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Commentary

# VA Research and Operations Collaborate in Key Efforts to Strengthen Veteran Suicide Prevention

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There is no single cause of suicide. It is often the result of a complex interaction of risk and protective factors at the individual, interpersonal, community, and societal levels. To prevent Veteran suicide, we must minimize risk factors and maximize protective factors at all levels of intervention. In response, VA has adopted a public health approach recommended by the National Strategy for Preventing Veteran Suicide (2018-2028), amplified in the White House's Reducing Military and Veteran Suicide: Advancing a comprehensive, cross-sector, evidence-informed public health strategy, with best practices codified in the VA/DoD Clinical Practice Guidelines: Assessment and Management of Patients at Risk for Suicide (2019).

Situated within the Office of Mental Health and Suicide Prevention (OMHSP) the Suicide Prevention Program (SPP) values the ongoing collaboration, coordination, and alignment between VA's national research agenda, and VA's operational and clinical priorities to address and inform Veteran suicide. SPP has numerous research questions and areas of inquiry needed to inform our community-based efforts and clinical interventions.

SPP has expanded efforts to include community-based interventions. These efforts are designed to reach Veterans universally, and specifically those outside the VHA healthcare system. These interventions include partnerships with states and territories to develop strategic efforts focused on VA's priority areas: 1) identify Service Members, Veterans, and their families, and screen for suicide risk; 2) promote connectedness and improve care transitions; and 3) increase lethal means safety and safety planning. In addition to state level efforts, VA is funding a five-year pilot project supporting the establishment of local community coalitions to advance local Veteran suicide prevention. Reviews have identified a scarcity of studies focused on community-level interventions, and evaluation of impacts and change. More research with improved methodologies and research designs is needed to evaluate multi-layered interventions, and to increase our knowledge of factors and best practices that decrease suicide risk.

Previous research has shown that social determinants of health play a role in suicide risk, while mitigation of these determinants has shown protective value.[1] Financial distress and cumulative stressors increase suicide risk. Homelessness, housing insecurity, food insecurity, and justice system involvement have been shown to increase risk in Veterans. We look forward to improved usage of geospatial mapping and community level data to inform where and with whom to intervene. We need evidence-informed, culturally sensitive, and responsive methods to message and reach Veterans identified by our data and surveillance to be at elevated risk.

**Figure 1. Key Tenets of Suicide Prevention**

| KEY TENETS | | |
|---|---|---|
| 1 Suicide is preventable. | 2 Suicide prevention requires a public health approach, combining clinical and community-based approaches. | 3 Everyone has a role to play in suicide prevention. |

**Figure 2. Public Health and Suicide Prevention**


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## DIRECTOR'S LETTER

### Veteran Suicide Prevention: Beyond the Clinic Walls

VA's recent report on Veteran suicide found that suicide rates, while decreasing in 2019 and 2020, increased in 2021. Notably, suicide was ranked the second leading cause of death among Veterans under the age of 45.

Suicide remains a persistent crisis among Veterans. An estimated 17.5 Veterans died by suicide per day in 2021. Many of these deaths occurred among Veterans who had not used VA healthcare services, and recent trends such as an increasing risk of housing insecurity and of home foreclosure, a lack of attention to the invisible wounds of war, and even loneliness, may all play a role in exacerbating this crisis.

Given the time lag in ascertaining cause-specific death data from the Centers for Disease Control (CDC), it is uncertain whether these trends will continue. Nonetheless they point to the urgent need for improving implementation of evidence-based interventions to address suicide among Veterans, especially beyond the clinic walls. A number of Health Services Research and QUERI initiatives have come to fruition in the wake of increased attention on Veteran suicide prevention in both VA and community-based settings, including Caring Contacts/Caring Letters, Services for Transitioning Service Members, and Electronic Risk assessment (RISK-ID).

Based on VA cross-agency priority goals, VHA long-range goals, and HSR&D's updated priorities, there is increased attention to suicide prevention beyond the clinic walls, especially for at-risk, marginalized Veteran populations. There also remains the larger issue of addressing what Anne Case and Angus Deaton referred to as "deaths of despair." Their research examined mortality trends from substance abuse as well as suicide. Innovations in programs and policies that bolster Veteran quality of life such as housing and education benefits as well as reforms to the legal system (e.g., divorce courts) have been discussed as pathways for mitigating root causes of suicide and related causes of death. Research that can tackle these complex societal issues, while challenging, will be paramount in making a difference for Veterans and their families.

Amy Kilbourne, PhD, MPH, Acting Director, HSR&D

VA is the largest healthcare system in the nation to implement universal screening for suicide risk. The 'Risk ID' program requires annual suicide risk screening in all ambulatory clinics. All Veterans with a positive screen receive a prompt comprehensive suicide risk evaluation to inform treatment needs and options. Because suicide risk is a fluid and dynamic phenomenon, ensuring we are identifying all Veterans at risk with this method is a challenge. Simonetti et al. found that 45 percent of Veterans who died by suicide between 2000 and 2014 did not have a mental health or substance abuse diagnosis.[2] Are risk assessments sensitive enough to identify suicide risk in Veterans across the numerous clinics where they present for care? How might technology inform clinical care? Research needs to include a precision medicine approach in which studies inform 'which' Veterans need 'what' interventions 'when'. Studies focused on these areas of inquiry can help determine efficacy of risk assessment tools, the utility of technological advances (artificial intelligence, natural language processing, predictive modeling, ecological momentary assessment, and mobile applications) and the expansion of evidence for targeted interventions to support efficient and effective clinical decision making.

Suicide prevention is everyone's business, and everyone has a role to play in reducing Veteran suicide. To these ends, VA research, program evaluation, and clinical operations overlap with all areas of the VHA healthcare system, including primary care, women's health, whole health, emergency medicine, mental health, and caregiver support, to name a few. We are grateful for the research sponsored by HSR&D that informs improved processes for suicide prevention and barriers to changes in the healthcare delivery system that impact these efforts. Further research attention on best practices to inculcate suicide prevention in VHA and community-based providers would inform our continued efforts.

Additionally, suicide prevention intersects with the benefits and services provided to Veterans and their families through the Veterans Benefits Administration. To date, we have little understanding of how these benefits and resources mitigate or exacerbate risk or how they interact with other benefits, treatments, and resources to reduce suicide. We have been asked to understand and quantify the protective value of these benefits on suicide risk. Increased collaborative research with health economics would improve our ability to answer such questions.

Over 70 percent of Veteran suicides are completed with a firearm.[3] Securely storing firearms and medications during times of distress and crisis saves lives. We know that access to firearms increases the risk for death by suicide. However, we have much to learn to improve the application of secure storage of firearms and medications. Although secure storage has been found to be effective, resistance to secure in-home and out-of-home firearm storage is widespread. Effective messaging to Veterans has remained elusive. Further research can inform our campaigns, messaging, and strategies to amplify lethal means safety to Veterans.

Training and education are a primary focus for SPP. We appreciate ongoing and continued research attention to the study of gatekeeper trainings (VA S.A.V.E), Skills Training for the Evaluation and Management of Suicide (STEMS), and lethal means safety training. Previous research has identified numerous barriers for providers across the VA enterprise to learn and incorporate suicide prevention into their routine practice. We look forward to developing and testing innovative training methods and options to address these barriers and to inculcate suicide prevention into everyday activities.

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# VA Research and Partner Collaboration Brings Focus to Veteran Suicide Prevention

Robert W. O'Brien, PhD, and Joseph Constans, PhD, both with the VA Office of Research and Development

The VA Office of Research and Development (ORD) understands and agrees with Dr. Miller's challenge to become more 'nimble and responsive' to the needs of its operational partners – and ORD has already initiated steps in this direction. Dr. Miller closed his commentary by citing ongoing re-organization efforts within ORD and discussing his expectations for enhanced collaboration between ORD and the Suicide Prevention Program (SPP; part of the VA Office of Mental Health and Suicide Prevention) in support of the overall VA suicide prevention effort. ORD is in the process of transitioning from a research program that is organized based on research methods to one structured by and responsive to specific diseases or clinical challenges within the Veteran community.

For decades, ORD disbursed research funding through services that were defined by research methods and techniques ranging from basic science to health systems-based investigations; this approach emphasized the full research to practice translational pipeline. With this model, suicide prevention research has been supported across all ORD services, ensuring the topic was studied from a range of perspectives; however, this model has also been a barrier to efficient management of the overall portfolio and restricted the capacity of ORD to respond to urgent needs of VHA leadership.

The aims of the ORD reorganization are to preserve the advantages of discipline-focused research while at the same time increasing ORD's capacity to coordinate research efforts within a particular topic area. The reorganization will create opportunities to address the immediate needs of our clinical program partners. Beginning in FY25, ORD will be organized into four broad portfolios of wide-ranging interests, with additional, Actively Managed Portfolios (AMPs) that are focused on relatively narrow health concerns. One of these AMPs is being designed specifically to support suicide prevention research.

What does this mean for VA suicide prevention research? First, this new model allows a continued emphasis on investigator-initiated suicide prevention research efforts, which have yielded several innovative ideas over the years. However, to improve responsiveness to the needs of clinical partners and the Veteran community, the Suicide Prevention AMP also will release time limited, focused Research Funding Announcements (RFA) that address specific priorities of VA operational partners. These priorities will be established by an Executive Steering Committee that will consider input from relevant program offices, field clinicians and investigators, and the broader Veteran community. The release of focused RFAs is intended to guide the field into important but understudied areas of inquiry relevant to suicide prevention. Additionally, the Suicide Prevention AMP will create funding opportunities for investigators to develop enterprise-wide resources that address structural barriers inherent in suicide prevention research. Thus, the creation of the Suicide Prevention AMP is intended to support and grow investigator-initiated research while simultaneously increasing research that addresses key gaps. We expect this to result in collaborations with clinical partners that identify ways to translate research findings more quickly into practice.

Although the Suicide Prevention AMP will not formally commence until FY25, ORD already has established enterprise-wide resources to support the VA suicide prevention research community. Primary among these is the Suicide Prevention Research Impact Network (SPRINT). This resource center, now jointly funded by HSR&D and CSR&D, is self-described as "a national collaborative network of VHA researchers and operations partners and seeks to maintain up-to-date information about VA suicide prevention research and operations projects, collaborate with SPP to identify research priorities, facilitate development of innovative research proposals through a planning award mechanism and field-based meetings, and foster professional development among suicide prevention researchers." In four years, SPRINT has not only established a strong working relationship with the SPP and formalized a network of VA investigators, it has also built critical links with other federal agencies that support research in this area.

One of SPRINT's most impressive contributions to VA has been the implementation of planning awards to both new and experienced investigators. Over three years, SPRINT has peer-reviewed and funded 15 studies as planning awards that have begun to target the range of topics cited by Dr. Miller. Planning awards include studies on the use of social determinants of health to help identify Veterans at risk for suicide, perceptions of suicide-related care for LGBTQ Veterans, and implementation barriers to lethal means management by pharmacies in rural communities.

Another resource is the Suicide Prevention Trials Database, which provides "a publicly available and up-to-date database of study-level data from published trials of suicide prevention approaches." This database, updated quarterly, is being developed to support future research-related activities, such as supporting OMHSP in the development of clinical practice guidelines, highlighting research gaps, and informing the planning stages of new research.

Currently, ORD supports almost 80 merit awards and pilot studies with a primary or secondary focus on suicide prevention. Following HSR&D guidelines, researchers developed many of these studies with at least some level of consultation with OMHSP/SPP staff to ensure the utility of the research in addressing VA needs in reducing Veteran suicide. The ongoing reporting of study progress and findings to OMHSP/SPP is a feature of this ongoing work.

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# Adapting to Context: Implementing an Evidence-Based Suicide Prevention Intervention During the COVID-19 Pandemic

Sara J. Landes, PhD, and Susan M. Jegley, MSW, both with the Behavioral Health QUERI, Central Arkansas Veterans Healthcare System, North Little Rock, Arkansas, and Katherine M. Dollar, PhD, VA Center for Integrated Healthcare, Syracuse, New York

Caring Contacts is an evidence-based suicide prevention intervention that consists of sending brief, caring messages to people at risk of suicide at regular intervals, usually over the course of a year. It is recommended by clinical practice guidelines but has not been widely implemented. The QUERI-funded Partnered Implementation Initiative (PII) "Implementing Caring Contacts for Suicide Prevention in Non-Mental Health Settings" that aimed to improve implementation concluded at the close of fiscal year 2023.

The QUERI PII started with a one-year planning and pilot phase followed by a longer phase to allow for implementation across multiple Veterans Integrated Service Networks (VISNs). The timeline of the initiative's spread phase coincided with the onset of the COVID-19 pandemic, and with changes in both the popularity of Caring Contacts and in VA requirements related to its implementation. We share here more about the research and implementation teams' experience of those significant context changes.

The PII began with a one-year planning and pilot phase in collaboration with VISN 16 and the Central Arkansas Veterans Healthcare System (CAVHS) in 2019. During that year, the team conducted qualitative interviews with stakeholders about adapting and implementing Caring Contacts for Veterans in emergency department (ED) and urgent care center (UCC) settings. Using that data, the team worked with an advisory board of stakeholders and experts to adapt Caring Contacts and develop implementation materials. A successful pilot was conducted at CAVHS with facilitation used to support implementation. The team mailed Caring Contacts to 475 Veterans following an ED visit in the first year of the pilot. Qualitative interviews indicated that Veterans appreciated receiving Caring Contacts. One Veteran said, "I appreciate them sending the cards out though to check on me because, you know, I have (had) several suicidal attempts. That made me feel good, that 'Hey, I'm being thought about'."[1] Following the pilot, the initiative expanded to 10 additional VISNs, for a total of 20 facilities. Facilitation was used to support implementation in each facility.

Facilitation was originally planned to include in-person site visits to allow for better facilitator understanding of the context, recipients, logistics, and setting as well as to foster rapid relationship building. Launch of the spread phase coincided with the onset of the COVID-19 pandemic and therefore the in-person component of facilitation was removed. In addition to changing the facilitation approach, the onset of the COVID-19 pandemic had a significant impact on the targeted settings: emergency departments and urgent care centers.

Facilities had agreed to participate in the initiative prior to the grant submission and therefore significantly ahead of the pandemic. Facility interest in implementing Caring Contacts at the launch of the spread phase varied greatly. Some facilities indicated that due to the pandemic, they were either unable to add any new service, or were too short-staffed to participate. Other facilities were more enthusiastic, noting that they were concerned about increased risk of Veteran suicide due to the pandemic and the challenges of social distancing. Caring Contacts presented a relatively low-burden intervention that allowed facilities to reach out to Veterans over the course of a year without additional in-person interaction.

Facilitators experienced multiple unique challenges due to the COVID-19 pandemic but were ultimately able to design strategies to minimize and overcome these obstacles. Facilitators initially found it challenging to gather site-specific information and build rapport without the opportunity for in-person site visits. By design, EDs and UCCs provide unscheduled care, with high variability in peak times of demand. Thus, at times, it was difficult for facilitators to schedule meetings with leaders, clinicians, and champions at the sites without the option of an in-person visit. Many sites (and facilitators) struggled with the rapid switch to virtual applications for components of their jobs.

The pandemic also impacted onsite personnel who had been identified as the Caring Contact Champions and Specialists; as facilities struggled to provide care for COVID-19 patients, these personnel experienced shifts in assigned duties, increased patient caseloads, and re-assignment to different sections or wards. The initiative experienced a high level of turnover, especially among the specialists. Over time, facilitators identified successful strategies to address these unique challenges. These strategies included decreasing length

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### Key Points

- Caring Contacts is an evidence-based suicide prevention intervention that entails sending short, caring messages to Veterans at risk of suicide.
- The QUERI PII's launch of Caring Contacts coincided with the start of the COVID-19 pandemic, resulting in the need for flexible and adaptable implementation.
- The original goal of Caring Contacts has now been accomplished; 20 facilities across 11 VISNs have implemented Caring Contacts. Additional settings have also launched Caring Contacts programs.
- While implementation progress occurred in unexpected ways due to the COVID-19 pandemic, it is clear the use of Caring Contacts has increased among high-risk Veterans.

and frequency of routine contacts, increasing flexibility in scheduling, providing shelf-ready and user-friendly materials, creating pre-formatted written standard operating procedures, incorporating flexibility into processes to allow for appropriate site-level modification, integrating the need for the site to train multiple back-up specialists in anticipation of turnover, and initiating routine yet unscheduled check-ins via Microsoft Teams messaging.

Two additional strategies proved critical. First, facilitators recognized that implementation during the pandemic would be slower and less linear than at other times. Second, facilitators realized the value of building personal relationships to support all healthcare professionals via informal and unstructured contacts. For example, facilitators took the time to understand the site's specific COVID-19 patient load and adapted facilitation strategies and expectations as those factors fluctuated.

In addition to the impact of the COVID-19 pandemic on implementation, the popularity and requirements regarding Caring Contacts in VA changed over the course of the project. Initially, Caring Contacts was chosen as an evidence-based intervention that had historically experienced low uptake. As the project progressed, Caring Contacts became more popular in VA. Prior to the initiative, Caring Contacts had been recommended for additional outreach for Veterans identified as being in the highest tier of predicted suicide risk by REACH VET. However, given low use of Caring Contacts, a subsequent project to centralize sending Caring Contacts on behalf of clinicians resulted in higher utilization.[2] Later, the Surgeon General recommended considering use of Caring Contacts for crisis lines and VA undertook an initiative to send Caring Contacts to Veterans Crisis Line callers who were VHA users and who self-identified. This work is being evaluated by another QUERI-funded project led by Dr. Mark Reger. The Veterans Crisis Line used a centralized mailing service to do this and in the first 12 months, VA sent Caring Contacts to more than 100,000 Veterans.[3] More recently, policy changed to require that Veterans be sent Caring Contacts following deactivation of their high risk for suicide flags in the electronic health record. Given the extent and potential benefit of sending Caring Contacts for this population, VA centralized and implemented this intervention nationally starting in 2023.

When we first started implementation, Caring Contacts was still a relatively new intervention. Many VA sites expressed enthusiasm. The first sites we worked with were eager to have a new way to reach out to Veterans who may have been more isolated due to COVID-19. Once other Caring Contacts initiatives described above started, implementation planning at sites changed to include decisions about 1) whether to incorporate tracking of other Caring Contacts programs into the process, and 2) whether to send Caring Contacts from more than one initiative (e.g., from the ED and REACH VET).

As a QUERI PII, the primary goal of this project was to increase the use of an evidence-based suicide prevention intervention among Veterans at risk of suicide. This goal has been accomplished and 20 facilities across 11 VISNs completed facilitation and implemented Caring Contacts. In addition, the attention on Caring Contacts and QUERI funding to support its implementation and evaluation has resulted in implementation of Caring Contacts in other settings and using different approaches (i.e., centralizing with a mailing service). As is common in implementation work, the progress occurred in unexpected ways and in different settings, but it is clear the use of Caring Contacts has increased among high-risk Veterans. The dedication and ability of all team members to rapidly adapt to changing and challenging contexts resulted in enhanced implementation and increased utilization of this life-saving intervention.

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Technological advances can add value to our suicide prevention efforts. Numerous innovative and novel opportunities, including use of artificial intelligence, machine learning and natural language processing, virtual reality, and computer-based assessments, are under development in the private and public sectors. However, further study is needed to determine return on investment in bringing these innovations to practice.

As we know, the pace of science can be slow. SPP welcomes the opportunity and advantages of the Suicide Prevention Research Actively Managed Portfolio (AMP). We look forward to the ongoing collaboration, flexibility, and adaptability this AMP will provide to our operational priorities. We need nimble and responsive interaction between our research endeavors and our operations priorities to save the lives of Veterans. We do not have time to waste. Suicide is preventable.

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# Tailoring Suicide Prevention for Women Veterans

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Although women Veterans die by suicide at a lower rate than men, several trends have raised concerns over whether suicide prevention efforts are meeting the needs of women Veterans; these include sharp increases in the suicide rate among women Veterans in recent years, the higher rate of women Veterans attempting suicide than men, and the excess risk of suicide among women Veterans as compared to non-Veteran women. Indeed, much of the evidence in suicide prevention among Veterans reflects research with men-dominated samples. This is not surprising given the relatively small proportion of the Veteran population comprising women (11 percent), though at best this body of research is "gender-neutral" or, at worst, speaks primarily to our understanding of suicide risk and prevention among Veterans who are men.

Examining the potential need to tailor suicide prevention efforts for women Veterans requires a purposeful effort to design studies that enroll a sufficient proportion of women to allow for gender comparisons in suicide prevention-related topic areas, such as risk and protective factors, ideation, and recovery from nonfatal suicide attempts. The HSR&D-funded study (IIR 17-131), "Advancing Suicide Prevention for Female Veterans" began in 2018 and sought to address this gap through qualitative interviews and a subsequent longitudinal survey of approximately equal numbers of women-identifying and men-identifying Veterans who had recently attempted suicide.

Qualitative interviews with 25 women and 25 men provided the backbone for an understanding of how suicidal behavior develops, rooted in the experiences of Veterans who had attempted suicide within the prior six months. Across the 50 interviews, many similarities emerged in the lives, cognitions, and healthcare experiences of participants. Several gender differences were also readily apparent. Self-concept, social power, relationships, coping, and stress were the focal points of narratives that differentiated women from men in the development of suicidal behavior.[1] Women held less social power, experienced significant harm from relationships, were met with rejection when they sought out family and friends for support, and had been taught to second-guess themselves, which exacerbated their struggle to determine the best path forward.

The starkest difference observed between women and men was their internalization and externalization, respectively, of the challenges they had experienced. When women spoke about what they were thinking when they attempted suicide, they felt like "a throw away" of a person, and said, for example, "I felt like maybe it's time for me to just leave this place because I'm shameful…I suck. In that moment, I wanted to die," and, "my mind is telling me, 'you don't deserve to be here, you don't deserve to be anything.'" Meanwhile, men also felt a debilitating sense of failure, but expressed frustration with the world, which they perceived as having thwarted their attempts to succeed. They thought, "this is enough garbage, I'm done. I'm done fighting this fight, this is just exhausting and pointless," and said, "I feel like at that point, I was like, 'screw this,'" and "I felt like it was just not worth it."

Consistent with the differences we observed between women and men in the development of suicidal behavior, women expressed different preferences and goals for treatment, or recovery, from their suicide attempt than did men.[2] First, women wanted to foster positive relationships with others, preferably other women, who could relate to their experiences. Importantly, they wanted to make connections with people for reasons other than shared health concerns, and they wanted to feel as though the relationship was mutually beneficial. Second, women wanted to improve their self-worth and confidence. This included a desire to increase their self-knowledge of why they think or do the things they do. Men, on the other hand, expressed wanting to live up to what they believed to be their 'ideal self' and to feel needed by others. Both women and men desired a stronger sense of purpose in life. Finally, we observed small differences in how women and men spoke about healthcare engagement; most importantly, our findings pointed toward a need for better access to trauma-informed care and women-only spaces to increase engagement in mental healthcare among women.

Findings from the interviews served to inform construct selection for the subsequent longitudinal survey of 1,000 Veterans (57 percent women-identifying) with a recent suicide attempt, enhancing the ecological validity of the survey and allowing for quantitative tests of relationships among concepts identified in the qualitative interviews. Veterans completed follow up surveys six and twelve months after completing a baseline survey. The main analysis focused on negative childhood and adult experiences, psychological distress, institutional betrayal, coping styles, self-compassion, financial satisfaction, social rejection, hope, autonomy, and suicidal ideation. At baseline, we identified cross-

### Key Points

- A sharp increase in recent suicide rates among women Veterans and an excess risk of suicide among women Veterans compared to non-Veteran women are two trends that illustrate the need to improve VA's current suicide prevention efforts.
- The HSR&D funded study "Advancing Suicide Prevention for Female Veterans" sought to fill the gap in data on suicide prevention among women Veterans.
- Self-concept, social power, relationships, coping, and stress were key areas that differentiated women Veterans in the development of suicidal behavior; these findings can help inform VA's suicide prevention efforts.

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sectional gender differences; women reported a higher tendency to engage in negative coping strategies (i.e., avoidant behaviors such as substance use, social withdrawal, rumination), stronger feelings of institutional betrayal, and more commonly felt rejected by family and friends than men.[3] Men had higher scores on constructs typically thought of as protective factors: self-compassion (i.e., the ability to treat oneself with kindness and understanding) and autonomy (i.e., a proxy for social power – a sense of independence and self-control over one's life). Men also had higher scores on suicidal ideation. We observed no differences in the relationships among the concepts studied. Longitudinal analysis is ongoing.

Together, findings point toward a need to consider how societal forces and relationship experiences harm women's self-perceptions, shaping both thoughts of suicide and perceived confidence in enacting self-determined behavior. The latter may exacerbate challenges observed in this study, and others, with engaging and retaining women Veterans in VA mental healthcare. These findings suggest that increasing confidence and self-knowledge of health conditions – together with increased trauma-informed care – may improve women Veterans' engagement in care. Developing novel approaches that address healthy relationships, and advancing policy to reduce incidence of military sexual trauma are both critical avenues for suicide prevention.

Finally, these findings also suggest potentially beneficial alterations in the modes of care delivery, including ways to fine-tune treatment to address both women's treatment goals and their internalization of harmful life experiences.

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Key studies in our overall Suicide Prevention Portfolio already are addressing OMHSP needs by investigating topics around lethal means safety, gatekeeper training, social determinants of health, and public messaging to Veterans and community stakeholders. Researchers are testing efficacious interventions, including caring contacts, the Virtual Hope Box, treatment within a Dialectical Behavior Therapy Skills Group, Transcranial Magnetic Stimulation, and cognitive behavioral therapy for insomnia. As for study populations, these studies target a wide range of critical study groups such as women Veterans, Veterans experiencing homelessness, LGBTQ Veterans, Veterans not receiving VHA services, and aging Veterans.

Impacts from these studies are already being felt in the field. An HSR&D Innovation award – *Development and Evaluation of a Veteran-Informed Means Restriction Intervention for Suicide Prevention* – investigated strategies for engaging community stakeholders in helping employ community-based, safe storage programs for Veterans at high risk for suicide. In a short time, this novel approach has been expanded from a pilot involving three firearm retailers to 14 sites with continued expansion planned based on OMHSP support. Another study – *Using Big Data and Machine Learning to Understand the Association Between Altitude and Suicide among Veterans* – is answering a Congressional research question by applying innovative analytic methods that have confirmed the association between altitude and suicide. This study is now investigating the interaction between geospatial location and social determinants in understanding suicide risk.

Finally, in looking beyond our current efforts, we also foresee a productive future for suicide prevention research based on having more than 20 individuals involved in ORD career development and capacity building programs, all involved in research efforts with a primary or secondary focus on suicide prevention. In addition, ORD supports three Research Career Scientists and two Diversity, Equity, and Inclusion Summer Research Program awardees who are focusing on suicide prevention research. Finally, true to its mission, SPRINT has developed a robust, ongoing early career investigator initiative that provides regular consultation and networking activities for both senior and junior researchers new to the field of suicide prevention research.

We look forward to ever increasing collaboration with OMHSP, bringing the impressive skillsets of our investigators to the forefront of our research contribution to VA's top clinical goal: ending Veteran suicide.

# Suicide Prevention Training for Veterans' Family Members: Leveraging a Video-based Version of VA S.A.V.E.

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Individuals experiencing suicidal ideation are more likely to share these thoughts with loved ones than a healthcare provider. This presents a clear opportunity for family and friends to play a role in suicide prevention. While supporting someone at risk for suicide can feel daunting for anyone, gatekeeper training helps prepare and empower people to help.

## What is Gatekeeper Training and VA S.A.V.E.?

Gatekeeper training refers to a public health intervention strategy designed to teach individuals how to identify a person at risk of suicide and then assist the at-risk person in seeking professional mental health evaluation and treatment. "Gatekeeper" refers to the target recipient for the training and represents the family member or other close contact of the person at risk for suicide.

VA S.A.V.E. (Signs; Ask; Validate; Encourage and Expedite) is a gatekeeper training that was developed by the Department of Veterans Affairs (VA) and is specifically tailored to Veterans. While the training is typically delivered in person, VA S.A.V.E. is also available in a brief, online video-based format that was developed in partnership with the education and training nonprofit PsychArmor. Brief video-based gatekeeper training holds significant appeal because it allows individuals to learn at their own pace and schedule, and it can be easier to scale and disseminate than in-person training.

While there have been some studies of other brief video-based gatekeeper trainings, our project was the first to examine and evaluate the video-based version of VA S.A.V.E.

## What Did the Pilot of VA S.A.V.E. Find?

We conducted a randomized controlled trial of the brief video-based version of VA S.A.V.E. To be eligible, participants had to have social contact with a Veteran at least once per week. We recruited participants through Facebook and randomized them to VA S.A.V.E. versus a video-based attention control condition. Participants completed follow-up surveys over six months. Those in the intervention group completed a 25-minute video training, with content that addressed myths and facts about suicide, components of the S.A.V.E. model, scenario-based vignettes, and suicide prevention and mental health resources. The S.A.V.E. model emphasizes four suicide prevention skills: learning Signs of suicide, Asking about suicidal thoughts, Validating Veterans' experiences, and Encouraging help and Expediting treatment. A subgroup (n=15) of intervention group participants completed a follow-up interview. We used a mixed methods framework to integrate quantitative and qualitative findings. We published additional details on study procedures for interested parties.

Findings from the pilot were very encouraging. First, recruitment exceeded our goals. We enrolled 214 participants representing 44 different states who completed baseline measures. Even more, we accomplished this in just 10 weeks during the heart of the pandemic in early 2021, thanks to our social media campaign and remote trial methods.

Second, our intervention appeared acceptable to study participants, of whom 88 percent (n=189) were women and 61 percent (n=130) were the spouse or romantic partner of a Veteran. We examined engagement in the VA S.A.V.E. training by calculating the time spent on the VA S.A.V.E. training webpage. Most participants in the VA S.A.V.E. intervention group (67 percent) stayed on the webpage for the full length of the intervention, and on average they stayed on the webpage for 77 percent of the training's duration. Survey measures of satisfaction and usability were also positive.

### Key Points

- Gatekeeper training is an intervention designed to teach individuals how to identify a person at risk of suicide, and to assist the at-risk person in seeking care and treatment.
- VA S.A.V.E. is a gatekeeper training specifically developed for the Veteran community. Typically delivered in person, VA S.A.V.E. is also available in a brief online video format that allows individuals to learn at their own pace.
- Results from a pilot study of the video version of VA S.A.V.E. indicate that it is a promising brief suicide prevention training. Study findings also suggest implications for future work related to suicide prevention among Veterans.

Third, we observed some evidence of potential mechanisms of action for how the training might promote suicide prevention. Results showed that the intervention group had an increase in knowledge about suicide and an increase in positive social norms toward suicide prevention at six-month follow-up.

Fourth, we explored changes in behaviors and skills related to suicide prevention, which are called gatekeeper behaviors. As a pilot study, we were not powered to determine whether changes were significant. Nonetheless, here again, we saw positive signs. Specifically, at six-month follow-up, compared to the control group, a higher proportion of the VA S.A.V.E. group reported using gatekeeper behaviors, such as directly asking a person about suicidal thoughts or providing concrete information on the Veterans Crisis Line (67-85 percent vs. 44-77 percent).

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Our interview data corroborated these preliminary trial findings, with participants feeling more confident in their suicide prevention skills and wanting VA S.A.V.E. to be shared widely. Participants also shared examples of applying what they learned. One participant said, "I've actually had conversations with my husband that I probably didn't think I was ever going to have. It's opened up doors to some conversations that I didn't know that I would have or have been trying to figure out a way to have for a while and just couldn't quite get there."

**Figure 1. Examples of Participant Endorsement of Learning the Core Components of the VA S.A.V.E. Model**


## What are Next Steps in this Line of Work?

This study is the first ever to evaluate a video-based version of VA S.A.V.E. among individuals recruited via social media who have regular social contact with a Veteran. Our results provide multiple indicators that VA S.A.V.E. is a promising brief suicide prevention training. There are also implications for future work that emerged from this pilot.

Given our high rate of participation among spouses of Veterans, we believe VA S.A.V.E training may hold promise when delivered in settings and contexts popular among military and Veteran families. Indeed, VA S.A.V.E. training for caregivers for Veterans has been included within services offered through the Caregiver Support Program, and evaluation of this training is underway, as described in a recent issue of HSR&D FORUM. PsychArmor also has a video-based version of VA S.A.V.E. for caregivers that can be leveraged. Finally, we believe social media and digital spaces are vital and valuable avenues to share trainings such as VA S.A.V.E.

## References

1. Teo AR, et al. "Feasibility of Recruitment and Retention in a Remote Trial of Gatekeeper Training for Close Supports of Military Veterans: Mixed Methods Study," *Contemporary Clinical Trials Communications* 2022 Sep 5;30:100993.

# Learning about Suicides After Prescription Opioid Change

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How will we learn more about the suicides that sometimes happen in the wake of prescription opioid reductions? How can we possibly prevent them? Answering both these questions has been the passion and the commitment of the VA-funded CSI:OPIOIDs team. Let me tell you why we started this work, why it matters, and why it's difficult to do.

Large database analyses, including those published by VA in 2018, have warned that in some instances, suicides follow prescription opioid reduction or stoppage. It's tempting to assume cause and effect are fully known, and to jump to conclusions. "Don't taper too quickly!" "Don't taper at all!" What's harder is to ask, with an open mind, what happened and why.

To approach these questions, we decided to study suicides one by one, like airplane crashes. There's a name for this: "psychological autopsy." This approach combines interviews and medical record review. The interviews last two hours or more, and cover topics ranging from healthcare changes prior to death, to whether the decedent suffered from unmet social needs from the suicide literature. The latter include two unmet social needs, first described by Thomas Joiner, PhD, a member of our team, and the author of *Why People Die by Suicide*. One is an unmet need for connection (i.e., "thwarted belongingness") and the other is a sense that "others would be better if I were gone" (i.e., "perceived burdensomeness").

Our unique challenge lies with recruitment. Typically, psychological autopsy studies simply ask a medical examiner to help them recruit all suicides in a jurisdiction. By contrast, we seek a type of suicide related to changes in care before death, which is information medical examiners rarely possess. So, our effort is to reach out to the public, to find out if survivors are willing to speak with us on this sensitive subject.

In our pilot work and the first funded year, we developed our own social media, shared across many fora, employed a marketing firm, and designed our website; we've also spoken with countless patients and families. Very soon, we'll launch a professional advertising campaign, working with a firm that understands the rules about what Facebook will and will not agree to share. For example, Facebook will not promote advertisements including the word "suicide."

At every step, we have learned new things, and we have been fortunate. We've had the benefit of VA and non-VA experts in suicide, opioids, pain, addiction, and health services. Even more striking, families who have suffered this excruciating loss have joined our advisory team. If you would like to learn more about our work, please visit www.csiopioids.org. If you know a group of patients or clinicians who would like a flyer, a presentation, or a link, please let us know by writing to csiopioids@uabmc.edu and stefan.kertesz@va.gov.