



Evaluation of Prevention Efforts and Risk Factors Among Veteran Suicide Decedents Who Died by Firearm

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Objective: Veterans die by suicide at a higher rate than the U.S. population, and veterans more frequently use a firearm as the suicide method. Consequently, firearm accessibility and storage represent important prevention considerations. This project aimed to explore the implementation of suicide prevention efforts among veterans who went on to die by suicide, with and without the use of a firearm, and to identify factors that differentiated veteran suicide decedents to help inform suicide prevention efforts.

Methods: Data from the Veteran Health Administration Behavior Health Autopsy Program was analyzed for 97 veteran suicide decedents.

Results: Results demonstrated that veterans who used a firearm for suicide were less likely to have engaged in suicide prevention efforts overall and were less likely to have received lethal means safety counseling / safety planning. Veterans who died by firearm had lower levels of notable risk factors (e.g., prior suicide attempt, no-shows for appointments), however were more likely to have a documented unsecured firearm in their home.

Conclusion: These findings support the benefit of broadening the reach of suicide prevention efforts, especially for high-risk veterans with access to firearms.

Approximately 20 veterans die by suicide each day, representing about 20% of all U.S. suicides (U.S. Department of Veterans Affairs, 2016). After adjusting for age and gender, the veteran suicide rate is 1.5 times higher than nonveteran adults (U.S. Department of Veteran Affairs, 2018). Similar findings have been obtained for veterans of recent U.S. wars (Kang, Bullman, Smolenski, Skopp, Gahm, & Reger, 2015).

Several important risk factors may place veterans at increased risk for suicide compared to civilian populations including

access to firearms. Almost 50% of suicides in America occur by firearm (Ahmedani, et al., 2014), and the proportion of veteran suicides via firearms is even higher. Firearms are the most frequent suicide method among veterans (Kaplan, McFarland, & Huguet, 2009; Kemp & Bossarte, 2012), with more than 69% of veteran suicides resulting from intentional firearm injuries (U.S. Department of Veteran Affairs, 2018). Even after controlling for gender, male and female veterans are more likely to use a firearm in a suicide than civilians (Hoffmire & Bossarte, 2014). Firearms

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are generally considered the most lethal suicide method, regardless of age or gender (Elnour & Harrison, 2008; Shenassa, Catlin & Buka, 2003). Therefore, it is not surprising that suicide attempts among military populations are more likely than civilians to result in death (Anestis & Bryan, 2013).

Firearm accessibility and storage represent important prevention considerations. Among civilian populations, suicide rates have been linked to household ownership of firearms (both overall and among those who die by firearm; Miller, Azrael, & Barber, 2012; Miller, Lippmann, Azrael, & Hemenway, 2007; Weibe, 2003). Nearly half of all veterans own one or more firearms (Cleveland, Azrael, Simonetti & Miller, 2017), and one in three veterans report storing their firearm loaded and unlocked (Simonetti, Azrael, & Miller, 2019). This highlights the importance of veteran suicide prevention efforts focused on safe firearm storage (Mann et al., 2005; Yip, Caine, Yousuf, Wu, & Chenn, 2012). Lethal means safety counseling aims to create additional time between thoughts of suicide and behaviors intended to act on those thoughts, thus providing individuals an opportunity to change their mind, seek help, be interrupted, or receive other interventions. Evidence supporting the effectiveness of lethal means safety counseling has strengthened in the last 15 years (Zalsman et al., 2016). Lethal means safety counseling has resulted in lower suicide rates by firearm (Shenassa, Rogers, Spalding & Roberts, 2004) without off-setting increases in suicides by other methods (Anestis, Selby, & Butterworth, 2017).

Despite the success of lethal means safety counseling in civilian research studies, there is limited evidence available to inform implementation of the intervention among culturally distinct veterans (Meyer, Writer, & Brim, 2016). Little is known, for example, about how often lethal means safety counseling is used among veterans. A study conducted in a civilian emergency department found that only 18% of patients with a positive suicide risk assessment had a documented assessment of lethal means access and,

furthermore, only 8% had a documented discussion related to an action plan to reduce lethal means access (Betz et al., 2018). We were interested in the implementation of these and similar suicide prevention efforts among veterans within our local Veterans Affairs health care system. Furthermore, since those who die by suicide via firearm are less likely to have a history of previous suicide attempts (Anestis, 2016; Anestis, Khazem & Anestis, 2017; Boggs, Simon, Ahmendani, Peterson, Hubly, & Beck, 2017; Smith, Currier, & Drescher, 2015) or a documented mental health or substance use condition (Boggs et al., 2017), it is also important to consider whether more nuanced indicators of psychological distress, or patterns of health care utilization, may aid in targeting prevention efforts to veterans who may benefit most.

The current quality improvement project aimed to explore the implementation of suicide prevention efforts among veterans who went on to die by suicide, with and without the use of a firearm. We were interested in how many of these veterans received lethal means counseling or other prevention efforts. Furthermore, this evaluation aimed to identify factors that differentiated veteran suicide decedents who died by firearm compared to other methods to help inform targeted suicide prevention efforts. We examined whether veterans who died by suicide with a firearm would have fewer prior suicide attempts, health care visits, and psychiatric diagnoses compared to those who died by other methods. We also examined more nuanced documented symptomology that may supplement findings related to psychiatric diagnoses.

METHOD

The data analysis was conducted as part of a quality improvement project. The quality improvement determination was made by the local Director for Human Research Protection Program, the Associate Chief of Staff for Research and Development, and the Director of Quality, Safety, and Values.

Data Sources

We utilized data from the Veteran Health Administration's (VHA's) Behavioral Health Autopsy Program (BHAP). The BHAP is one of VA's primary data collection programs used to inform suicide prevention recommendations and improvements nationally (U.S. Department of Veterans Affairs, 2017). Members of the Suicide Prevention Teams located at each facility are tasked with tracking and submitting information about each local veteran suicide. Data collection consists of standardized chart reviews, interviews with family members, and reviews of the services provided by the VA. Records reviewed include VA medical records, internal VA reports that describe details associated with suicide behavior events (Suicide Behavior Reports), medical examiner reports, death certificates, and police reports (U.S. Department of Veterans Affairs, 2017).

Suicide Case Identification

Ninety-seven suicide cases were identified by their inclusion in the BHAP from 2012 to 2017 at a local VA health care system. Consistent with national BHAP procedures, following a suicide death in the local VA catchment area, a licensed independent clinical social worker or equivalent member of the local Suicide Prevention Team conducted an extensive review of the decedents' records and coded data in accordance with a detailed coding manual. The BHAP tracking system calls for each variable individually, requiring a response from the coder and prompting them to carefully review the accuracy of each item. More detailed information about the BHAP procedures and the summarized national findings can be found in Behavioral Health Autopsy Program (BHAP) Annual Report (U.S. Department of Veterans Affairs, 2017).

BHAP Variables

The current evaluation examined several categories of BHAP data: demographics (10 variables), health care utilization (eight

variables), psychiatric diagnoses (eight variables), acute psychiatric symptoms (e.g., hopeless; five variables), psychosocial risk factors (e.g., legal problems; six variables), and suicide risk factors (e.g., prior suicide attempt; nine variables). Variable details are available in the Tables 1–3.

Engagement in VA suicide prevention services was coded when any one of the following was present in the year prior to death: contact with the local Suicide Prevention Team, engagement in lethal means safety counseling with a provider, or a documented safety plan. In addition, the VA has a system for entering a flag in the medical records when someone is high risk for suicide (e.g., after a suicide attempt); these flags are associated with required suicide prevention efforts and were coded as engagement in VA suicide prevention services. Lethal means safety counseling was examined more directly by creating an additional variable to indicate whether lethal means safety counseling or safety planning (which includes lethal means safety counseling) was conducted in the year prior to death.

RESULTS

The majority of identified suicide cases were male and Caucasian, and the average age of cases was approximately 50 (Table 1). About half of the cases died by firearm ($n = 47$; 48.5%). Cases were divided into two groups based on suicide method: firearm ($n = 47$) and other methods ($n = 50$). Given the preliminary nature of the current report, a critical alpha of .05 was used for all analyses. There were no significant differences between those who used a firearm versus other methods on any demographic characteristics, with the exception of a trending difference for living situation at time of death ($p = .059$). Post hoc analyses revealed veterans who used a firearm for suicide were less likely to be homeless ($p < .05$).

Less than half of all decedents (49.5%) had received any documented suicide prevention services. Veterans who died by a gunshot wound were less likely to have engaged in

TABLE 1
Demographic Characteristics of Veterans Who Died by Suicide

	Firearm method		Other methods	
	N	%	N	%
Gender				
Male	44	93.60	45	93.80
Female	2	4.30	3	6.30
Age (<i>M, SD</i>)	53.97	17.58	47.77	15.66
Race				
Caucasian	42	91.30	37	77.10
African American	2	4.30	3	6.30
Asian	1	2.20	2	4.20
American Indian or Alaska Native	0	0	2	4.20
Native Hawaiian or Pacific Islander	0	0	1	2.10
Other	1	2.20	3	6.30
Ethnicity				
Non-Hispanic	40	95.20	43	93.50
Hispanic	2	4.80	3	6.50
Marital status				
Married/cohabitating	23	56.10	15	34.90
Divorced/separated	7	17.10	14	32.60
Widowed	2	4.90	0	0
Single/never married	8	19.50	9	20.90
Estranged/separated	1	2.40	5	11.60
Children	26	72.20	24	61.50
Living situation				
With spouse/significant other	19	47.50	13	30.20
Alone	13	32.50	9	20.90
With family	5	12.50	6	14.00
With roommate/friend	2	5.0	5	11.60
Homeless	1	2.50	7	16.30
Other	0	0	3	7.0
Combat exposure	15	31.90	9	20.90
Traumatic brain injury	3	9.10	2	6.00

All percentages are based on valid percentages.

suicide prevention efforts overall ($p < .001$) and were less likely to have engaged in lethal means safety counseling/safety planning ($p = .026$; Table 2).

Veterans who used a firearm for suicide were less likely to have a documented previous suicide attempt ($p = .020$) or a history of violence ($p = .019$). They were more likely to have a documented unsecured firearm in their home ($p < .001$; Table 2).

Veterans who used a firearm for suicide were less likely to have no-showed for multiple medical and/or mental health

appointments ($p = .006$; Table 3).¹ Veterans who used a firearm versus other method for suicide did not differ in documented psychiatric diagnoses. Veterans who used a firearm for suicide were less likely to have a documented experience of guilt ($p = .029$) and were more likely to have a recent decline in physical activity ($p = .025$).

¹Three outliers were identified on the variable assessing number of days since veteran's final visit. Analyses were re-run with outliers removed; the pattern of results did not change.

TABLE 2
Group Differences on Suicide Prevention Efforts and Suicide Risk Factors by Suicide Method

	Firearm method		Other methods		χ^2	v
	N	%	N	%		
Suicide prevention efforts						
Any suicide prevention effort	15	31.90	33	66.00	11.26***	0.34
Means safety/safety planning	14	29.80	26	52.00	4.93*	0.23
Suicide risk factors						
Previous suicide attempt	18	38.30	31	62.00	5.45*	0.24
History of violence	1	2.10	8	16.00	5.54*	0.24
Suicide plan	9	19.10	9	18.00	0.02	0.01
Unsecured firearm	29	61.70	3	6.00	34.00***	0.59
Family or friend suicide	0	0.00	2	4.00	1.92	0.14
Suicide note	2	4.30	2	4.00	0.01	0.01
Give possessions away	1	2.10	2	4.00	0.28	0.05
Other preparatory acts	1	2.10	1	2.00	0.01	0.01
Suicidal ideation at last contact	3	4.40	6	4.60	0.91	0.10

* $p < .05$. *** $p < .001$; all percentages are based on valid percentages.

DISCUSSION

Findings from this quality improvement project highlight that less than half of veterans who went on to die by suicide had received prevention services from the VA in the form of contact with the local Suicide Prevention Team, engagement in lethal means safety efforts, a documented safety plan, and/or the presence of a high risk for suicide flag in the medical record. Furthermore, fewer than one-third of those who died by suicide using a firearm had received lethal means safety counseling. While these findings appear to be better than those observed in some civilian studies (Betz et al., 2018), they are far from ideal. Unfortunately, these findings are not surprising since the research literature is clear that clinicians cannot predict suicide with an acceptable degree of accuracy (e.g., Dawes, Faust, & Meehl, 1989), likely translating to a limited ability to identify those at highest need for prevention efforts. In addition, implementation of the VA's suicide prevention efforts requires that veterans are seen for care and that they share information relevant to their risk. While veterans were often seen within 30 days of their death (Table 3 footnote), research shows that many

patients who die by suicide do not endorse suicide risk at their final health care visit, even when asked directly about it (Simon et al., 2016). Furthermore, recent research emphasizes that suicidal ideation fluctuates significantly even within a single day (Kleiman, Turner, Fedor, Beale, Huffman, & Nock, 2017); veterans may report information truthfully during a health care visit, but their risk can increase rapidly soon after due to changes in stressors or other risk factors. These sobering realities highlight the challenges associated with suicide prevention in any health care system.

From a clinical perspective, the results of the evaluation suggest that it may be helpful to broaden the reach of suicide prevention efforts, especially for high-risk veterans with access to firearms. Those who died by firearm appear to be identified at-risk less frequently than those who died by other methods, resulting in lower engagement in suicide prevention efforts (32% overall). Theoretically, clinicians could seek to provide lethal means safety counseling to more veterans with access to firearms if they demonstrate *any* suicide risk. However, such strategies must consider the associated statistical realities, since the low base for suicide exacerbates the

TABLE 3
Group Differences on Study Variables by Suicide Method

	Firearm method		Other methods		χ^2	v
	N	%	N	%		
Health care utilization						
Last visit type					4.52	0.22
Mental health	18	40.00	16	34.00		
General medical	15	33.00	9	19.10		
Other	12	26.70	22	46.80		
Days since last visit ^a	212.40	535.28	87.13	161.10	1.55	0.32
Service connection ^a	39.15	41.22	36.40	39.94	0.33	0.07
One-year prior						
Psychiatry referral	8	17.01	7	14.00	1.87	0.21
Substance use/residential treatment	8	17.00	14	28.00	1.67	0.13
Residential service	1	2.20	4	8.20	1.71	0.13
30 Days prior						
Multiple failure to show	5	10.60	17	34.00	7.54**	0.28
Number of MH inpatient bed days ^a	0.20	0.93	1.10	4.83	-1.22	-0.26
Number of MH outpatient visits ^a	1.79	5.01	1.90	4.48	-0.11	-0.02
Psychological diagnoses						
Depression	25	41.70	35	58.30	2.90	0.17
Post-traumatic stress disorder	20	42.60	20	40.00	0.07	0.03
Anxiety disorder	15	31.90	12	24.00	0.76	0.09
Bipolar disorder	4	8.50	8	16.00	1.25	0.11
Schizophrenia	3	6.40	6	12.00	0.91	0.10
Alcohol use disorder	13	27.70	19	38.00	1.17	0.11
Substance use disorder	8	17.00	16	32.00	2.92	0.18
Personality disorder	2	4.30	2	4.00	0.01	0.01
Acute psychiatric symptoms						
Hopeless	9	19.10	14	28.00	1.05	0.10
Sleep problems	24	51.10	31	62.00	1.18	0.11
Guilt	3	6.80	11	22.00	4.78*	0.22
Agitation	12	25.50	20	40.00	2.30	0.15
Pain	24	51.10	31	62.00	1.18	0.11
Psychosocial risk factors						
Decline in physical activity	13	27.70	5	10.00	4.99*	0.23
Financial loss	8	17.00	12	24.00	0.72	0.09
Legal problems	6	12.80	7	14.30	0.05	0.02
Health problems	17	36.20	11	22.00	2.37	0.16
Relationship problem	11	23.40	18	36.00	1.83	0.14
Family or friend death	2	4.30	2	4.00	0.01	0.01

^aMeans, standard deviations, *t*-test statistic and Cohen's *d* presented, the median for this variable was: overall = 15; firearm method = 18; and other methods = 12.

p* < .05. *p* < .01.

prevention challenge; there are only about 30 suicides per 100,000 veterans a year in the population (U.S. Department of Veterans Affairs Office of Mental Health & Suicide

Prevention, 2018). Thus, our results also lend support to the view that new secondary prevention efforts are needed that seek to identify those at elevated risk who are not known to be

clinically suicidal for further assessment or proactive prevention efforts (Griffith & Bryan, 2018). Some new secondary prevention programs for suicide risk appear promising (e.g., Voss, Kaufman, O'Connor, Comtois, Conner, & Ries, 2013). Predictive models based on sophisticated statistical analyses of electronic health records are also emerging as a new tool to assist clinicians in identifying veterans at risk (Kessler et al., 2017; McCarthy et al., 2015).

The results also showed that even though those who died by firearm were more likely to have an unsecured firearm in their home, they were less likely to have engaged in lethal means safety counseling compared to those who died by other methods. Since those who died by firearm had equivalent medical and mental health contacts compared to other suicide methods, this does not appear to be due to less opportunity for suicide prevention efforts. It is possible that veterans who died by firearm were less likely to disclose owning or having access to a gun (which may decrease the rate of lethal means safety counseling) or they may have declined to participate lethal means counseling at higher rates. Alternatively, it could be an artifact of gun owners being less likely to be identified as high risk, overall.

In support of the latter point, differences between veterans who died by firearm versus other methods suggested that those who died by firearm may have been less severe psychiatrically, in some subtle ways. Compared to veterans who died by other methods, they were less likely to have a prior suicide attempt, history of violence in the year before death, and complaints about feelings of guilt in the year prior to death. Furthermore, they were less likely to fail-to-show for scheduled appointments in the 30 days prior to their suicide. These findings are generally consistent with previous research (Anestis, 2016; Anestis et al., 2017; Boggs et al., 2017; Smith et al., 2015). Some have speculated that those who die by firearm may be less severe, psychiatrically, but their choice of a firearm method increases their chance of dying on their first suicide attempt, compared to those who select

other methods (Anestis, 2016). Those selecting another, less lethal method may consequently live longer and decline more psychiatrically. However, we did not observe differences in rates of psychiatric diagnoses between the suicide method groups which some prior studies have reported (Boggs et al., 2017); we note that Boggs et al. (2017) examined one overarching variable to assess the presence of a mental health or substance use condition. Our goal was to determine whether it is possible to target prevention services to those in need, so we used a more specific diagnostic analysis. More research is needed on this topic.

Based on the results of our program evaluation, we recommended several actions. First, we recommended additional provider training on lethal means counseling to ensure they have updated information about the intervention and strategies to effectively implement such discussions with veterans. Second, our facility is planning to pilot a new secondary prevention program for veterans with substance use disorders (SUDs). Veterans with SUDs are at high risk for suicide (Ilgen, et al., 2010), providing an important opportunity to expand secondary suicide prevention efforts. In addition, since the collection of the majority of these data, our facility has implemented the VA's national REACH VET model which utilizes a predictive model to help clinicians identify veterans at-risk for suicide (Reger, McClure, Ruskin, Carter, & Reger, 2018). Safety planning and lethal means safety counseling are now considered when veterans are identified as potentially at-risk by the statistical model, providing one more pathway to ensure veterans receive evidence-based prevention services. The results of this evaluation were also disseminated to our Suicide Prevention Coordinators and leadership.

The current findings should be viewed in light of methodological limitations. It is possible that the BHAP data collection process missed relevant data for some variables. Similarly, suicide prevention efforts may have been implemented and not documented, and the coding system only captured some types

of prevention. While members of the local Suicide Prevention Team were trained in data coding and had a detailed coding manual to follow, all cases were only coded by a single individual, precluding the examination of interrater reliability. It is also possible that data coding practices changed over time as the VA emphasized suicide prevention and surveillance in more recent years. Data collection for some variables may have been biased by the method of suicide (e.g., unsafe firearm storage practices may be more frequently identified in firearm deaths); this risk appears to only affect a few variables, however. The overall and by group sample sizes were low, potentially resulting in underpowered analyses. Finally, suicide cases were identified within the local catchment area; only those

cases identified by the VA and enrolled in VA care were included in current evaluation.

Despite these limitations, the current findings show that in a local sample, veteran suicide decedents who die by firearms may be less psychiatrically severe and exhibit fewer oft-cited suicide risk factors (e.g., previous suicide attempts). Furthermore, they are less likely have engaged in suicide prevention efforts, like lethal means safety counseling. Taken together, results highlight the need for the development of secondary suicide prevention efforts targeting those who are at-risk for death by firearm. The results also highlight the value of surveillance programs, such as the BHAP, for tracking prevention efforts in local health care systems.

REFERENCES

- AHMEDANI, B. K., SIMON, G. E., STEWART, C., BECK, A., WAITZFELDER, B. E., ROSSOM, R., ET AL. (2014). Health care contacts in the year before suicide death. *Journal of General Internal Medicine*, *29*, 870–877.
- ANESTIS, M. D. (2016). Prior suicide attempts are less common in suicide decedents who died by firearms relative to those who died by other means. *Journal of Affective Disorders*, *189*, 106–109.
- ANESTIS, M. D., & BRYAN, C. J. (2013). Means and capacity for suicidal behavior: A comparison of the ratio of suicide attempts and deaths by suicide in the U.S. military and general population. *Journal of Affective Disorders*, *148*, 42–47.
- ANESTIS, M. D., KHAZEM, L. R., & ANESTIS, J. C. (2017). Differentiating suicide decedents who died using firearms from those who died using other methods. *Psychiatry Research*, *252*, 23–28.
- ANESTIS, M. D., SELBY, E. A., & BUTTERWORTH, S. E. (2017). Rising longitudinal trajectories in suicide rates: the role of firearm suicide rates and firearm legislation. *Preventive Medicine*, *100*, 159–166.
- BETZ, M. E., KAUTZMAN, M., SEGAL, D. L., MILLER, I., CAMARGO, C. A. JR., BOUDREAUX, E. D., ET AL. (2018). Frequency of lethal means assessment among emergency department patients with a positive suicide risk screen. *Psychiatry Research*, *260*, 30–35.
- BOGGS, J. M., SIMON, G. E., AHMEDANI, B. K., PETERSON, E., HUBLEY, S., & BECK, A. (2017). The association of firearm suicide with mental illness, substance use conditions, and previous suicide attempts. *Annals of Internal Medicine*, *167*, 287–288.
- CLEVELAND, E. C., AZRAEL, D., SIMONETTI, J. A., & MILLER, M. (2017). Firearm ownership among American veterans: Findings from the 2015 National Firearm Survey. *Injury Epidemiology*, *4*, 33.
- DAWES, R. M., FAUST, D., & MEEHL, P. E. (1989). Clinical versus actuarial judgment. *Science*, *243*, 1668–1674.
- ELNOUR, A. A., & HARRISON, J. (2008). Lethality of suicide methods. *Injury Prevention*, *14*, 39–45.
- GRIFFITH, J., & BRYAN, C. J. (2018). Preventing suicides in the US military. *Psychological Services*, *15*, 251.
- HOFFMIRE, C. A., & BOSSARTE, R. M. (2014). A reconsideration of the correlation between veteran status and firearm suicide in the general population. *Injury Prevention*, *20*, 317–321.
- ILGEN, M. A., BOHNERT, A. S. B., IGNACIO, R. V., MCCARTHY, J. F., VALENSTEIN, M. M., KIM, M., ET AL. (2010). Psychiatric diagnoses and risk of suicide in veterans. *Archives of General Psychiatry*, *67*, 1152–1158.
- KANG, H. K., BULLMAN, T. A., SMOLENSKI, D. J., SKOPP, N. A., GAHM, G. A., & REGER, M. A. (2015). Suicide risk among 1.3 million veterans who were on active duty during the Iraq and Afghanistan wars. *Annals of Epidemiology*, *25*, 96–100.
- KAPLAN, M. S., MCFARLAND, B. H., & HUGUET, N. (2009). Firearm suicide among

veterans in the general population: Findings from the national violent death reporting system. *The Journal of Trauma Injury Infection and Critical Care*, 67, 503–507.

KEMP, J., & BOSSARTE, R. (2012). *Suicide data report, 2012*. Washington, DC: U.S. Department of Veterans Affairs.

KESSLER, R. C., HWANG, I., HOFFMIRE, C. A., MCCARTHY, J. F., PETUKHOVA, M. V., ROSELLINI, A. J., ET AL. (2017). Developing a practical suicide risk prediction model for targeting high-risk patients in the Veterans health Administration. *International journal of Methods in Psychiatric Research*, 26, e1575.

KLEINMAN, E. M., TURNER, B. J., FEDOR, S., BEALE, E. E., HUFFMAN, J. C., & NOCK, M. K. (2017). Examination of real-time fluctuations in suicidal ideation and its risk factors: Results from two ecological momentary assessment studies. *Journal of Abnormal Psychology*, 126, 726–738.

MANN, J. J., APTER, A., BERTOLOTE, J., BEAUTRAIS, A., CURRIER, D., HAAS, A., & ET AL. (2005). Suicide prevention strategies: A systematic review. *Journal of the American Medical Association*, 294, 2064–2074.

MCCARTHY, J. F., BOSSARTE, R. M., KATZ, I. R., THOMPSON, C., KEMP, J., HANNEMANN, C. M., ET AL. (2015). Predictive modeling and concentration of the risk of suicide: Implications for preventive interventions in the US Department of Veterans Affairs. *American Journal of Public Health*, 105, 1935–1942.

MEYER, E. G., WRITER, B. W., & BRIM, W. (2016). The importance of military cultural competence. *Current Psychiatry Reports*, 18, 26.

MILLER, M., AZRAEL, D., & BARBER, C. (2012). Suicide mortality in the United States: the importance of attending to method in understanding population-level disparities in the burden of suicide. *Annual Review of Public Health*, 33, 393–408.

MILLER, M., LIPPMANN, S. J., AZRAEL, D., & HEMENWAY, D. (2007). Household firearm ownership and rates of suicide across the 50 United States. *Journal of Trauma and Acute Care Surgery*, 62, 1029–1035.

REGER, G. M., MCCLURE, M. L., RUSKIN, D., CARTER, S. P., & REGER, M. A. (2018). Integrating predictive modeling into mental health care: an example in suicide prevention. *Psychiatric Services*, 70, 71–74.

SHENASSA, E. D., CATLIN, S. N., & BUKA, S. L. (2003). Lethality of firearms relative to other suicide methods: A population based study. *Journal of Epidemiology & Community Health*, 57, 120–124.

SHENASSA, E. D., ROGERS, M. L., SPALDING, K. L., & ROBERTS, M. B. (2004). Safer storage of firearms at home and risk of suicide: a study of protective factors in a nationally representative sample. *Journal of Epidemiology & Community Health*, 58, 841–848.

SIMON, G. E., COLEMAN, K. J., ROSSOM, R. C., BECK, A., OLIVER, M., JOHNSON, E., ET AL. (2016). Risk of suicide attempt and suicide death following completion of the Patient Health Questionnaire depression module in community practice. *Journal of Clinical Psychiatry*, 77, 221–227.

SIMONETTI, J. A., AZRAEL, D., & MILLER, M. (2019). Firearm storage practices and risk perceptions among a nationally representative sample of US veterans with and without self-harm risk factors. *Suicide and Life-Threatening Behavior*, 49, 653–664.

SMITH, P. N., CURRIER, J., & DRESCHER, K. (2015). Firearm ownership in veterans entering residential PTSD treatment: Associations with suicide ideation, attempts, and combat exposure. *Psychiatry Research*, 229, 220–224.

U.S. Department of Veterans Affairs (2017). *Behavior Health Autopsy Program (BHAP) Annual Report: December 1, 2012 – June 30, 2016*.

U.S. Department of Veterans Affairs, Office of Mental Health and Suicide Prevention (2016). *Suicide Among Veterans and Other Americans: 2001–2014*.

U.S. Department of Veterans Affairs, Office of Mental Health and Suicide Prevention (2018). *VA National Suicide Data Report: 2005–2016*.

VOSS, W. D., KAUFMAN, E., O'CONNOR, S. S., COMTOIS, K. A., CONNER, K. R., & RIES, R. K. (2013). Preventing addiction related suicide: A pilot study. *Journal of Substance Abuse Treatment*, 44, 565–569.

WIEBE, D. J. (2003). Homicide and suicide risks associated with firearms in the home: a national case-control study. *Annals of Emergency Medicine*, 41, 771–782.

YIP, P. S., CAINE, E., YOUSUF, S., CHANG, S. S., WU, K. C., & CHEN, Y. Y. (2012). Means restriction for suicide prevention. *Lancet*, 379, 2393–2399.

ZALSMAN, G., HAWTON, K., WASSERMAN, D., VAN HEERINGEN, K., ARENSMAN, E., SARCHIAPONE, M., ET AL. (2016). Suicide prevention strategies revisited: 10-year systematic review. *The Lancet Psychiatry*, 3, 646–659.

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