Preventing Suicides in the U.S. Military

James Griffith  
National Center for Veterans Studies, Salt Lake City, Utah

Craig J. Bryan  
National Center for Veterans Studies, Salt Lake City, Utah, and University of Utah

In the past decade, the U.S. military has observed increased suicides among its personnel, and now, rates for the military services exceed civilian age-adjusted rates. Numerous and varied approaches to suicide prevention are now evident, though with measured success. To address this need, levels typically used in the health field to describe interventions (i.e., primary, secondary, and tertiary) are described and used. The discussion clarifies fundamental differences in the stage at which the negative health condition is intervened, and for the intervention, its purpose, target audience, and aim. This framework can also be used to identify current gaps in suicide prevention and possible directions for future approaches.

One of the first observations regarding the military’s rising suicide rate was that the Marine Corps and Army had the highest rates among the services (see Figure 1). Given the Marine Corps and Army conducted the greater part of the ground combat, initial hypotheses centered on the potential role of combat trauma on suicide risk (U.S. Army of the Office of Chief of Public Affairs, 2010). From 2012 to 2014, there was a notable decrease in crude suicide rates across most services, with the exception of the Air Force’s steadily rising rate, but this trend soon reversed.

The U.S. military subsequently initiated numerous studies to identify factors associated with increased risk of suicide, including but not limited to the U.S. Army Public Health Command’s Health Surveillance studies (e.g., Nweke et al., 2016), the Army Study to Assess Risk and Resilience in Service members (STARRS; Ursano et al., 2014), and studies of suicide events performed by the Department of Defense (DoD) National Center for Telehealth and Technology (e.g., Pruitt et al., 2017).

What Is Known

Suicides in the U.S. military have been observed to occur proportionally more among males, Caucasians/Whites, and younger ages (18–24 years), many of whom have undetected or untreated behavioral conditions or substance abuse (Anglemyer, Miller, Buttrey, & Whitaker, 2016; Black, Gallaway, Bell, & Ritchie, 2011; Nock et al., 2013; Schoenbaum et al., 2014). Other associated risk factors include past childhood abuse (Afifi et al., 2016; Griffith, 2014) and past sexual mistreatment (Bryan, McNaughton-Cassill, Osman, & Hernandez, 2013). Psychosocial conditions associated with suicide risk are, principally, posttraumatic stress disorder (PTSD), depression, and alcohol-related problems (Krysinska & Lester, 2010; Leard-Mann et al., 2013; Ursano et al., 2015). It is surprising that having been deployed and having participated in combat have shown little to no
association with suicide (Anglemyer et al., 2016; Bryan et al., 2015; LeardMann et al., 2013).

U.S. military leaders and researchers have sought to understand these increases and reverse the apparent trend through various prevention programs (Ramchand, Acosta, Burns, Jaycox, & Pernin, 2011). It has now been over a decade since the rise of suicides in the U.S. military was first observed and prevention efforts were escalated. Despite these efforts, suicides in the military generally have continued to rise. Figure 2 portrays crude suicide rates of the Department of Defense (DoD) over time, with rates showing an overall linear increase.

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Levels of Prevention

Three levels are often used in the health field to convey entry points for programs to intervene and prevent the disease process: primary, secondary, and tertiary (Ganz, Braquehais, & Sher, 2010; National Public Health Partnership, 2006; Park, 2005). Each level has a definitive stage at which to mitigate negative health conditions, in addition to a distinct purpose, target audience, and strategy aim (see Table 1).

Primary prevention aims to reduce the number of new cases of the negative health condition in the general population by controlling exposure to risk factors and promoting protective factors. Primary prevention targets a broad audience and, insofar as possible, aspires to prevent symptoms among individuals likely to develop the negative health condition. For example, primary prevention strategies for various health issues have included broad-based lifestyle media campaigns (e.g., nutrition, exercise, etc.) believed to influence individual behaviors, especially those associated with the negative health condition (e.g., high blood pressure). Secondary prevention aims to reduce the progression of the negative health condition by early detection and intervention. Secondary prevention identifies those individuals at risk for the negative health condition (e.g., family history of high blood pressure, increased difficulty in performing physical tasks, etc.) and intervening with them in order to mitigate the progression of the condition. Often, those at-risk do not know they have initial symptoms of the negative health condition. Finally, tertiary prevention aims to reduce the effects of an already-contracted negative health condition and its associated complications via effective treatment and management. Tertiary prevention targets those who already have the negative health condition and preventive efforts
aim to slow down the condition (e.g., prescribing medication to those having high blood pressure). A combination of primary, secondary, and tertiary interventions is likely needed to achieve meaningful suicide prevention and protection.

In the U.S. military, there are numerous examples of each level of suicide prevention. Several documents prescribe the DoD’s broad suicide prevention strategy, including the 2015 DoD Strategy for Suicide Prevention (U.S. Department of Defense, 2015), the Defense Suicide Prevention Office (DSPO) Annual Reports (e.g., DSPO, 2013, 2014), the Department of Veterans Affairs (VA)/DoD Clinical Practice Guideline for Assessment and Management of Patients at Risk for Suicide, and the National Research Action Plan (U.S. Departments of Defense, Veterans Affairs, Health and Human Services, and Education, 2013), the latter of which is a document jointly developed by the Departments of Defense, Veterans Affairs, Health and Human Services, and Education. Broad goals for suicide prevention that cut across all of these reports entail promoting individual coping and help-seeking, developing policies and procedures to ensure access to appropriate care, and conducting research and surveillance activities to identify risk factors and effective suicide prevention.

A recent RAND study (Ramchand et al., 2014) suggested the majority of suicide prevention efforts in the DoD can be classified as primary prevention. As noted above, these programs tend to entail broad-based public awareness and education campaigns that focus largely on the communication of concerning symptoms and the availability of professional support services. Resilience and readiness programs such as Comprehensive Soldier and Family Fitness (CSF), Comprehensive Airman Fitness (CAF), Sailor Assistance and Intercept for Life (SAIL), and Combat Operational Stress Control (COSC) are aimed at helping servicemembers better cope with military and general life stressors, thereby reducing the prevalence and/or intensity of risk factors for suicide. Although these programs are not necessarily considered to be suicide prevention programs per se, they nonetheless aim to equip military personnel at large with information to more effectively recognize emergent symptoms and risk factors associated with suicide risk and offer tools (largely cognitive–behavioral in design) to more effectively cope with stressors. Underlying this approach is the stress-diathesis hypothesis (Griffith & West, 2013), which posits that life stressors become so great and overwhelming that the individual sees him/herself as helpless and a victim, becomes severely depressed, and “gives up.” In theory, resilience programs help the individual to reduce distress reactions via enhanced recognition of what contributes to worsening negative life events (e.g., irrational thoughts) and increased competency in responding to these factors (e.g., seeking help).

Much of the presentation in the present paper centers on Army suicide prevention for two primary reasons. First, the Army has had and continues to have highest rates of suicide (U.S. Army Office of the Chief of Public Affairs, 2012). Second, the Army active and reserve components comprise the largest numbers of military personnel: in 2016, the active component Army comprised over a third of all personnel among the active components (475,000 of 1,400,000) and the U.S. Army Reserve and Army National Guard composed over one half of the select reserves (550,000 of 990,000; Heritage, 2017). Despite this general focus, we propose that our discussion and conclusions can be applied to all military branches.

Less common both in civilian (Ganz et al., 2010) and U.S. military populations are secondary prevention approaches, which seek to identify those at elevated risk in order to provide clinical assessment, intervention, and/or treatment referral. The Army’s Ask, Care, and Escort (ACE) program, which includes broad-based education and training for all soldiers aimed at recognizing suicidal behaviors and reducing stigma for soldiers to seek appropriate help, is one possible example of secondary intervention. ACE can also be conceptualized as tertiary prevention as well, in
Table 1
Levels of Prevention: Stage of Condition, Purpose, Target Audience, Strategy Aim, and Intervention Approach

<table>
<thead>
<tr>
<th>Question relative to approach to prevention</th>
<th>Level of prevention</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stage of condition: When to prevent?</td>
<td>Primary</td>
</tr>
<tr>
<td>Vulnerability evident, i.e., specific factors associated with onset of negative health condition.</td>
<td>Early onset of negative health condition evident—from good health to onset of negative health condition.</td>
</tr>
<tr>
<td>Purpose: What temporal period to prevent?</td>
<td>Secondary</td>
</tr>
<tr>
<td>Intercede before factors associated with onset of negative health condition occur</td>
<td>Intercede at or near development of onset of negative health condition</td>
</tr>
<tr>
<td>Target audience: Who to focus on?</td>
<td>Tertiary</td>
</tr>
<tr>
<td>General population</td>
<td>At-risk subpopulation, those having early symptoms of negative health condition or factors associated with its onset</td>
</tr>
<tr>
<td>Strategy aim: Where to prevent?</td>
<td></td>
</tr>
<tr>
<td>Widespread change to reduce factors associated with onset of negative health condition, in particular, subpopulations possessing such factors</td>
<td>Prevent progression of negative health condition by early detection and intervention</td>
</tr>
<tr>
<td>Intervention approach: How to prevent?</td>
<td></td>
</tr>
<tr>
<td>Recognition of factors associated with onset of negative health condition. Disseminate broad-based preventive measures, e.g., education, attitude and behavioral change, etc., to reduce exposure to factors associated with the negative health condition.</td>
<td>Recognition of early symptoms of negative health condition in others and self. Broad-based identification and referral individuals for further assessment and treatment.</td>
</tr>
<tr>
<td>What are examples of current this approach?</td>
<td></td>
</tr>
<tr>
<td>Universal and targeted activities that reduce exposure to risk factors and promote protective factors, e.g., Army resilience program</td>
<td>Identification of individuals having signs of or factors associated with negative health condition. Activities made available to detect and refer individuals having symptoms or most at risk for negative health condition, e.g., Periodic Health Assessment, Army ACE program</td>
</tr>
<tr>
<td>What is the occurrence of this approach among current military programs?</td>
<td>Many</td>
</tr>
</tbody>
</table>

the sense an individual who is identified as being suicidal is connected with professional clinical interventions. Secondary prevention approaches are most needed and likely to be most effective, when considering research findings pertaining to suicides. Research studies conducted by the U.S. Army Health Command reported, for instance, that nearly one half of all Army suicides were undetected or, when detected, were preceded by unsystematic behavioral health treatment (U.S. Army Office of the Chief of Public Affairs’ [2010] U.S. Army Health Promotion report; and (U.S. Army Office of the Chief of Public Affairs’ [2012] U.S. Army 2020: Generating Health report). Furthermore, there is accumulating evidence that individuals who have experienced early childhood trauma (Pomplii et al., 2011) and/or enduring “negative affectivity” (Meis, Erbes, Polusny, & Compton, 2010) may be especially vulnerable to suicidal behaviors. Such predispositions, combined with the rarity of suicide in the military population, imply the need for developing new, effective methods to screen for elevated risk among vulnerable subgroups.

Current U.S. military suicide prevention also includes tertiary prevention. Broadly, these approaches employ methods intended to reduce suicide risk among clinical populations, largely in the form of medications and psychotherapy. For example, medication treatments include antidepressants to reduce depression and PTSD symptom severity whereas psychotherapies such as prolonged exposure and cognitive processing have been found to reduce PTSD and depression symptom severity, two conditions that are often comorbid conditions of suicidal behavior. At times, the military offers presentations to inform professionals and laypersons of effective clinical methods. An example is the recent Defense Center of Excellence presentation “Evidence-Based Treatment and Prevention for Suicide and Related Outcomes” (Knox, Litts, Talcott, Feig, & Caine, 2003). Yet another example is the Army’s current comparison of the effectiveness of various suicide risk screening assessments for those already in clinical treatment (Joiner & Gutierrez, 2013). This study involves a comparison of several existing suicide screening assessments on military clinical populations, not nonclinical populations. These approaches are aimed at those individuals who are suicidal or very near suicidal and clinical treatment constitutes the preventive approach. An early review of clinical treatments of suicidal behavior showed limited effectiveness (O’Neil et al., 2012), although more recent data indicates that brief cognitive–behavioral therapy (BCBT) was effective for reducing suicidal behavior by 60% among
active duty military personnel with active suicide ideation or a recent suicide attempt (Rudd et al., 2015). Subsequent research has found that one particular procedure from BCBT, the crisis response plan, reduced suicide attempts by 76% among active duty servicemembers who had unscheduled arrivals to an emergency department or mental health clinic for a behavioral health evaluation (Bryan et al., 2017). A recent review of several military clinical trials (Bryan & Rozek, in press) further suggests that certain trauma-focused therapies may reduce suicide risk among service members with PTSD. These studies mark important advances in tertiary suicide prevention among military personnel.

Suicide Prevention in Context of Levels

The abundance of primary and tertiary prevention approaches in the U.S. military contribute to speculative assumptions regarding how best to manage suicide and lessen its occurrence (Ganz et al., 2010; Ramchand et al., 2014). Clinical treatment methods (tertiary prevention) and resiliency training (primary prevention), for example, are more often seen as effective methods to reduce suicide risk among the general population (U.S. Department of Army, 2014). Regarding the former, the underlying assumption is that the etiology and course of suicide risk among individuals in nonclinical settings is similar to those in clinical settings, though empirical support is lacking concerning the specific processes and course of suicidal behavior (Nock et al., 2013). Even if evidence is offered, suicide risk cases must be effectively identified in the general population. Regarding the latter, CSF resiliency training was initially aimed at helping soldiers better adapt to combat and related military stressors (i.e., the precursor being BattleMind; Adler, Bliese, McGurk, Hoge, & Castro, 2009), and now, also to everyday stressors. Suicide has been seen as the individuals’ ability to effectively cope with stressors—that increased levels of stressors become so great, that the individual becomes extremely distressed, helpless, and suicidal. Research among military samples indicating the primary driver of suicidal behavior is the desire to avoid or alleviate emotional distress (Bryan, Rudd, & Wertenberger, 2013) supports the coping perspective of suicidal behavior. Applying resiliency training to suicide prevention seems logical, as both personal distress and suicide make similar assumptions about stress reactions (i.e., relied on the stress-diathesis hypothesis). However, recent evidence has shown that stressors, in particular those associated with war (e.g., having been deployed, number of deployments and combat exposure), show little to no relationship with suicidal behavior (Bryan et al., 2015; LeardMann et al., 2013). In addition, a recent meta-analysis of resiliency training’s effectiveness has shown mixed results. Vanhove, Herian, Perez, Harms, and Lester (2015) reported overall small positive effects of resilience training, though effects diminished over time. Effectiveness differed by method of instruction: One-to-one delivery showed most positive effects, followed by classroom. Train-the-trainer and computer-based were least effective. Finally, resiliency training had an opposite or negative effect on those greater at risk—either experiencing stress or lacking protective factors.

The importance of levels of prevention also lies in clarifying assumptions underlying the intervention approach. Approaches would seemingly prescribe program activities that intervene in the processes of suicidal behavior. Without elaborating such connections, the logical basis for program activities and their expected effects are uncertain. There, then, is less confidence in programs based on approaches not having clearly articulated connections to processes inherent in suicidal behavior. Approaches to primary prevention often include symptom awareness and recognition, resulting in referral of others or oneself to behavioral health care. The assumption is that symptom awareness and recognition will lead to prevention, notwithstanding the many examples in public health to the contrary (e.g., O’Loughlin, Paradis, Gray-Donald, & Renaud, 1999). Mann et al. (2005) reported mixed support for public education, screening, and media education as being preventive of suicide. Zamorski (2011) also noted the limited effectiveness of broad-based media campaigns on suicide prevention (see also, Fountoulakis, Gonda, & Rihmer, 2010).

Another assumption is that lessening the stigma (or social consequences) associated with seeking treatment through broad-based information campaigns will reduce suicide. Recent research suggests that unwillingness to seek behavioral health care is the result of soldiers’ general cynicism of its effectiveness, independent of self-stigma and negative attitudes toward mental health care (Arbisi, Rusch, Polusny, Thuras, & Erbes, 2013). Too, reluctance to seek help may equally have to do with (a) access to behavioral health care, in particular, for reservists who are not typically covered by military health care after having left active military duty and often lack adequate private health care insurance and (b) behavioral health providers’ unfamiliarity with the most effective treatments for suicide risk (Schmitz et al., 2012). In sum, benefits for current and future prevention approaches lie in more deliberate thought, in particular, at broad conceptual prevention levels in combination with what is now known about suicides in the U.S. military.

Implications for Suicide Prevention

Secondary prevention is lacking in approaches to suicide prevention, both in the civilian and military (Ganz et al., 2010; Mann et al., 2005), and represents a fruitful direction for future policy and practice. This is particularly relevant because “filling this gap” will (a) identify those who are at risk yet not clinically suicidal for further assessment and (b) address the statistic that nearly one half of Army suicides had either untreated or unsystematic behavioral health treatment (Millikan, Spiess, Mitchell, Watts, & Porter, 2011). The success of applying the most effective tertiary treatments in reducing overall suicide rates lies in the effective identification of those at risk from the start. As stated by Mann et al. (2005) in their review of approaches to suicide prevention, “...much of what we have learned about secondary suicide prevention through research can now be applied to the real world. For example, we know that to provide the best secondary suicide prevention, clinicians must learn how to evaluate at-risk individuals properly (emphasis added). After completing these assessments, clinicians can now use well-researched psychological and pharmacological methods to decrease the levels of suicidality in their patients. Too, restricting access to lethal means and responsible media reporting of suicide are associated with a reduction of suicides worldwide.” This discussion implies several concrete actions regarding future approaches to suicide prevention:

1. Developing feasible universal screening methods to identify those at risk;
2. Offering behavioral health care to those determined at-risk, which is sustained overtime; and

3. Developing and implementing a firearms safety program for servicemembers and their families, which instructs on how best to store fire arms.

These actions are summarized in greater detail in the US Medicine journal at http://www.usmedicine.com/psychiatry/who-are-most-likely-military-suicide-victims-guard-study-offers-some-valuable-clues.html#.UgKeLW01n-U.

Concerning the first action, at present, there is no practical method to effectively screen those soldiers at risk for case identification and further follow-up. Indeed, among priorities of the National Research Action Plan (U.S. Departments of Defense, Veterans Affairs, Health and Human Services, and Education, 2013) are screening and assessment tools that better guide decisions on identification and intervention. At present, screening methods to assess psychological adjustment do not lend themselves to consistent administration, scoring, or follow-up (Gutierrez, 2012). Before joining military service, prospective recruits at the military entrance processing station (MEPS) respond to a few open-ended questions. The way in which the questioning is conducted and scored varies greatly. Potential inductees can easily falsify responses. For those already in the military, questions about stress levels, suicide ideation, and substance abuse are asked during the Pre-Deployment Health Assessment (PDHA) and Post-Deployment Health Reassessment (PDHRA). But again, there is no uniform way for recording and determining which score warrants further assessment. These methods are fairly limited in terms of detecting behavioral health conditions, including suicide. Indeed, there is at least one study that reported increased waivers coinciding with suicide increases (Gallaway et al., 2013). This was particularly the case during the 2004–2006 when applicants with misdemeanors, behavioral health conditions, weight, and so on were allowed to join in order to increase the size of the U.S. Army (Lipscomb, 2015). Concerning those already serving, many military personnel who die by suicide (25%) or attempt suicide (40%) had a medical appointment at which they were presumably screened within the 30 days preceding the attempt/suicide (Trofimovich, Reger, Luxton, & Oetjen-Gerdes, 2013). These medical appointments were in addition to the regular PDHA, PDHRA, and the Periodic Health Assessment (PHA), which also included routine depression and suicide screening. These assessments required soldiers to respond to broad questions regarding suicide thoughts, plans, and attempts. Although positive responses to these questions are generally considered by suicide experts to be among the most important “warning signs” or short-term indicators of imminent risk for suicide, research suggests that more than one half of individuals who die by suicide actually deny suicidal ideation and/or intent during their most recent screening (Busch, Fawcett, & Jacobs, 2003; Hall, Platt, & Hall, 1999; Kovacs, Beck, & Weissman, 1976). Among military personnel, self-disclosure of suicidal ideation is significantly lower when responses can be identified (Anestis & Green, 2015). The majority of servicemembers who attempt suicide or die by suicide are therefore “missed” by current screening methods that focus on self-reporting of suicidal thoughts and behaviors.

Recognizing limitations of current screening, Bryan and Griffith (2013) have proposed pilot-testing of a screening assessment for suicide risk among the general, nonclinical military population. The content of the assessment draws on the Fluid Vulnerability Theory (FVT, Rudd, 2006), which posits that suicide risk fluctuates as a result of shifts in “suicide modes.” Individuals become suicidal when underlying vulnerabilities associated with suicidal behavior, notably emotion regulation deficits and cognitive rigidity (Bryan & Rozek, in press), are triggered by acute contextual factors, which typically entail stressful life events. Cognitive rigidity often manifest as hopelessness, perceived burdensomeness, self-hatred, problem solving deficits, and/or distress intolerance. In another words, chronic vulnerability that is not readily apparent using self-report screeners of suicidal thinking and intent become more pronounced within the context of certain life events, which increases suicide risk. In sum, the theory implies that screening should seek to assess suicide-specific vulnerabilities that could better identify servicemembers who are at-risk for suicidal behavior but deny symptoms (thoughts or plans) on general suicide screenings.

Research has shown several life experiences associated with suicide risk (Ganz et al., 2010; Nock et al., 2013). Alexander, Reger, Smolenski, and Fullerton (2014) compared the occurrence of events among active duty military suicides to those of a control sample of nonsuicides. They found recent failed intimate relationships, past and current behavioral health conditions, substance abuse history, and prior self-injury were associated with suicide. Recently, a study examined characteristics of new recruits for elevated suicide risk (Rosellini et al., 2017). Using administrative and survey data, variables most associated with negative health outcomes were chronic stressful events, including pre-enlistment childhood physical abuse, family history of mental illness, living in foster homes as a child, and number of lifetime stressors. Such life events might comprise a short practical method of determining the need for suicide assessment. For example, questions might be asked:

What has changed since I last saw you?

2. Job/school change? Loss of job? Drop out of school?
3. Legal issues? Driven under the influence? Law suit? Court hearing?
4. Financial status change? Loss of income? Gambling loss? Debt that has become unmanageable?
5. Change in drinking (alcohol)? More frequent? More drinks during one sitting?
6. Changes in mood, that is, feel more “down,” unable to get enough energy to do things; nobody cares about me/understands me? and
7. Own personal firearms, for example, pistol, rifle, and so forth? Where and how stored?

Initial evidence suggests such content for a screener is reliable and valid, and feasibly implemented. Bryan et al. (2014) examined data gathered from several samples of military personnel who used mental health clinics. Screening assessments showed good reli-
ability and validity—significantly predicting current suicidal ideation and significantly differentiating suicide attempts from non-suicidal self-injury and control groups, better than other risk factors.

Admittedly, additional screening poses logistical problems in terms of personnel needed to carry out such activities. However, screening as envisioned here is not exclusively carried out by mental health professionals. Laypeople need to be trained and used more abundantly (Mann et al., 2005). This strategy makes sense when considering the sheer number of military personnel relative to rarity of suicide risk and difficulties of identifying those in the reserve components. Screening reserve personnel is problematic due to lack of access while not on active duty—called up, weekend drills, and annual training. Most suicides among reserve personnel occur during nonduty time (Griffith, 2012). Through programs like ACE and similar methods, unit members can provide frontline identification.

“Gate-keepers” are useful in detecting early signs of depression and suicidal behavior, including the use of short screeners. In their review of effective suicide prevention methods, Mann et al. (2005) identified family and friends, civilian coworkers, clergy, and physicians as effective in identifying those at risk for suicide and referral to appropriate care. To the extent possible, gate-keepers need to be informed of those groups most at-risk for suicide, in addition to some behavioral indicators of suicide, such as excessive alcohol use, substance abuse, recent interpersonal troubles (loss of significant other), and financial difficulties. First-line supervisors can be trained not only to recognize suicidal symptoms, and equally important, life events associated with elevated suicide risk and on occasion, use screeners described above. Gate-keepers can also serve to ensure treatment compliance and monitor for symptom remission (Ganz et al., 2010). Gate-keepers can also be trained to provide brief interventions for high-risk personnel. For example, the crisis response plan is a 30-minute procedure that significantly reduces suicidal thoughts and behaviors among military personnel (Bryan et al., 2017), and contributes to immediate reductions in emotional distress (Bryan et al., in press). This is sorely needed. Millikan et al. (2011) in their initial examination of Army suicides reported that nearly one half had been identified and either had no follow-up or were noncompliant on follow-up treatment. Similar calls to bolster community professionals and members to better enable identification and referral to treatment and treatment compliance are found in the DoD’s Strategy for Suicide Prevention (U.S. Department of Defense, 2015) and Defense Suicide Prevention Annual Reports (2013, 2014) Goals of the emphasize the need for community resources identify, referral, and treatment compliance.

There are likely inherent difficulties when using gatekeepers for suicide prevention. Gate-keepers will likely result in many “false positives,” who are referred for further assessment yet who are not genuinely suicidal. There also would be needed mental health assets to address subclinical and potentially high base-rate risk factors. Also, those identified will likely be known to others in the social group and will likely influence their behaviors toward the identified, such as socially shunned, viewed as less reliable, being excluded from assignments, and so forth.

Another approach to broad screening for suicide risk is recasting training for servicemembers concerning suicide risk recognition—namely to develop awareness and symptom recognition not only in others but also in oneself. Among the goals of the DoD Strategy for Suicide Prevention (U.S. Department of Defense, 2015) are improving communication to prevent suicide by changing knowledge, attitudes, and behaviors concerning suicide risk. The current ACE education program teaches servicemembers to recognize suicidal behaviors principally in others. There has been little emphasis as to how ACE applies to oneself as having suicide risk. Refocusing attention to symptoms in oneself combined with life events associated with suicide risk might better inform servicemembers of their risk. Such training would better inform servicemembers of life circumstances associated with stressors and personal distress, such as relationship problems, military or work-related stressors and financial troubles, possible psychological and behavioral reactions (strain), and other more adaptive responses.

Concerning the second action recommended by Mann et al. (2005), suicides in the U.S. military have risen since 2004, particularly in the Army and the ARNG. Suicide rates for the ARNG increased starting in 2006 and, in 2010, exceeded that of the active component Army (31 per 100,000 vs. 25 per 100,000) and the Army Reserve (24 per 100,000), as well as the most recently available civilian age-adjusted rate of 20.3 per 100,000 (U.S. Army Health Promotion, 2010). Yet, there is no behavioral health care, such as offering an inexpensive universal health care for reserve component soldiers. This would seem to be critical for suicide risk reduction. Indeed, the VA/DoD Clinical Practice Guideline for Assessment and Management of Patients at Risk for Suicide (U.S. Department of Defense et al., 2015) describes suicide risk as being on a continuum, and thus, for effective treatment, is knowing the content of the risk and when it is observed. Such care would seem to be necessary so that those determined to be at-risk can receive adequate referral and follow-up care. Identification and referral for further assessment and behavioral health care are initial steps in secondary prevention. Equally important is follow-up so referred soldiers maintain adherence to therapy. The recent U.S. Army Public Health Command noted that, among the 2006 to 2009 suicides, 52% had reported two depressive items and 44% reported one PTSD symptom; yet very few (6%) were referred and followed-up with a health professional to address these issues (U.S. Army Office of the Chief of Public Affairs’s [2010] U.S. Army Health Promotion report). Among, 2005–2009 suicides, about one half (48%) had received outpatient care for behavioral health disorders. Taken together, there then is a clear need for more determined referral and follow-up of soldiers who are screened for being at-risk for suicide. This includes a designated person responsible for referral and follow-up and a mechanism whereby the at-risk individual can receive medical treatment (VA/DoD Clinical Practice Guideline, U.S. Department of Defense et al., 2015). For ARNG/Army Reserve personnel, this protocol needs to include a mechanism for personnel to receive mental health treatment in the military health care system. Complementary supports might include: provision of a case manager; treatment supports, such as, family members or a, designated person or staff member to monitor the at-risk person; informing general practitioners, private psychiatrists, case managers, family, and friends of the individual’s suicide risk and follow-up arrangements; and repeated telephone or in-person contact (Mann et al., 2005).

Another promising approach to suicide prevention is reducing access to firearms. A goal of the DoD Strategy for Suicide Prevention (U.S. Department of Defense, 2015) is reducing access to lethal means, in particular, among those deemed at risk for suicide. The majority of suicides in the Army involve personal fire arms
(U.S. Army Office of the Chief of Public Affairs’s [2010] U.S. Army Health Promotion report). This fact, combined with evidence concerning the relationship of firearms availability and suicide follow-through (Kubrin & Wadsworth, 2009), offers an effective means for suicide prevention. Indeed, in their review of effective suicide prevention, Mann et al. (2005) identified “means restriction” as an effective approach to suicide prevention (see also, Ramchand et al., 2011). Currently, the U.S. DoD is giving guidance to the services regarding procedures for unit leaders to secure personal weapons of those determined at risk. Although this approach is a positive step, it assumes effectively identifying those at-risk, which is lacking in current approaches to suicide prevention (as noted above). Given this limitation, the approach to reducing weapons access might be broadened to education and training for soldiers and family members. The aim is to place more barriers between the personally owned firearm and the suicidal individual, including locked storage of firearms, use of gun lock devices, separate storage of ammunition from the firearm, and safe handling of firearms when loaded. Some observations suggest means restriction counseling increases the likelihood of individuals taking protective measures (Krueger et al., 1999; McManus et al., 1997), though more systematic study is needed concerning the protective effects of firearm safety education. A military-funded study focused testing the feasibility and acceptability of the firearm safety education protocol described by Britton, Bryan, and Valensteın (2014) is currently underway. Such broad education to reduce risk behaviors has been achieved in other areas. For example, in the past when there was a high occurrence of driving-while-intoxicated, the military instituted safety programs with reasonable success.

A final consideration for future approaches to prevention is examining the usefulness of broad contextual conditions related to suicide risk. Both the DoD Strategy for Suicide Prevention (U.S. Department of Defense, 2015) and Defense Suicide Prevention Annual Reports (2013, 2014) give recognition to the importance of the community in providing resilience and recovery. Predominant theories of suicide explain the origins of suicide at different social levels, such as communal/societal (Durkheim, 1951), belongingness to others (Van Orden, Witte, Gordon, Bender, & Joiner, 2008), and personal dispositions (Pompili et al., 2011; Bryan & Rozek, in press; Klonsky, Saffer, & Bryan, in press). But, how these translate to approaches to prevention has largely not yet been articulated and needs to be done.

Concerning possible associations of suicide occurrence with broad social phenomena, Kposowa (2013) observed state-level statistics—suicide rates, fire arms availability, state conservatism, church membership and immigration rate were correlated with individual suicide risk. He explained context (here, the state) provided more favorable norms for suicide and suicide acceptance, which increased the odds of committing suicide. Another recent study also found social context related to suicide risk. In their review of suicide studies, Fässberg et al. (2012) observed increased risk for suicide among those lacking “social connectedness” (i.e., little involvement with family, friends, and social groups), and the effect was greater for men than women. The U.S. military has rarely examined contextual factors relating to suicide, such as unit cohesion (recent exception, Griffith, 2015), and its possible beneficial effects against suicide (Durkheim, 1951), namely programs designed to enhance social connections and sense of community among men. This is surprising considering the past emphases of the U.S. military on bonds among soldier relationships as key elements to effective soldiers (Griffith, 2007). Indeed, Nock et al. (2013) noted that cohesion offers the suicidal individual greater social integration and feelings of belongingness and worth to others and a mechanism to buffer the negative effects of stress on personal well-being and possibly the occurrence of suicidal behavior (Brailey, Vasterling, Proctor, Constans, & Friedman, 2007; McLean et al., 2017).

Summary

In the last several years, there have been many approaches to prevent suicide and its observed rise in the U.S. military. This paper discusses approaches to suicide prevention in the military as representing levels of prevention, typically used in the health field. Each is described as having a specific purpose, strategy aim, target audience, and definitive stage for prevention. Arranging current suicide prevention programs with the levels shows predominant approaches and gaps to suicide prevention in the U.S. military. Underlying some primary prevention approaches is the stress-diathesis hypothesis, which has mixed empirical support when considering suicidal behavior. The connection between suicide and tertiary prevention, offered as effective clinical treatment of suicide, is largely unknown, especially when applied broadly to non-clinical populations. The foremost problem for military suicides is—knowing who is at risk (nonclinically) before being a real risk followed by the necessary follow-up—assessment, referral, and case management. These activities and others constitute secondary prevention, which need greater representations among approaches to reduce suicide in the U.S. military. Such approaches more directly address the problem of suicide in the U.S. military and deserve further consideration in future suicide prevention efforts.

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