistics relevant to children in the home and firearms	To raise awareness that firearms are the leading cause of death for children in the US as a context for considering firearm safety
Statistics about frequency of suicidal thoughts among women Veterans	To normalize and validate thoughts of suicide but encourage proactive safety planning
Presentation of suicide myths and evidence that addresses them	To address misconceptions that may prevent engagement in firearm safety planning To increase understanding of how secure gun storage significantly reduces firearm suicide risk
Integral PtDA Safety Action Plan: Key suicide and firearm questions with a decisional checklist and fill in options	To make options transparent and encourage autonomy and empowerment in navigating safety choices To develop and document a personalized firearm safety plan that can be shared with providers and trusted individuals To increase understanding of how secure gun storage significantly reduces firearm suicide risk To support Veterans' personal values and situations that inform women's decisions
PtDA Question #1 topic: Identification of suicide risk factors and symptoms	To raise self-awareness and confidence in recognizing personal risk To become aware of times of increased risk to activate safety plan steps To identify trusted individuals to talk with To identify crisis and routine resources in the VHA, DoD, and community
PtDA Question #2 topic: Identification of what firearms lethal means safety planning is With whom can you share your plan? Consideration of options for: • Routine firearm safety • Temporary firearm removal • When temporary firearm removal is not possible	To reinforce that firearm suicide risk can change over time and that proactive upstream planning allows for personalized safety choices that are aligned with their circumstances and preferences To engage trusted individuals to step up to help with their plan
PtDA #3 Topic: Personal safety when there isn't a firearm in the home Non-lethal options to consider for ensuring and sustaining safety References with electronic links	To acknowledge personal protection and safety concerns and realities and identify alternatives To support trauma-informed care To support credibility of information and promote accessibility of resources
Resources for emergencies and routine care resources	To increase awareness of resources across different domains of need To support credibility of information provided in the PtDA and encourage further exploration
Every page: Veteran Crisis line logo and contact information	Ensuring visibility and awareness that immediate access to crisis support is available 24/7

Table 3 Women's Improvement Network (WIN) Patient Decision Aid (PtDA) Feedback

Topic	Veteran quotes
PtDA acceptability and ability to engage Veterans?	"It is well organized. I followed the flow. It is direct yet sounds caring. I appreciate the up-front statistics. It drew me in." "It is very informative. The way it is presented is good. The tone was excellent. If I was suicidal, I would be willing to go for help." "I liked the safety plan decisions, options, and questions chart. It was simple to follow if someone was in crisis. The resources give many options on where to go and who to call. When a crisis occurs, you should not have to think about what to do. This document lays out what to do." "Knowledge is power! If you know better, you can do better." "Surprised at the statistics for women Veterans, sadness, hope with safety plan: 1) factual, anticipatory (plan); 2) I liked the format of statistics side by side with plan and clear concise suggestions for formulating the plan and the multiple options to consider an individual plan; 3) resources to back up statistics; 4) emotionally hard to read (personal experience with family/friends and suicide), but gave me hope that this is a clear way to decrease this response (suicide)." "As a retired Safety Officer, I've worked my entire life career in "Risk Management", so at a glance, this was already complete."
Would you complete the PtDA action plan?	"If I was in crisis and working through issues I would use it. If my therapist or loved one asked me to complete it, I would use it It's good to have a plan before you are in crisis." "I definitely would. It's well organized, informative, and helpful." "I would fill it out. If I had a family member that would do it with me. I'd probably be more thoughtful with my answers and their help." "Not sure, I probably would think about the suggestions, and depending on how severe my symptoms were, I might complete some of it. Motivation would be (from) any family/friends/health providers I share it with. If one of the above were aware of my feelings AND encouraged me 'in the moment' to complete it, I would be motivated." "Having had personal experience with family and friends and suicide attempts/completion, this 'spoke' to me. I did complete it and think it's a great way to do proactive counseling for all Veterans especially women, given the rather shocking statistics. The knowledge of these statistics would certainly have given me as a health care provider 'tools' to use."

The Steering Committee responded to WIN recommendations for PtDA improvement by including additional statistics, improving visual presentation, and editorial revisions. Given positive WIN feedback, the committee developed a SDM process interview to accompany the PtDA. This process was guided by the Agency for Healthcare Research and Quality SHARE Model⁵⁴ which uses the PtDA to help Veterans (a) consider firearm safety planning options to decrease

their suicide risk; (b) reach decisions on a safety plan; and (c) evaluate satisfaction with their personalized plan.

Phase 3: PtDA Acceptability and Satisfaction When Used with a SDM Process Implemented by Study Staff. The next step was to alpha test the refined PtDA using the SDM process interview. The goal was to gather feedback to further refine the tool and inform its feasibility and utility in clinical settings to support SDM. We aimed to understand a community sample of RNG women Veteran gun owners' perceptions of the PtDA and SDM process and its impact on their firearm safety planning, and suggestions for improvements. International standards emphasize that iterative, patient-centered piloting of PtDAs is critical groundwork for eventual provider uptake and effective SDM. Bypassing this step risks limiting impact by failing to ensure Veterans' engagement and relevance, which in turn undermines provider adoption.

We re-engaged the sub-sample of Phase 1 community RNG women Veterans who acknowledged gun ownership, updated with current emails. Recruitment was completed by email and telephone ($n = 107$). Participants completing the interview were reimbursed \$40 with an additional \$10 incentive if they scheduled or completed the interview prior to our recruitment call.

Prior to interview, Veterans were e- and postal mailed the PtDA and asked to review it and have it present for their call. Veterans were informed in the invitation and on the call that this was not a clinical session but a feedback opportunity to evaluate the PtDA's utility with a SDM process to inform its potential as a model for firearm safety planning. During the call, the PtDA was reviewed with the interviewer, giving the Veteran time to complete their personalized safety plan. Veterans were then asked semi-structured questions about their perceptions of the PtDA and SDM process. Interviewers did not review Veterans' personalized firearm safety plans with them, as a clinician would.

Of the 107 eligible women Veterans, 30 were recruited, seven declined, 23 consented to participate, and we interviewed the first 20 consenters (the number funded to complete). Telephone interviews were completed by female interviewers 3/27/23 through 4/18/2023. Data were analyzed using descriptive statistics.

Phase 3 Findings. The majority of participants (60%) were aged 30–44 years (range 30–59) (Appendix 4); 40% were non-white; and most (70%) had only men for sexual partners over their lifetime. All had completed college or higher education, with 85% currently working. Most (70%) had a current joint family annual income under \$100,000, and 40% had children under age 18 living in their household. Most were enlisted or non-commissioned officers (85%), had prior active component military service (90%), and had been deployed to Iraq or Afghanistan post 9/11 (80%).

The gun types that participants owned (not mutually exclusive) included handguns (75%), rifles (45%), and

shotguns (40%), with 40% owning three or more guns. When considering gun storage, almost half had their guns loaded and accessible at all times (45%), and over half had guns locked only some of the time or never (60%).

Satisfaction with Decision Aid and SDM Process Participants ($n = 20$) reported favorable perceptions of the PtDA and SDM process and implementation preferences (Table 4). Most agreed or strongly agreed that the PtDA helped them to (1) learn new information about the relationship between firearm safety and suicide risk (70%); and (2) better understand suicide risk and options to decrease this risk (65%). Most (80%) believed the information was presented in a way consistent with their choice to have firearms in their home; and most (90%) would recommend the PtDA to other Veterans with firearms in their homes.

Most agreed or strongly agreed that Veterans could complete the PtDA and develop a personal firearm safety plan without assistance from a VA provider or suicide prevention coordinator (75%). Veterans agreed or strongly agreed that the PtDA should be made available on a VA website (100%); given by and discussed with a suicide prevention coordinator or nurse care manager (100%); initiated in an appointment with a mental health provider (95%); left in waiting rooms (90%); sent with a VA appointment (70%); or provided by/discussed with their primary care provider (65%).

SDM Perceived Value Most Veterans reported favorable perceptions about the SDM process (Table 4). They agreed or strongly agreed that VA providers should routinely use SDM in discussions about firearm lethal means safety and suicide risk when providing care to Veterans (95%); they would recommend

Table 4 Phase 3 Reserve and National Guard Women Veterans' Satisfaction with Patient Decision Aid (PtDA) Reviewed Independently and with a Shared Decision-Making Process ($N = 20$)

Question	Strongly agree or agree % (n)	Neither agree nor disagree % (n)	Strongly disagree or disagree % (n)
Perceived value of PtDA			
As a result of the (Firearm Lethal Means Safety) decision aid, I learned new information about the relationship between suicide risk and firearm safety	70 (14)	25 (5)	5 (1)
The decision aid information and action steps helped me to better understand suicide risk and think about options for managing my firearms to decrease my risk of suicide	65 (13)	35 (7)	0 (0)
I believe that the decision aid presented information in a way that is consistent with my choice to have firearms in my home	80 (16)	15 (3)	5 (1)
I would recommend the decision aid to other Veterans who have firearms in their home	90 (18)	5 (1)	5 (1)
Preference for PtDA implementation			
I believe that Veterans could complete the decision aid action steps (to develop a personal firearm safety plan) on their own without assistance from a VA healthcare provider or suicide prevention coordinator	75 (15)	20 (4)	5 (1)
I believe that the firearm lethal means decision aid tool should be*:			
Made available on the VA website	100 (20)	0 (0)	0 (0)
Given to me by a VA suicide prevention coordinator or nurse care manager and discussed in a call or meeting	100 (20)	0 (0)	0 (0)
Given to me by my mental health care provider and discussed in an appointment	95 (19)	0 (0)	5 (1)
Left in a VA waiting room for Veterans to see	90 (18)	0 (0)	10 (2)
Sent with VA appointment information	70 (14)	10 (2)	20 (4)
Given to me by my primary care provider and discussed in an appointment	65 (13)	20 (4)	15 (3)
Perceived value of shared decision-making with PtDA			
I believe that VA providers should routinely use shared decision-making about firearm lethal means safety and suicide risk when they provide care to Veterans	95 (19)	0 (0)	5 (1)
I would recommend using this shared decision-making process about firearm lethal means safety and suicide risk to other Veterans	100 (20)	0 (0)	0 (0)
The firearm lethal means shared decision making process addressed all of the concerns I have about options for managing my firearms to decrease my risk of suicide. ($n = 19$)	84 (16)	11 (2)	5 (1)
Having my firearm safety action plan which resulted from the shared decision-making process makes me feel safer	70 (14)	30 (6)	0 (0)
I believe that I was more likely to identify my personal action steps and plan to act on them because of the shared decision-making process than if I had received the decision aid tool alone	70 (14)	15 (3)	15 (3)
Veteran's planned firearm safety changes resulting from shared decision-making with PtDA			
As a result of the process of shared decision-making using the decision aid, I will:			
Follow my (firearm safety) action plan to hand off my firearm to a safe party if I need to	100 (20)	0 (0)	0 (0)
Talk with my partner, a family member, friend or someone else about a plan for holding my firearms if I or someone who cares about me had concerns about my safety from suicide	95 (19)	5 (1)	0 (0)

*Other settings Veterans recommended that the firearm lethal means decision aid should be made available in: (1) Veteran-focused organizations, e.g., American Legion, Vet Centers; (2) community settings, e.g., peer supports, emergency response technicians; (3) health care settings, e.g., PTSD groups, mailed with appointment reminders; (4) Department of Defense, e.g., annual briefings, distributed to squadrons and on information boards similar to what we have for disasters

SDM to other Veterans (100%); the SDM process using the PtDA addressed all of their concerns about options for managing their firearms to decrease their suicide risk (84%); the firearm safety action plan resulting from the SDM process made them feel safer (70%); and that because of the SDM process, they were more likely to identify their safety plan and act on it than if they had only received the PtDA (70%).

As a result of the SDM process using the PtDA, 100% of participants indicated they would follow their action plan to hand off their firearm to a safe party if needed; and 95% indicated they would talk with a partner, family member, friend, or someone else about a plan for holding their firearms if they or someone who cares about them had concerns about their safety from suicide.

DISCUSSION

Guided by international PtDA standards and input from key stakeholders across three phases, we developed a PtDA tailored for women RNG Veterans to support informed decision-making and encourage completion of a personalized firearm safety plan. Veterans reported high satisfaction and endorsed the PtDA's utility both independently and with a SDM process delivered by study staff, underscoring its potential for firearm safety planning and suicide prevention. Positive feedback likely reflects the meaningful involvement of women Veterans and their providers in developing the PtDA, as well as our Steering Committee's expertise. Findings align with prior research on Veterans' preferences for firearm safety discussions in primary care, emphasizing care for health and well-being, a nonjudgmental approach, clear rationale for and normalization of the topic, and addressing fears about health system responses as the safety plan is focused on their autonomy.^{21-27,55-57}

An important finding is the potential for the PtDA to support meaningful conversations between women Veteran gun owners and health care providers. Participants reported feeling safer when engaging in SDM using the PtDA, and 95% agreed that VA providers should routinely use this approach in clinical care. Importantly, all participants said they would recommend SDM for firearm safety and suicide prevention to other Veterans, and thought the PtDA should be available on a VA website. These results suggest that a tailored, upstream intervention like this PtDA is not only acceptable to women Veterans with firearm access, but also effectively addresses safety concerns and supports firearm safety planning as a part of routine preventive health care. Notably, PtDA use may also help overcome previously identified provider²¹⁻²⁴, as well as health care system barriers to discussing firearm safety, e.g., tools to engage providers, standardized materials.⁵⁵⁻⁵⁷

Another key finding is that using the PtDA with a SDM process may empower women Veterans to proactively involve others in supporting them with firearm safety

planning. Nearly all gun owners reported they would discuss a plan for firearm storage if their suicide risk increased, and all participants reviewing the PtDA with SDM indicated they would follow a plan to hand off their firearms to a safe party if needed. Notably, the majority had served in Iraq or Afghanistan post-9/11, and nearly half reported keeping loaded, unlocked guns accessible. Additionally, three-quarters acknowledged having handguns, the most common firearm type used in suicides among US women.⁵⁸ These findings underscore the potential of this approach to facilitate upstream firearm safety planning and engage trusted individuals in interrupting a decision to act on a suicide impulse.

Key factors differentiate our PtDA from previous research and have implications for providers, researchers, and policy makers. First, to our knowledge, this is the first study to develop a firearm lethal means PtDA tailored to and informed by women Veterans. In contrast, "Lock to Live" is a sex-neutral decision aid that addresses lethal means of all types and is not specific to Veterans.⁵⁹ The VA National Center for PTSD "Safety Plan" App also comprehensively addresses lethal means, helping Veterans and non-Veterans "create steps you can take the next time you are in crisis."⁶⁰ A recent randomized controlled trial testing a digital health tool for patients with suicide risk likewise addressed both firearm and medication storage, but was not tailored to women Veterans.⁶¹ Second, our PtDA focuses on the military ethos of preparedness that supports Veterans' personal agency to make safety decisions which is consistent with an upstream prevention approach. Third, the PtDA directly communicates why firearm and suicide screening is needed within a context of risk and protective choices, providing actionable steps to trigger and assist Veterans to develop a personalized safety plan. Fourth, the PtDA uniquely supports decisions about non-lethal means of self-protection, addressing a known barrier to engaging gun owners in firearm safety planning and supporting trauma-informed care for women. Finally, we piloted the PtDA with a SDM process and elicited Veteran perspectives of its acceptability and utility in clinical encounters.

This work is consistent with the VA National Strategy for Preventing Veteran Suicide⁶² focusing on promoting healthy and empowered Veterans, families, and communities. It addresses implementation principles of focusing on not only awareness but also activation to change behaviors of Veterans (and ultimately providers), and in tailoring solutions to at-risk sub-populations instead of a "one-size-fits-all" approach.

This work has limitations and strengths. Our PtDA does not specifically address decisional choices and suicide risk for Veterans who cohabitate with a gun owner or who may later buy a gun. However, it provides important information for any woman Veteran with access to a firearm in a sharable format. Self-selection bias may have increased participation among women gun owners with existing concerns

about firearm suicide or who have experienced the loss of a Veteran, military peer, or family member through firearm suicide. If so, these women's experiences and awareness of the complexity of these fatal choices could contribute knowledge or perspectives benefitting the utility of our findings. Low provider response rate is a limitation. Further, Veteran and provider interviews informing PtDA development were completed approximately 2 years prior to our PtDA alpha testing. It is common for PtDA development to be a lengthy incremental process⁶³ and Veterans' positive feedback indicates that our interview findings remain relevant. The PtDA was not alpha-tested with providers, although we elicited their perspectives to inform its development. Lastly, this work was piloted with RNG Veterans and findings may not be generalizable to all women Veterans. However, most evidence presented, and the decisional choices, are relevant to all women Veterans and 90% had served in the active component military. This work was performed with community samples of Veterans and has potential utility for community outreach and for both VA and community providers.

CONCLUSION

We developed a PtDA tailored to women Veterans to promote safer firearm storage and advance suicide prevention through informed, patient-centered care. Veterans' high satisfaction, whether using it alone or with SDM, demonstrates its capacity to strengthen safety planning, involve trusted individuals, and promote respectful firearm safety. Through iterative involvement of Veterans, providers, and other stakeholders, we demonstrated the feasibility and acceptability of integrating firearm safety into routine preventive care. Framing suicide risk as a health concern and offering a patient-centered tool may enable more effective and sustainable prevention for women Veterans, with promise for both VA and community settings and adaptability to other high-risk populations. Future work should test provider use of the PtDA in real-world clinical settings, clinical trials, and development of an electronic format to assess feasibility, usability, and potential for broader implementation.

Supplementary Information The online version contains supplementary material available at <https://doi.org/10.1007/s11606-025-09942-4>.

Acknowledgements We would like to acknowledge the following individuals who contributed invaluable assistance to this research but did not meet authorship criteria. These include the following: qualitative interviewers, Monica Paez and Melissa Steffen; the computer-assisted telephone interview laboratory, Holly Strehlow; statistician, Yuho Gao; The Iowa City Rural Health Resource Center Leadership, Carolyn Turvey and Samantha Solimeo; The Women's PBRN Leadership, Susan Frayne and Diane Carney; and the women Veterans who participated in this research and their dedicated service to our country.

Corresponding Author: Anne G. Sadler, PhD; , University of Iowa Hospitals and Clinics, Iowa City, IA, USA (e-mail: anne-sadler@uiowa.edu).

Author Contribution All authors made substantial contributions to the conception or design of the work; or the acquisition, analysis, or interpretation of data; drafting the work or revising it critically for important intellectual content; final approval of the version to be published, and agreement to be accountable for all aspects of the work, ensuring that questions related to accuracy or integrity are appropriately investigated or resolved. In addition to these, more detailed contributions of each author are to follow.

Anne G. Sadler, PhD. Dr. Sadler was the principal investigator of funding for work presented in this manuscript. She has been responsible for and led every aspect of this work. This includes conception and design of the work; the acquisition, analysis, and interpretation of data; and primary responsibility for drafting the work and revising it crucially and final approval. She agrees to be accountable for all aspects of the work. As the corresponding author, she will be responsible for communication with the journal, managing revisions, and ensuring all authors approve the final journal.

Michelle A. Mengeling, Ph.D. Dr. Mengeling was a co-investigator for all work presented in this manuscript. As a health services investigator and methodological expert, she contributed to the conception and design of this work, and the acquisition and interpretation of the data. She was actively involved in the drafting and revision of this work.

Brian L. Cook, DO. Dr. Cook was a co-investigator for all work presented in this manuscript. He contributed his clinical and administrative expertise in the care of Veterans and the VAH care delivery to the conception and design of this work as well as the interpretation of the data. He was actively involved in the drafting and revision of this work. James C. Torner, PhD. Dr. Torner was a co-investigator for all work presented in this manuscript. He contributed his expertise as an injury epidemiologist and public health researcher with longstanding research in military members and Veterans. He actively participated with the conception and design of this work and interpretation of this data. He was actively involved in the drafting and revision of this work.

Mark Vander Weg, PhD. Dr. VanderWeg contributed his expertise as a psychologist and health services researcher whose work has focused on health behavior changes in Veteran populations. He actively participated with the analysis and interpretation of this data. He was actively involved in the drafting and revision of this work.

Alison B. Hamilton, PhD, MPH. Dr. Hamilton was a co-investigator for all work presented in this manuscript. As a women's health researcher, qualitative expert, and implementation scientist, she actively participated with the conception and design of this work and interpretation of this data. She was actively involved in the drafting and revision of this work.

Jonathan Platt, PhD. Dr. Platt was a co-investigator for one phase of work presented in this manuscript. As a social epidemiologist who studies suicide, he actively participated with the design of this work and interpretation of this data. He was actively involved in the drafting and revision of this work.

Amanda Heeren, MSW. Ms. Heeren contributed her expertise as a social worker, actively engaged in the care of high-risk patients endorsing suicidal ideation. As a research coordination for this project, she actively participated with the design of this work, acquisition of data, and the analysis and interpretation of this data. She was actively involved in the drafting and revision of this work.

Lindsey Fuhrmeister, BA. Ms. Fuhrmeister contributed her expertise as a career research coordinator in mental health and health services research, including her work as a coordinator for this project. She actively participated with the design of this work, acquisition of data, and the analysis and interpretation of this data. She was actively involved in the drafting and revision of this work.

Jeffrey L. Smith, BS. Mr. Smith contributed his expertise as an implementation science expert, with expertise in the field of mental health quality improvement. He was a co-investigator for all aspects of this study. He actively participated with the design of this work and the collection and interpretation of this data. He was actively involved in the drafting and revision of this work.

Funding This work was funded by the VHA Office of Rural Health Veterans Rural Health Resource Center-IC project "Mitigating Firearm Suicide Risk for Rural Reserve/Guard Women Veterans: Online and Telephone/Telehealth-Implemented Shared Decision-Making Interventions (NOMAD #PROJ-03858)." Dr. Hamilton is supported by a VA Health Systems Research (HSR) Research Career Scientist Award (RCS 21-135).

Declarations

Ethics Approval The study received IRB approval from the University of Iowa Human Subjects Review Board (IRB # 201911171).

Study information provided to participants included the elements of informed consent and consent was implied by their decision to participate, as approved by IRB.

Conflict of Interest The authors declare that they do not have a conflict of interest.

Disclaimer The views expressed in this article are those of the authors and do not necessarily reflect the position or policy of the Department of Veterans Affairs or the United States government.

Open Access This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. The images or other third party material in this article are included in the article's Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit <http://creativecommons.org/licenses/by/4.0/>.

REFERENCES

- Gramlich, J. Pew Research Center. What the data says about gun deaths in the U.S.. Available at: <https://www.pewresearch.org/short-reads/2025/03/05/what-the-data-says-about-gun-deaths-in-the-us/>. Accessed March 3, 2025.
- Centers for Disease Control and Prevention, National Center for Injury Prevention and Control. www.cdc.gov/suicide/suicide-data-statistics.html. Accessed November 29, 2023.
- U.S. Department of Veterans Affairs, Office of Mental Health and Suicide Prevention. 2024 National Veteran Suicide Prevention Annual Report. Available at: https://www.mentalhealth.va.gov/suicide_prevention/data.asp. Accessed April 1, 2025.
- Denneson, LM, Smolenski, DJ, McDonald, KL et al. Gender differences in risk and resilience for suicidal thoughts and behaviors: A national longitudinal survey study of United States veterans with a recent suicide attempt. *Journal of Affective Disorders*. 2024; 360, 412-420.
- Ursano RJ, Kessler RC, Naifeh JA, et al. Risk Factors Associated With Attempted Suicide Among US Army Soldiers Without a History of Mental Health Diagnosis. *JAMA Psychiatry*. 2018; 75,10, 1022-1032.
- Reger MA, Smolenski DJ, Carter SP. Suicide Prevention in the US Army: A Mission for More Than Mental Health Clinicians. *JAMA Psychiatry*. 2018; 75,10, 991-992.
- Naifeh JA, Colpe LJ, Aliaga PA, et al. Barriers to initiating and continuing mental health treatment among soldiers in the Army Study to Assess Risk and Resilience in Servicemembers (Army STARRS). *Mil Med*. 2016;181(9):1021-1032.
- Luoma JB, Martin CE, Pearson JL. Contact with mental health and primary care providers before suicide: a review of the evidence. *Am J Psychiatry*. 2002 Jun;159(6):909-16. <https://doi.org/10.1176/appi.ajp.159.6.909>. PMID: 12042175; PMCID: PMC5072576.
- Denneson LM, Kovas AE, Britton PC, Kaplan MS, McFarland BH, Dobscha SK. Suicide Risk Documented During Veterans' Last Veterans Affairs Health Care Contacts Prior to Suicide. *Suicide Life Threat Behav*. 2016;46(3):363-74. <https://doi.org/10.1111/sltb.12226>. Epub 2016 Feb 1. PMID: 26833711.
- Bond, AE, Bandel, SL, Rodriguez, TR, Anestis, JC, Anestis, MD. Mental health treatment seeking and history of suicidal thoughts among suicide decedents by mechanism, 2003-2018. *JAMA Network Open*. 2022; 5(3), e222101-e222101.
- Hoffmire CA, Kittel JA, Brenner LA, et al. Suicidal Ideation and Suicide Attempts Among Women Veterans Using VA Reproductive Health Care: Prevalence and Associations With Fertility-, Pregnancy- and Parenting-related Factors. *Womens Health Issues*. 2024 Sep-Oct;34(5):528-539. <https://doi.org/10.1016/j.whi.2024.06.004>. Epub 2024 Aug 5. PMID: 39107152; PMCID: PMC11614071.
- Monteith LL, Holliday R, Miller C, et al. Suicidal ideation, suicide attempt, and non-suicidal self-injury among female veterans: Prevalence, timing, and onset. *J Affect Disord*. 2020 Aug 1;273:350-357. <https://doi.org/10.1016/j.jad.2020.04.017>. Epub 2020 May 12. PMID: 32560928.
- Chhatre, S, Hoffmire, CA, Bellamy, SL, Agha, AZ, Dichter, ME. Relationship between Veterans Crisis Line risk rating and subsequent suicidal self-directed violence among veteran callers: A gender comparison. *Suicide and Life-Threatening Behavior*. 2023; 53(5), 739-747.
- Krishnamurti, LS, Agha, A, Denneson, LM, Montgomery, AE, Chhatre, S, Dichter, ME. Gender differences in connecting veterans to care through the Veterans Crisis Line: A mixed methods evaluation of referrals to suicide prevention coordinators. *Medical care*. 2023; 61(1), 50-53.
- Anglemyer A, Horvath T, Rutherford G. The accessibility of firearms and risk for suicide and homicide victimization among household members: a systematic review and meta-analysis. *Ann Intern Med*. 2014 Jan 21;160(2):101-10. <https://doi.org/10.7326/M13-1301>. Erratum in: *Ann Intern Med*. 2014 May 6;160(9):658-9. PMID: 24592495.
- Pallin R, Teasdale S, Agnoli A, et al. Talking about firearm injury prevention with patients: a survey of medical residents. *BMC Med Educ*. 2022 Jan 3;22(1):14. <https://doi.org/10.1186/s12909-021-03024-9>. Erratum in: *BMC Med Educ*. 2022 Feb 24;22(1):126. 10.1186/s12909-022-03117-z. PMID: 34980095; PMCID: PMC8725249.
- Studdert DM, Zhang Y, Swanson SA, et al. Handgun Ownership and Suicide in California. *N Engl J Med*. 2020 Jun 4;382(23):2220-2229. <https://doi.org/10.1056/NEJMsa1916744>. PMID: 32492303.
- Simon, T.R., Swann, A.C., Powell, K.E., Potter, L.B., Kresnow, M., and O'Carroll, P.W. Characteristics of Impulsive Suicide Attempts and Attempters. *SLTB*. 2001; 32(suppl):49-59.
- Harvard School of Public Health, Harvard Injury Control Research Center. Duration of Suicidal Crisis. Means Matter. Available at: <https://means-matter.hsph.harvard.edu/>. Accessed May 5, 2025.
- Cai Z, Junus A, Chang Q, Yip PSF. The lethality of suicide methods: A systematic review and meta-analysis. *J Affect Disord*. 2022 Mar 1;300:121-129. <https://doi.org/10.1016/j.jad.2021.12.054>. Epub 2021 Dec 23. PMID: 34953923.
- Department of Veteran Affairs Office of Inspector General. 2022. Deficiencies in Lethal Means Safety Training, Firearms Access Assessment, and Safety planning for Patients with Suicidal Behaviors by Firearms. Available at: <https://www.va.gov/oig/pubs/VAOIG-21-00175-19.pdf>
- Conner A, Azrael D, Miller M. Firearm Safety Discussions Between Clinicians and U.S. Adults Living in Households With Firearms: Results From a 2019 National Survey. *Ann Intern Med*. 2021 May;174(5):725-728. <https://doi.org/10.7326/M20-6314>. Epub 2020 Dec 22. PMID: 33347768.
- US Department of Veterans Affairs Office of Inspector General. *Testimony before the House Committee on Veterans' Affairs: Mental Health Care at VA*. Published April 30, 2025. Accessed May 21, 2025. https://www.vaoig.gov/sites/default/files/document/2025-05/2025-04-30_hvac_of_mental_health_va_oig_testimony_dr_julie_kroviak_-_final.pdf
- Brandt CA, Workman TE, Farmer MM, et al. Documentation of Screening for Firearm Access by Healthcare Providers in the Veterans Healthcare System: A Retrospective Study. *West J Emerg Med*. 2021 May 19;22(3):525-532. <https://doi.org/10.5811/westjem.2021.4.51203>. PMID: 34125022; PMCID: PMC8203018.

25. **Richards JE, Simon GE, Kuo E, et al.** Patient and clinician perspectives of a standardized question about firearm access to support suicide prevention: a qualitative study. *JAMA Health Forum.* 2022;3(11):e2239032. <https://doi.org/10.1001/jamahealthforum.2021.1973>. <https://jamanetwork.com/journals/jama-healthforum/fullarticle/2799032>
26. **Thai JN, Saghir HA, Pokhrel P, Post RE.** Perceptions and experiences of family physicians regarding firearm safety counseling. *Fam Med.* 2021;53(3):181–188. <https://doi.org/10.22454/FamMed.2021.813476>. <https://journals.stfm.org/familymedicine/2021/march/thai-2020-0283/>
27. **Dineen JN, Christakis NA, Young GJ.** Understanding the facilitators and barriers to physician anticipatory guidance around secure firearm storage. *Patient Educ Couns.* 2024;117:107878. <https://doi.org/10.1016/j.pec.2024.107878>.
28. **Suicide Rise Among current and Former National Guard service members.** (2023). *From Science to Practice.* Available at: https://www.mentalhealth.va.gov/suicide_prevention/docs/FSTP-Suicide-Risk-Among-Current-and-Former-National-Guard-and-Reserve-Members.pdf Accessed April 10, 2025.
29. **Wilmoth, MC, Treyball, MP, Gettinger, A, McCauley, L.** Civilian Health Care Systems Must Recognize and Study Military Service as a Social Determinant of Health. *NAM perspectives* 2025; 10–31478
30. **Monteith LL, Holliday R, Dorsey Holliman BA, Brenner LA, Simonetti JA.** Understanding female veterans' experiences and perspectives of firearms. *J Clin Psychol.* 2020 Sep;76(9):1736–1753. <https://doi.org/10.1002/jclp.22952>. Epub 2020 Mar 30. PMID: 32227687.
31. **Sadler AG, Mengeling MA, Cook BL, Torner JC.** Factors Associated with U.S. Military Women Keeping Guns or Weapons Nearby for Personal Security Following Deployment. *J Womens Health (Larchmt).* 2021 Jan;30(1):103–112. <https://doi.org/10.1089/jwh.2019.8029>. Epub 2020 May 27. PMID: 32460621.
32. **Simonetti JA, Azrael D, Rowhani-Rahbar A, Miller M.** Firearm Storage Practices Among American Veterans. *Am J Prev Med.* 2018 Oct;55(4):445–454. <https://doi.org/10.1016/j.amepre.2018.04.014>. Epub 2018 Aug 27. PMID: 30166080.
33. **Goldstein KM, Pace R, Dancu C, et al.** *An Evidence Map of the Women Veterans' Health Literature, 2016 to 2023: A Systematic Review.* *JAMA Netw Open.* 2025;8(4):e-2025.6372. <https://doi.org/10.1001/jamanetworkopen.2025.6372>
34. **Sursely A, Nash S, Sadler A, Roberts E, Torner J, Platt J.** *Exploring contextual details in suicide precipitating circumstances: A qualitative content analysis of National Violent Death Reporting System (NVDRS) narrative reports.* *J Psychiatry Brain Sci.* 2025;10(4):e250008. <https://doi.org/10.20900/jpbs.20250008>
35. **Polzer ER, Holliday R, Rohs CM, Thomas SM, Miller CN, Simonetti JA, Brenner LA, Monteith LL.** Women veterans' perspectives, experiences, and preferences for firearm lethal means counseling discussions. *PLoS One.* 2023;18(12):e0295042. <https://doi.org/10.1371/journal.pone.0295042>
36. **Sepucha KR, Fowler FJ Jr, Mulley AG Jr.** Policy support for patient-centered care: the need for measurable improvements in decision quality. *Health Aff (Millwood).* 2004;23(Suppl2):VAR-54–VAR-62. <https://doi.org/10.1377/hlthaff.var.54>
37. **Stacey D, Légaré F, Lewis K, Barry MJ, Bennett CL, Eden KB, Holmes-Rovner M, Llewellyn-Thomas H, Lyddiatt A, Thomson R, Trevena L.** Decision aids for people facing health treatment or screening decisions. *Cochrane Database Syst Rev.* 2017 Apr 12;4(4):CD001431. <https://doi.org/10.1002/14651858.CD001431.pub5>. Update in: *Cochrane Database Syst Rev.* 2024 Jan 29;1:CD001431. 10.1002/14651858.CD001431.pub6. PMID: 28402085; PMCID: PMC6478132.
38. **Denneson, LM, Newell, S, Elliott, V, et al.** Veteran perspectives on population-based suicide risk screening in VHA primary care: mixed-methods study. *Journal of general internal medicine.* 2023; 38(11), 2537–2545.
39. **Elwyn, G, Frosch, D, Thomson, R, et al.** Shared decision making: a model for clinical practice. *Journal of General Internal Medicine.* 2012; 27, 1361–1367.
40. **Betz ME, Wintemute GJ.** Physician counseling on firearm safety: a new kind of cultural competence. *JAMA.* 2015;314(5):449–450. <https://doi.org/10.1001/jama.2015.7055>
41. **NEJM Catalyst.** (2017). What Is Patient-Centered Care? Explore the definition, benefits, and examples of patient-centered care. How does patient-centered care translate to new delivery models? *New England Journal of Medicine Catalyst.* <https://catalyst.nejm.org/doi/full/10.1056/CAT.17.0559>
42. **Champion VL, Skinner CS.** The health belief model. *Health behavior and health education: Theory, research, and practice.* 2008;4:45–65.
43. **Stacey D, Légaré F, Boland L, et al.** 20th Anniversary Ottawa Decision Support Framework: Part 3 Overview of Systematic Reviews and Updated Framework. *Med Decis Making.* 2020;40(3):379–398. <https://doi.org/10.1177/0272989X20911870>
44. **Légaré, F, O'Connor, AM, Graham, ID, Wells, GA, & Tremblay, S.** Impact of the Ottawa Decision Support Framework on the agreement and the difference between patients' and physicians' decisional conflict. *Medical Decision Making.* 2006; 26(4), 373–390.
45. **Sepucha, KR, Abhyankar, P, Hoffman, AS, et al.** Standards for UNiversal reporting of patient Decision Aid Evaluation studies: the development of SUNDAE Checklist. *BMJ quality & safety.* 2018; 27(5), 380–388.
46. **Coulter A, Stilwell D, Kryworuchko J, Mullen PD, Ng CJ, van der Weijden T.** A systematic development process for patient decision aids. *BMC Med Inform Decis Mak.* 2013;13 Suppl 2(Suppl 2):S2. <https://doi.org/10.1186/1472-6947-13-S2-S2>
47. **Cordasco, KM, Mengeling, MA, Yano, EM, Washington, DL.** Health and health care access of rural women veterans: Findings from the National Survey of Women Veterans. *The Journal of Rural Health.* 2016; 32(4), 397–406.
48. **Frayne SM, Carney DV, Bastian L, et al.** The VA Women's Health Practice-Based Research Network: amplifying women veterans' voices in VA research. *J Gen Intern Med.* 2013 Jul;28 Suppl 2(Suppl 2):S504–9. <https://doi.org/10.1007/s11606-013-2476-3>
49. **Kowalski CP, Nevedal AL, Finley EP, Young JP, Lewinski AA, Midboe AM, Hamilton AB.** Planning for and Assessing Rigor in Rapid Qualitative Analysis (PARRQA): a consensus-based framework for designing, conducting, and reporting. *Implementation Science.* 2024 Oct 11;19(1):71.
50. **Flesch R.** A new readability yardstick. *J Appl Psychol.* 1948 Jun;32(3):221–33. <https://doi.org/10.1037/h0057532>. PMID: 18867058.
51. **Kincaid, J. Peter; Fishburne, Robert P. Jr.; Rogers, Richard L.; and Chissom, Brad S.** "Derivation Of New Readability Formulas (Automated Readability Index, Fog Count And Flesch Reading Ease Formula) For Navy Enlisted Personnel" (1975). Institute for Simulation and Training. 56.
52. **Politi MC, Dizon DS, Frosch DL, Kuzemchak MD, Stiggelbout AM, Légaré F.** Clinicians' perceptions of digital and paper-based decision support interventions. *Health Expect.* 2015;18(6):1672–1685. <https://doi.org/10.1111/hex.12159>
53. **Chrystal, J., Hamilton, A., Ono, S., Lesser, R., Matsumoto, R., Fenwick, K., Frayne, S., Yano, E.,** VA Women's Improvement Network: the evolution of a national women Veterans' engagement research group: the VA HSR&D Women's Improvement Network. Oral presentation at the VA Women's Health Services Research Conference, Washington, D.C., September 2023.
54. **The SHARE Approach.** Content last reviewed October 2024. Agency for Healthcare Research and Quality, Rockville, MD. Available at: <https://www.ahrq.gov/sdm/share-approach/index.html> Accessed on April 14, 2025.
55. **Dobscha, SK, Clark, KD, Newell, S, et al.** Strategies for discussing firearms storage safety in primary care: veteran perspectives. *Journal of General Internal Medicine.* 2021; 36, 1492–1502.
56. **Clark, KD, Newell, S, Kenyon, EA, et al.** Firearms storage safety discussions in VA primary care: Staff perspectives. *General hospital psychiatry.* 2021; 72, 96–101.
57. **Houtsma, C, MacWilliams, K, Pardue-Bourgeois, S, et al.** Provider Perspectives on Healthcare System Barriers to Engaging Caregivers of Rural US Veterans in Firearm Suicide Prevention. *Journal of General Internal Medicine.* 2024; 1–9.
58. **Hanlon TJ, Barber CW, Azrael D, et al.** Type of firearm used in suicides: findings from 13 states in the National Violent Death Reporting System, 2005–2015. *Am J Public Health.* 2019;109(2):332–337. <https://doi.org/10.2105/AJPH.2018.304781>
59. **Betz M, Knoepke C, Simpson S, et al.** An Interactive Web-Based Lethal Means Safety Decision Aid for Suicidal Adults (Lock to Live): Pilot Randomized Controlled Trial *J Med Internet Res* 2020;22(1):e16253 URL: <https://www.jmir.org/2020/1/e16253> <https://doi.org/10.2196/16253>

60. VA's National Center for PTSD and VA's Office of Mental Health and Suicide Prevention (2023). Safety Plan (Version 1.0.0) [mobile app] https://www.ptsd.va.gov/appvid/mobile/safety_plan_app.asp
61. **Boggs JM, Quintana LM, Beck A, Clarke CL, Richardson L, Conley A, Buckingham ET, Richards JE, Betz ME.** A randomized controlled trial of a digital health tool for safer firearm and medication storage for patients with suicide risk. *Prev Sci.* 2024;25(2):358-368. <https://doi.org/10.1007/s11121-023-01628-y>
62. U.S. Department of Veterans Affairs. (2018). *National strategy for preventing veteran suicide: 2018–2028*. Available at: https://www.mentalhealth.va.gov/suicide_prevention/docs/Office-of-Mental-Health-and-Suicide-Prevention-National-Strategy-for-Preventing-Veteran-Suicide-2018-2028.pdf Accessed on March 1, 2025.
63. **Savelberg W, van der Weijden T, Boersma L, Smidt M, Willekens C, Moser A.** Developing a patient decision aid for the treatment of women with early stage breast cancer: the struggle between simplicity and complexity. *BMC Med Inform Decis Mak.* 2017 Aug 1;17(1):112. <https://doi.org/10.1186/s12911-017-0505-6>. PMID: 28764688; PMCID: PMC5540178.

Publisher's Note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.