

Rethinking Military Suicide
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Suicide among U.S. military members has steadily risen since 2004 across all branches of service (Pruitt et al., 2017; Ramchand et al., 2011), with recent data indicating the military suicide rate is 25.9 per 100,000 and suicide is the second leading cause of death among service members. Military suicide has far-reaching impacts, even beyond the loss of individual lives. Research shows that military suicide has devastating effects on the morale, readiness, and psychological health of fellow unit members (Bryan, Cerel, et al., 2017; Ursano et al., 2017) and negatively impacts military families (Harrington-LaMorie et al., 2018; Peterson et al., 2020).

In response to rising suicides, the Department of Defense (DoD) has invested heavily in identifying, developing, and testing strategies to reverse these trends. Most of these investments have focused on foundational or “core” suicide prevention strategies like expanded suicide prevention and mental health screening, resiliency trainings, antistigma and awareness campaigns, and improved access to mental health treatments. These considerable investments have demonstrated little (if any) benefit, however, highlighting the clear need for new thinking.

Suicide Prevention Programs That Work

Scientific evidence supports the effectiveness of only a handful of mental treatments and strategies for preventing suicidal behavior. Suicide-focused cognitive behavioral therapies and problem solving therapies, in particular, have been shown to significantly reduce suicide risk by 19% or more (Fox et al., 2020; Mann et al., 2021). DoD-funded research shows that two such strategies are especially effective when used with service members: **brief cognitive behavioral therapy for suicide prevention** and **crisis response planning**. Brief cognitive behavioral therapy for and crisis response planning were both developed to teach service members how to use skills for managing acute suicidal crises and have been shown to reduce suicide attempts among active-duty service members by 60-76% as compared to traditional mental health treatments and interventions (Bryan, Mintz, et al., 2017; Rudd et al., 2015). Though highly effective, these specialized treatments are currently only available to service members who seek out mental health treatment from specially trained mental health professionals. Because the majority of service members who die by suicide do not seek mental health treatment prior to their deaths (Pruitt et al., 2017; Trofimovich et al., 2012), however, these suicide prevention strategies are received by very few service members. Effective strategies that can be deployed outside healthcare systems are therefore needed.

To date, only one suicide prevention strategy has been shown to work outside healthcare systems: **means restriction**. Means restriction involves taking steps to limit or restrict access to potentially lethal suicide attempt methods. Numerous research studies show that where a suicide attempt method is sufficiently lethal and used sufficiently often within a population, means restriction is consistently linked to large reductions in suicide (Mann et al., 2021). The life-saving effects of means restriction is not limited to any specific suicide method: limiting and reducing access to a wide range of methods including pain killers, pesticides, carbon monoxide, bridges, and firearms are all supported scientifically. Of particular relevance to the military is the potential impact of means restriction efforts focused on firearms, which accounts for nearly two-thirds of military suicides (Pruitt et al., 2017) as compared to approximately half of all U.S. suicides (Xu et

al., 2021). Despite the overwhelming evidence supporting means restriction, though, the strategy has until only recently been seriously considered as a component of comprehensive suicide prevention in the military. Given its considerable potential for saving lives, means restriction should become a central component of comprehensive suicide prevention within the military.

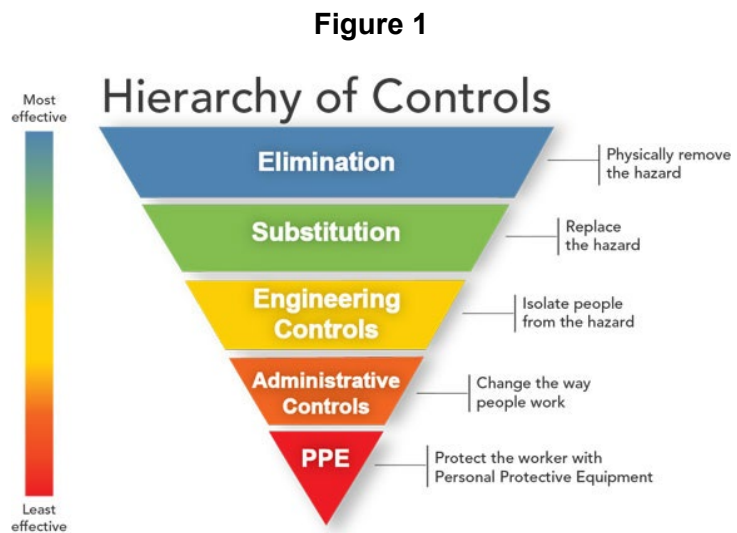
Faulty Assumptions Impede Effective Suicide Prevention in the Military

The prevailing model of suicide employed within and outside the DoD is that suicide is caused by or results from mental health conditions. This perspective persists despite decades of research showing that mental health conditions are only very weakly correlated with suicide and that over half of suicide decedents have no known mental health condition at the time of their death. Data from Centers for Disease Control and Prevention (CDC), for example, have consistently found that over half of U.S. citizens who die by suicide have no known mental health condition (Xu et al., 2021). Military data similarly show that most service members who die by suicide have no known mental health condition (Pruitt et al., 2017). A recently completed study aggregating the results of hundreds of research studies published during the past 50 years further shows that mental health conditions are only weakly correlated with suicide and are present in fewer than half of all suicide cases (Franklin et al., 2017).

Multiple lines of evidence therefore point to the conclusion that mental health conditions are only weakly correlated with suicidal behaviors and probably contribute much less to suicide among service members than has traditionally been assumed. Restricting suicide prevention efforts to programs and strategies that assume a causal role for mental health conditions is therefore insufficient. A more accurate perspective is that *some* service members who die by suicide have a mental health condition and *some* service members who die by suicide do not. Suicide prevention within the military must therefore move beyond strategies and programs that explicitly target mental health conditions.

A Prevention Through Design Approach to Suicide Prevention

A central tenet of public health injury, illness, and mortality prevention programs is the “hierarchy of controls” concept (see **Figure 1**), which rank-orders the probable effectiveness of strategies intended to reduce the risk of illness or injury within a population. At the top of this hierarchy, coinciding with the highest level of effectiveness, are strategies that seek to eliminate or physically remove a hazard from the environment. Elimination is the most effective strategy because it removes completely the thing causing harm. Elimination strategies also maximize effectiveness because they can remove or reduce risk for many (potentially all) people



SOURCE: National Institute of Occupational Safety and Health (2016)

within a group and do. By comparison, strategies that seek to protect people from a hazard that remains in the environment are less effective because the source of illness or injury remains present and protection from this risk depends upon the sustained integrity of the protective strategy and individual adherence (e.g., using the protective strategy correctly and consistently). For this reason, personal protective equipment (PPE) is positioned at the bottom of the hierarchy.

Complete elimination of an environmental hazard is not always possible, of course. Under those circumstances, the next most effective solution entails substitution, wherein a hazard is replaced with a less dangerous hazard, thereby incrementally reducing the risk of illness or injury. When elimination or substitution is not feasible, however, engineering controls may be employed, thereby isolating or otherwise separating people from a hazard. Next, administrative controls can be used to minimize the extent to which people are exposed to the hazard. Finally, personal protective equipment (PPE) can be used to minimize the likelihood of illness or injury despite ongoing exposure to the hazard.

From a prevention through design perspective, suicide prevention efforts within the DoD have historically emphasized the lowest (and least effective) levels of the hierarchy of controls. For example, resiliency trainings and mental health treatments—arguably the bedrock of military suicide prevention efforts date—function as a form of PPE because these strategies aim to protect the individual service members from psychological hazards that cannot be readily controlled by the service member. Training, therapy, medications, and other mental health treatments are not designed to alter or change the life stressors that contribute to and sustain a service member’s suicidal desire, however. During and after treatment, the psychological hazards that fuel service members’ suicidal desire—relationship problems, job-related strain, financial strain, legal or disciplinary issues—often remain and continue to press on the service member, potentially well after treatment ends. Service members are only protected so long as the skills learned in resiliency training or mental health treatments continue to be used and continue to work.

In comparison to the individual focus of resiliency training and mental health treatments, strategies that eliminate or reduce a service member’s exposure to the conditions and circumstances that fuel their suicidal desire could reduce suicide risk even if the service member does not attend resiliency training or seek out treatment. Deploying suicide prevention strategies at all levels of the hierarchy of controls instead of focusing only on the lowest (and least effective) levels will be critical for improving the effectiveness of suicide prevention within the military.

In contrast to the person-level focus of resiliency trainings and mental health treatments, suicide prevention strategies informed by the prevention through design model focuses on changing institutional and environmental factors that surround the individual service member. Some examples could include:

- Identify and reduce work-related stressors and problems that contribute to burnout, despair, and hopelessness. Excessive job demands, unclear and/or conflicting job responsibilities, and rapidly rotating shiftwork are work-related factors correlated with increased suicide risk among service members.
- Create and build safe environments in which service members can report harassment, discrimination, and abusive behaviors without fear of reprisal.
- Promote and model accountability within military units. Accountability involves taking responsibility for a past action or being assigned responsibility for a task or action and is correlated with reduced suicide risk among service members.

- Encourage and support expressions of appreciation, gratitude, and respect within military units, all of which promote well-being and positive emotional states.
- Improve quality of life by addressing food insecurity, inadequate or poor-quality housing, and financial insecurity.
- Enrich and invest in communities surrounding military installations to promote social connections and quality of life (e.g., access to green spaces, reduced commute times).
- Limiting work schedules that disrupt or interfere with regular sleep cycles (e.g., rotating shifts).
- Encourage, incentivize, and support secure firearm storage (e.g., safes and locking devices) and secure medication storage (e.g., lock boxes, pill dispensers) practices in service members’ homes to reduce ready access to potentially lethal suicide attempt methods.
- Subsidize the purchase of secure firearm storage devices and tools, thereby removing economic barriers to secure storage practices.
- Eliminate policies that restrict or discourage commanders and peers asking about firearm availability and access.
- Limit firearm sales from vendors located on military installations (e.g., Army & Air Force Exchange Service, Navy Exchange, Marine Corp Exchange) and/or require the sale of firearm storage devices with on-base firearm purchases.
- Include firearm suicide prevention curriculum as part of routine weapons qualification training.
- Eliminate policies that mandate commander notification and duty restrictions (e.g., flight status, weapons bearing status, top secret clearance) when accessing mental health treatment. Such policies serve as barriers to mental health treatment access.
- Eliminate policies that mandate mental health evaluations and/or transport to hospitals when a service member reports suicidal ideation to a member of their command.
- Reduce time-consuming screening, documentation, and administrative mandates that interfere with healthcare professionals’ ability to use empirically supported suicide prevention treatments and interventions.
- Eliminate barriers to tele-mental health services, especially for service members located in rural and geographically remote areas.

Creating Lives Worth Living

Suicide prevention in the military has also been hindered by the prevailing assumption that the “correct” solutions can be identified using systematic methods like trial and error, wherein proposed strategies are employed, evaluated, and replaced repeatedly until something fixes or eliminates the problem. Although this solution-focused approach is well-suited for most conventional problems that we face on daily basis, it is not well-suited for a problem like suicide, which is a highly complex and “wicked” problem. Wicked problems are especially difficult to solve

because they are characterized by incomplete, contradictory, and changing requirements that are difficult to recognize. The inherent complexity of suicide reduces the probability that any single strategy will fully address the problem; multiple strategies must therefore be employed. The effects of these strategies must also be closely monitored because a given strategy can change the nature of the problem itself, such that a suicide prevention strategy might work some of the time for some service members but may not work other times for other service members. For this reason, there are no “right” or “wrong” solutions to preventing suicide, although some suicide prevention strategies like brief cognitive behavioral therapy, crisis response planning, and means restriction are very clearly better than other strategies. This is not to say that nothing can be done to prevent suicide, however. Researchers have identified a handful for suicide prevention strategies are very clearly better than others when employed at the right time with the right people. None of these strategies is enough to eliminate suicide completely, though, and none will work for every service member under all circumstances.

If we want to be better at preventing suicide among service members, we must fundamentally rethink how we approach suicide prevention. An oft-repeated maxim of the suicide prevention field is that suicide prevention is everyone’s business. Suicide prevention being everyone’s business does not mean that everyone needs to constantly ask about suicidal ideation and repeatedly implore service members to pursue mental health treatment. Rather, it means that we should be working together every day to help service members create lives worth living.

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