VA/DoD CLINICAL PRACTICE GUIDELINE FOR THE ASSESSMENT AND MANAGEMENT OF PATIENTS AT RISK FOR SUICIDE

Department of Veterans Affairs
Department of Defense

QUALIFYING STATEMENTS

The Department of Veterans Affairs and the Department of Defense guidelines are based upon the best information available at the time of publication. They are designed to provide information and assist decision making. They are not intended to define a standard of care and should not be construed as one. Neither should they be interpreted as prescribing an exclusive course of management.

This Clinical Practice Guideline is based on a systematic review of both clinical and epidemiological evidence. Developed by a panel of multidisciplinary experts, it provides a clear explanation of the logical relationships between various care options and health outcomes while rating both the quality of the evidence and the strength of the recommendation.

Variations in practice will inevitably and appropriately occur when clinicians take into account the needs of individual patients, available resources, and limitations unique to an institution or type of practice. Every healthcare professional making use of these guidelines is responsible for evaluating the appropriateness of applying them in the setting of any particular clinical situation.

These guidelines are not intended to represent Department of Veterans Affairs or TRICARE policy. Further, inclusion of recommendations for specific testing and/or therapeutic interventions within these guidelines does not guarantee coverage of civilian sector care. Additional information on current TRICARE benefits may be found at www.tricare.mil or by contacting your regional TRICARE Managed Care Support Contractor.

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&

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Table of Contents

I. Introduction

The Department of Veterans Affairs (VA) and Department of Defense (DoD) Evidence-Based Practice Work Group (EBPWG) was established and first chartered in 2004, with a mission to advise the "…Health Executive Council on the use of clinical and epidemiological evidence to improve the health of the population across the Veterans Health Administration (VHA) and Military Health System (MHS)," by facilitating the development of clinical practice guidelines (CPGs) for the VA and DoD populations. [1] This CPG is intended to provide healthcare providers with a framework by which to evaluate, treat, and manage the individual needs and preferences of patients at risk for suicide, thereby leading to improved clinical outcomes.

In 2013, the VA and DoD published a CPG for the Assessment and Management of Patients at Risk for Suicide (2013 Suicide Risk CPG), which was based on evidence reviewed through November 2011. Since the release of that guideline, a growing body of research has expanded the general knowledge and understanding of suicide risk. Improved recognition of the complex nature of suicide and suicide-related behaviors has led to the adoption of new strategies to manage and treat patients at risk.

Consequently, a recommendation to update the 2013 Suicide Risk CPG was initiated in 2018. The updated CPG includes objective, evidence-based information on the assessment and management of suicide risk. It is intended to assist healthcare providers in all aspects of patient care, including, but not limited to, screening, assessment, and management. The system-wide goal of evidence-based guidelines is to improve the patient's health and well-being by guiding health providers who are caring for patients at risk for suicide along management pathways that are supported by evidence. The expected outcome of successful implementation of this guideline is to:

- Assess the individual's condition and determine, in collaboration with the patient, the best treatment method
- Optimize health outcomes and improve quality of life
- Minimize preventable complications and morbidity
- Emphasize the use of patient-centered care (PCC)

Throughout this document, efforts were made to adhere to the nomenclature adopted by VA, the Self-Directed Violence Classification System (SDVCS)[1], a taxonomy of terms and associated definitions for thoughts and behaviors related to suicidal and non-suicidal self-directed violence (SDV).[2,3] Terms and associated definitions are also presented in Appendix B. Whereas the outcome of interest for some of the evidence presented in this CPG was focused specifically on suicide, additional evidence pertaining to work focused on self-directed violence (e.g., non-suicidal SDV behaviors – suicide attempts, preparatory behaviors) more generally was also used.

[1] For more information regarding the SDVCS see: https://www.mirecc.va.gov/visn19/education/nomenclature.asp.

II. Background

Clinicians may encounter patients at risk of suicide in any clinical setting. Post-mortem forensic reviews suggest that most suicide decedents have identifiable mental illness, though only about one-half of these decedents had received a mental health diagnosis in the year prior to their death.[4-6] Although other numerous predispositions, precipitants, and exacerbating/alleviating factors have been identified, suicide—a low base-rate event—cannot be reliably predicted in either general or clinical populations.

Among the general population in the United States (U.S.), the most common means of suicide is the self-directed discharge of a firearm, most often with lethal head trauma.[4] This pattern holds for both the U.S. military [5] and Veteran populations as well.[6] Self-directed discharge of a firearm is also the most common method used by men and the most lethal relative to other common methods of suicide.[7] Among women, the leading means of suicide death is poisoning. This includes both drug and non-drug poisoning.[8] Other means include, but are not limited to, overdose of licit or illicit drugs, alcohol or combinations thereof, hanging, poisoning (with chemical compounds such as industrial cleaners or pesticides), carbon monoxide inhalation, suffocation (with plastic hoods or inert gasses), electric shock, immolation, drowning, exsanguination, and evisceration. Hanging deaths have increased in the past decade, with evidence of suicide contagion stemming from the deaths of high profile celebrities dying by this method of suicide.

Suicide is a public health problem with a worsening trend in recent decades. Nationwide, deaths by suicide increased 30% from 1999 to 2016.[4] Except for Nevada, all states reporting through the National Violent Death Reporting System (NVDRS) experienced an increase in suicide rates between 1999 and 2016. Nevada had one of the highest baseline rates and experienced a non-statistically significant 1% decrease during the period from 1999 to 2016. Increases in NVDRS state rates over this period ranged from 6-58%; most of these changes were statistically significant.[9] In the same period, the DoD active-component suicide rate increased from 10.7 suicide-related deaths per 100,000 Service Members to 21.5 suicide-related deaths per 100,000 Service Members.[10,11] Among cases in the 27 states where suicide rates could be ascertained, 17.8% of suicide decedents were Veterans, nearly double the prevalence of Veterans in the population.[4] There was a roughly 25% increase in Veteran deaths by suicide over the shorter period from 2005 to 2015.[12]

A. Epidemiology and Impact in the General Population

The most recent National Survey on Drug Use and Health (calendar year [CY] 2017), conducted by the Substance Abuse and Mental Health Services Administration (SAMHSA), provides an estimation of the occurrence of suicide and suicide-related behavior in the U.S. population.[13] This survey of 67,500 U.S. residents, ages 12 and older, includes Veterans but specifically excludes Active Component members of the U.S. military. Findings from this survey suggest that among those aged 18-25 years old representing both sexes, thoughts of suicide, planning for suicide, and the occurrence of suicide attempts have increased significantly in the 10 years between 2008 and 2017. When CY 2017 is compared to CY 2016, a significant increase is detected in the prevalence of both suicidal thinking and preparatory behavior among those aged 18-25 over that single year period. However, there was no increase in the prevalence of suicide attempts between 2016 and 2017 for this age group. SAMHSA notes that this increase in suicide-related behavior over the past 10 years co-occurs with a similar increase in the prevalence of mental health

conditions that cause significant impairment in daily life functioning, especially the occurrence of major depressive episodes and chronic substance use disorder (SUD).[13]

Recently released data from the U.S. Centers for Disease Control and Prevention (CDC), which include Service Members and Veterans as well as the remainder of the general population, continue to identify suicide as one of the top 10 causes of death among U.S. residents, accounting for 44,965 deaths in CY 2016 alone.[14] Among those between 10 and 34 years old, suicide is the second most common cause of death, with only unintentional injuries accounting for more fatalities. Suicide falls to the fourth most common cause of death among those who are between the ages of 35 and 54, and is the eighth most common cause of death among those between the ages of 55 and 64 years.[14]

Work by Cerel et al. (2018) suggests that, on average, 135 individuals are exposed to the effects of a suicide.[15] This impact often includes increases in the prevalence and severity of symptoms of depression and anxiety as well as thinking about suicide.

In addition to the emotional toll on the families, friends, and colleagues of those who have died by suicide, as well as the suicide-attempt survivors themselves, suicide has economic costs that are incurred by the individuals, families, communities, states, and nation. These include medical costs for individuals and families, lost workplace productivity, and lost income.[16] For 2013 alone, the total cost of suicides and suicide attempts in the U.S. was 93.5 billion dollars. Shepard et al. (2016) estimate that the economic impact of a single suicide death is, on average, more than 1.3 million dollars.[16] The vast majority of this cost is due to lost workplace productivity. While these metrics do not begin to fully address the impact of each suicide, they do provide some useful measurements on which to base estimates of burden and progress.

B. Suicide in the Department of Defense and the Department of Veterans Affairs Populations

A movement to integrate VA and DoD suicide prevention efforts began, formally, in January of 2018 in response to Executive Order No. 13822.[17] In addition, a suicide prevention memorandum of agreement (MOA) was established between the VA and DoD in November 2017, which focuses on the following areas: periods of transition; education, outreach, and strategic communications; lethal means safety and/or restriction; engagement and capacity building; call center efforts; research and program evaluation; data and surveillance; and postvention.

Rates of suicide in the military increased dramatically in the first decade of the 21st century.[18] However, current data suggest that, beginning in 2011, this increase slowed and the rate of suicide eventually plateaued.[5] While substantial efforts have been devoted to suicide prevention, the trajectory of military suicide has neither reversed nor worsened. Current DoD suicide surveillance reports demonstrate that the military's rate is statistically equivalent to the suicide rate of a demographically similar portion of the U.S. population.[5]

The DoD engages in suicide event surveillance through the Department of Defense Suicide Event Report (DoDSER), an annual report providing empirical in-depth analysis of demographics and risk factors

associated with deaths by suicide. Monitoring rates of suicide across the Active and Reserve Components of the military shows:[5]

- The CY 2016 suicide mortality rate for the Active Component was 21.5 deaths per every 100,000 Active Duty Service Members.
- The CY 2016 suicide mortality rate for the Reserve Component, regardless of duty status, was 22.0 deaths per 100,000 reservists.
- The CY 2016 suicide mortality rate for the National Guard, regardless of duty status, was 27.3 deaths per 100,000 members of the Guard population.
- The rates discussed above for each Component do not differ from the three-year average suicide mortality rates for CY 2013-2015.

The Active and Reserve Component rates in CY 2016 also do not differ from rates observed in a demographically similar portion of the U.S. general population. However, when examined in isolation, the rate for the National Guard is slightly elevated compared to a demographically similar portion of the U.S. general population.

Similarly, the VA reports that in 2016 (most recent data available) the rate of suicide was 30.1 suicide-related deaths per 100,000 Veterans, which is comparable to the 2015 rate of 30.5 suicide-related deaths per 100,000 Veterans.[6] After adjusting for age and gender, the 2016 Veteran rate was 1.5 times higher than the rate associated with non-Veteran adults. After adjusting for age, the suicide rate for female Veterans was 1.8 times greater than the suicide rate for non-Veteran women. Regarding specific age groups, the suicide rate for Veterans ages 35–54, 55–74, and 75 and older did not increase from 2015 to 2016. However, the suicide rate among Veterans ages 18–34 did increase from 40.4 suicide-related deaths per 100,000 Veterans (2015) to 45 suicide-related deaths per 100,000 Veterans (2016).[6]

Veterans recently using VHA services had higher rates of suicide than Veterans who did not recently receive VHA services, Veterans overall, and non-Veterans.[6] It is important to note, however, that the vast majority of Veterans receiving VHA services have medical and/or mental health care needs which may increase an individual's risk for suicide.

C. Identifying Suicide Risk in VA and DoD Populations

Although rising suicide rates in the VA and DoD populations led to significant increases in efforts to identify individuals at risk for suicide and to implement programs and policies to mitigate that risk, suicide risk identification remains an imperfect science. As concerning as suicide rate increases are, death by suicide remains a rare event across the entirety of the VA and DoD populations. Many associated risk factors (e.g., family history of suicide, previous suicide attempts, history of mental disorders, SUD, loss, illness, access to lethal means) also exist among individuals who do not have suicidal thoughts, attempt suicide, or die by suicide. Much research over the last decade has sought to identify which of the known risk factors are most predictive and whether there are military-specific risk factors that set Service Members and Veterans apart from those who have never served in the military, such as exposure to combat or long periods of military deployment.[19-23]These studies largely confirm risk factors demonstrated in non-military/Veteran populations and point to potential military-related unique risk factors, but the body of

evidence for the latter is inconclusive.[22] For example, findings on the potential relationship between military deployment and risk of suicide vary across studies.[19,24]

Recent data from the DoD demonstrate that, among Service Members who died by suicide in CY 2016, 44% had at least one diagnosed behavioral health condition, but 53% had no known behavioral health diagnosis.[5] Fifty-eight percent of Service Members who died by suicide in 2016 had contact with the healthcare delivery system in the 90 days prior to their death; roughly a third of those encounters were with outpatient or inpatient behavioral health. This CPG appropriately focuses on management of individuals identified as at risk for suicide and, by definition, engaged in clinical care. However, it also acknowledges the challenge faced by the VA and DoD in working to decrease the overall rate of suicidal ideations, attempts, and deaths in their populations, a task which necessarily includes identifying risk for suicide among individuals outside of the clinical care setting.

Numerous methods of identifying suicide risk have been investigated. These include traditional approaches (e.g., expert review of cases, face-to-face interviews, clinician-administered screening questions, self-report screening tools, gatekeeper training and education) as well as novel approaches (e.g., predictive models based on historical data, machine learning algorithms of social media, biomarkers). Regardless of the screening and identification method, accurate identification of suicide risk remains elusive.[25,26] These screening and identification efforts are often hampered by low positive predictive value, high false negative rates (roughly 50%) and false positives. Combined with the low base rate of suicide, this pattern of findings results in limited actionable information that can be used to guide or develop effective population-based screening programs that can be implemented in clinical and community-based settings. However, none of the evidence reviewed suggested that the screening for suicidal thoughts and behaviors increases risk for suicide.[27,28] Moreover, evidence was identified that supported the use of the Patient Health Questionnaire-9, item 9 as a universal screening tool. See Recommendations 1 and 2.

Although risk factors are derived epidemiologically, and as such cannot be used to predict individual behavior, evidence supports evaluation of key risk factors (see Recommendation 3) as a necessary, but not sufficient, component of a comprehensive suicide risk evaluation.

III. About this Clinical Practice Guideline

This guideline represents a significant effort toward improving the screening, assessment and management of patients at risk for suicide that are eligible to receive care in the VA and/or DoD. As with other CPGs, however, challenges remain. These include evidence gaps, as well as ongoing needs to develop effective strategies for guideline implementation, and to evaluate the effect of guideline adherence on clinical outcomes. This guideline is intended for VA and DoD healthcare practitioners including physicians, nurse practitioners, physician assistants, psychologists, social workers, nurses, pharmacists, chaplains, addiction counselors, and others involved in the team caring for Service Members or Veterans at risk for suicide. Additionally, this guideline is intended for those in community practice involved in the care of Service Members or Veterans at risk for suicide.

As elaborated in the qualifying statement on page one, this CPG is not intended to serve as a standard of care. Standards of care are determined based on all clinical data available for an individual patient and are

subject to change as scientific knowledge and technology advance and patterns evolve. This CPG is based on information available through April 2018 and is intended to provide a general guide to best practices. The guideline can assist care providers, but the use of a CPG must always be considered as a recommendation within the context of a variety of factors such as providers' clinical judgment, patient values and preferences, state and federal legal statutes, ethical guidelines, professional standards, and healthcare system policies.

A. Methods

The current document is an update to the 2013 Suicide Risk CPG. The methodology used in developing the 2019 CPG follows the *Guideline for Guidelines*, an internal document of the VA and DoD EBPWG that was updated in January 2019.[1] The *Guideline for Guidelines* can be downloaded from http://www.healthquality.va.gov/policy/index.asp. This document provides information regarding the process of developing guidelines, including the identification and assembly of the Guideline Champions (Champions) and other subject matter experts from within the VA and DoD (known as the Work Group) and the development and submission of an updated Suicide Risk CPG.

The Champions and Work Group for this CPG were charged with developing evidence-based clinical practice recommendations and writing and publishing a guideline document to be used by providers within the VA/DoD healthcare systems as well as those within the community who treat individuals within the VA and DoD. Specifically, the Champions and Work Group members for this guideline were responsible for identifying the key questions (KQs) of the most clinical relevance, importance, and interest for the detection, evaluation, and management of patients at risk for suicide. The Champions and the Work Group also provided direction on inclusion and exclusion criteria for the evidence review and assessed the level and quality of the evidence. The amount of new scientific evidence that had accumulated since the previous version of the CPG was also taken into consideration in the identification of the KQs. In addition, the Champions assisted in:

- Identifying appropriate disciplines of individuals to be included as part of the Work Group
- Directing and coordinating the Work Group
- Participating throughout the guideline development and review processes

The VA Office of Quality, Safety and Value, in collaboration with the Office of Evidence Based Practice, U.S. Army Medical Command, the proponent for CPGs for the DoD, identified three clinical leaders: Lisa A. Brenner, PhD from the VA and CAPT Michael J. Colston, MD and Amy M. Millikan Bell, MD, MPH from the DoD as Champions for the 2019 CPG.

The Lewin Team, including The Lewin Group, Duty First Consulting, ECRI Institute, and Sigma Health Consulting, LLC, was contracted by the VA and DoD to support the development of this CPG and conduct the evidence review. The first conference call was held in January 2018, with participation from the contracting officer's representative (COR), leaders from the VA Office of Quality, Safety and Value and the DoD Office of Evidence Based Practice, and the Champions. During this call, participants discussed the scope of the guideline initiative, the roles and responsibilities of the Champions, the project timeline, and the approach for developing and prioritizing specific research questions on which to base a systematic review about the assessment and management of patients at risk for suicide. The group also identified a list of clinical specialties and areas of expertise that are important and relevant to the management of

suicide risk, from which Work Group members were recruited. The specialties and clinical areas of interest included: psychiatry, psychology, nursing, social work, pharmacy, psychotherapy, mental health, and preventive medicine/public health.

The guideline development process for the 2019 CPG update consisted of the following steps:

1. Formulating and prioritizing KQs and defining critical outcomes
2. Convening patient focus groups
3. Conducting the systematic evidence review
4. Convening a face-to-face meeting with the CPG Champions and Work Group members to develop recommendations
5. Drafting and submitting a final CPG on the assessment and management of suicide risk to the VA/DoD EBPWG

Appendix C provides a detailed description of each of these tasks.

a. Grading Recommendations

The Champions and Work Group used the Grading of Recommendations Assessment, Development and Evaluation (GRADE) system to assess the quality of the evidence base and assign a strength for each recommendation. The GRADE system uses the following four domains to assess the strength of each recommendation:[29]

- Balance of desirable and undesirable outcomes
- Confidence in the quality of the evidence
- Patient or provider values and preferences
- Other implications, as appropriate, e.g.:
    - Resource use
    - Equity
    - Acceptability
    - Feasibility
    - Subgroup considerations

Additional information regarding these domains can be found in Appendix C.

Using these four domains, the Work Group determined the relative strength of each recommendation ("Strong" or "Weak"). Generally, a "Strong" recommendation indicates a high confidence in the quality of the available scientific evidence, a clear difference in magnitude between the benefits and harms of an intervention, similar patient or provider values and preferences, and understood influence of other implications (e.g., resource use, feasibility). Generally, if the Work Group has less confidence after the assessment across these domains and believes that additional evidence may change the recommendation, it assigns a "Weak" recommendation. It is important to note that the GRADE terminology used to indicate the assessment across the four domains (i.e., "Strong" versus "Weak") should not be confused with the

clinical importance of the recommendation. A "Weak" recommendation may still be important to the clinical care of a patient at risk for suicide.

Occasionally, instances may occur when the Work Group feels there is insufficient evidence to make a recommendation for or against a particular therapy or preventive measure. This can occur when there is an absence of studies on a particular topic that met evidence review inclusion criteria, studies included in the evidence review report conflicting results, or studies included in the evidence review report inconclusive results regarding the desirable and undesirable outcomes.

Using these elements, the grade of each recommendation is presented as part of a continuum:

- Strong for (or "We recommend offering this option …")
- Weak for (or "We suggest offering this option …")
- No recommendation for or against (or "There is insufficient evidence…")
- Weak against (or "We suggest not offering this option …")
- Strong against (or "We recommend against offering this option …")

The grade of each recommendation made in the 2019 CPG can be found in the section on Recommendations. Additional information regarding the use of the GRADE system can be found in Appendix C.

b. Reconciling 2013 Clinical Practice Guideline Recommendations

Evidence-based CPGs should be current, which typically requires revisions of previous guidelines based on new evidence or as scheduled and subject to time-based expirations.[30] For example, the U.S. Preventive Services Task Force (USPSTF) has a process for refining or otherwise updating its recommendations pertaining to preventive services.[31]

The Suicide Risk CPG Work Group largely focused on developing new and updated recommendations based on the evidence review conducted for the priority areas addressed by the KQs. In addition to those new and updated recommendations, the Work Group considered, without complete review of the relevant evidence, the current applicability of other recommendations that were included in the previous 2013 Suicide Risk CPG, subject to evolving practice in today's environment.

A set of recommendation categories was adapted from those used by the National Institute for Health and Care Excellence (NICE).[32,33] These categories, along with their corresponding definitions, were used to account for the various ways in which older recommendations could have been updated. In brief, the categories considered whether or not the evidence that related to a recommendation was systematically reviewed, the degree to which the recommendation was modified, and the degree to which a recommendation is relevant in the current care environment and within the scope of the CPG. Additional information regarding these categories and their definitions can be found in Recommendation Categorization. The categories for the recommendations included in the 2019 version of the guideline can be found in the section on Recommendations. The categories for the recommendations carried forward from the 2013 Suicide Risk CPG are noted in Appendix F.

The CPG Work Group recognized the need to accommodate the transition in evidence rating systems from the 2013 Suicide Risk CPG to the current CPG. In order to report the strength of all recommendations using a consistent format (i.e., the GRADE system), the CPG Work Group converted the USPSTF strengths of the recommendation accompanying the carryover recommendations from the 2013 guideline to the GRADE system. As such, the CPG Work Group considered the strength of the evidence cited for each recommendation in the 2013 Suicide Risk CPG as well as the intervention's harms and benefits, patients' values and preferences, and other implications, where possible. The CPG Work Group referred to the available evidence as summarized in the body of the 2013 Suicide Risk CPG and did not systematically re-assess the evidence. In some instances, relevant peer-reviewed literature published since the 2013 Suicide Risk CPG was considered along with the original evidence base for the specific recommendation. Where such newer literature was considered when converting the strength of the recommendation from the USPSTF to the GRADE system, it is referenced in the discussion that follows the corresponding recommendation as well as in Appendix E.

The CPG Work Group recognizes that while there are sometimes practical reasons for incorporating findings from a previous systematic review, previous recommendations,[34] or recent peer-reviewed publications into an updated CPG, doing so does not involve an original, comprehensive systematic review and may introduce bias.

c. Peer Review Process

The CPG was developed through an iterative process in which the Work Group produced multiple drafts of the CPG. The process for developing the initial draft is described in more detail in Drafting and Submitting the Final Clinical Practice Guideline.

Once a near-final draft of the guideline was agreed upon by the Champions and Work Group members, the draft was sent out for peer review and comment. The draft was posted on a wiki website for a period of 14 business days. The peer reviewers comprised individuals working within the VA and DoD healthcare systems as well as experts from relevant outside organizations designated by the Work Group members. Organizations that were designated by the Work Group to participate in the peer review and provided feedback included the following:

- American Psychiatric Association
- Perelman School of Medicine, University of Pennsylvania

The VA and DoD Leadership reached out to both the internal and external peer reviewers to solicit their feedback on the CPG. Reviewers were provided a hyperlink to the wiki website where the draft CPG was posted. All feedback from the peer reviewers was discussed and considered by the Work Group. Modifications made throughout the CPG development process were made in accordance with the evidence.

B. Summary of Patient Focus Group Methods and Findings

When forming guideline recommendations, consideration should be given to the values of those most affected by the recommendations: patients. Patients bring perspectives, values, and preferences into their healthcare experience that can vary from those of clinicians. These differences can affect decision making in various situations and should be highlighted and made explicit due to their potential to influence a

recommendation's implementation.[35,36] Focus groups can be used as an efficient method to explore ideas and perspectives of a group of individuals and collect qualitative data on a thoughtfully predetermined set of questions.

Therefore, as part of the effort to update this CPG, VA and DoD Leadership, along with the Suicide Risk CPG Work Group, held two patient focus groups. The first was held on March 23, 2018, at the Colorado Springs Vet Center in Colorado Springs, CO. The second was held on June 7, 2018, at the Washington, DC VA Medical Center in Washington, DC. The aim of the focus groups was to further understand and incorporate the perspective of patients at risk for suicide and who are covered and/or receiving their care through the VA and/or DoD healthcare systems, as these patients are most affected by the recommendations put forth in the CPG. The focus groups delved into the patients' perspectives on a set of topics related to their suicide risk management, including their priorities, challenges they have experienced, the information they received regarding their care, as well as the impacts of their care on their lives.

The focus groups comprised a convenience sample and the Work Group recognizes the lack of generalizability and other limitations inherent in the small sample size. A total of seven participants (four female and three male) were included in two focus groups to be consistent with the requirements of the Federal Paperwork Reduction Act, 1980. The Work Group acknowledges that the sample included in these focus groups is not representative of all patients within the VA and DoD healthcare systems. Further, time limitations for the focus groups prevented exhaustive exploration of all topics related to suicide risk management in the VA and DoD and the patients' broader experiences with their care. Thus, the Work Group made decisions regarding the priority of topics to discuss at the focus groups. These limitations, as well as others, were considered during guideline development as the information collected from the discussion was being used. Recruitment for participation in the focus groups was managed by the Champions and VA and DoD Leadership, with assistance from coordinators at the facilities at which the focus groups took place.

The following ideas and suggestions about aspects of care that are important to patients at risk for suicide emerged as recurring themes during the discussions (Table 1). These concepts were important parts of the participants' care and added to the Work Group's understanding of patient values and perspectives. Additional details regarding the patient focus group methods and findings can be found in Appendix D.

Table 1. Suicide Risk CPG focus group themes

Patient Focus Group Themes	
A.	Recognize the importance of trust between the patient and his or her provider and/or care team and the necessity for the patient to have consistent, open, and respectful communication in the management of his or her care
B.	Provide patients with comprehensive, digestible information regarding available prevention interventions and treatment options, including information on complementary and alternative therapies
C.	Use a team approach to improve care coordination and information sharing among providers to ensure that patients receive comprehensive, individualized and integrated care plans that are responsive to their goals, values, and preferences
D.	Involve family members, caregivers, and support persons in the patient's care whenever possible in accordance with patient preferences
E.	Encourage a culture shift surrounding suicide risk management within the VA and DoD systems to address stigma

C. Conflicts of Interest

At the start of this guideline development process and at other key points throughout, the project team was required to submit disclosure statements to reveal any areas of potential conflict of interest (COI) in the past 24 months. Verbal affirmations of no COI were used as necessary during meetings throughout the guideline development process. The project team was also subject to random web-based surveillance (e.g., Centers for Medicare and Medicaid Services [CMS] open payments or ProPublica).

If a project team member reported a COI (actual or potential), then it was reported to the VA and DoD program offices. It was also discussed with the Suicide Risk CPG Champions in tandem with their review of the evidence and development of recommendations. The VA and DoD program offices and the Suicide Risk CPG Champions determined whether or not action, such as restricting participation or voting on sections related to the conflict or removal from the Work Group, was necessary due to authorship of the literature included in the systematic review. If it was deemed necessary, action to mitigate the COI was taken by the Champions and VA and DoD program offices, based on the level and extent of involvement. No COIs were identified for the Suicide Risk CPG Work Group members or Champions. Disclosure forms are on file with the Department of Veterans Affairs Office of Quality, Safety and Value and available upon request.

D. Scope of this Clinical Practice Guideline

Regardless of setting, any patient in the VA and DoD healthcare system should ideally have access to the interventions that are recommended in this guideline after taking into consideration the patient's specific circumstances.

Guideline recommendations are intended to be patient centered. Thus, treatment and care should consider a patient's needs and preferences. Effective, open communication between healthcare professionals and the patient is essential and should be supported by evidence-based information tailored to the patient's needs. Use of an empathetic and non-judgmental approach facilitates discussions sensitive to gender, culture, ethnic, and other considerations. The information that patients are given about treatment and care should be culturally appropriate and available to people with limited literacy skills. Treatment information should also be accessible to people with additional needs such as physical, sensory, or learning disabilities. Family and caregiver involvement should be considered, if appropriate.

This CPG is designed to assist providers in managing or co-managing patients at risk for suicide as well as any co-occurring conditions (e.g., major depressive disorder [MDD], generalized anxiety disorder, SUD, posttraumatic stress disorder [PTSD], traumatic brain injury [TBI]). VA/DoD CPGs exist for MDD[2], mild TBI[3], PTSD[4], SUD[5], and opioid therapy for chronic pain[6]. Moreover, the patient population of interest for this CPG is patients at risk for suicide who are eligible for care in the VA and DoD healthcare delivery systems

[2] See the VA/DoD Clinical Practice Guideline for the Management of Major Depressive Disorder. Available at: https://www.healthquality.va.gov/guidelines/MH/mdd/

[3] See the VA/DoD Clinical Practice Guideline for the Management of Concussion-mild Traumatic Brain Injury. Available at: https://www.healthquality.va.gov/guidelines/Rehab/mtbi/

[4] See the VA/DoD Clinical Practice Guideline for the Management of Posttraumatic Stress Disorder and Acute Stress Reaction. Available at: https://www.healthquality.va.gov/guidelines/MH/ptsd/

[5] See the VA/DoD Clinical Practice Guideline for the Management of Substance Use Disorder. Available at: https://www.healthquality.va.gov/guidelines/MH/sud/

[6] See the VA/DoD Clinical Practice Guideline for the Management of Opioid Therapy for Chronic Pain. Available at: https://www.healthquality.va.gov/guidelines/pain/cot/

and those who are in the community receiving care from community-based clinicians. It includes Veterans as well as deployed and non-deployed Active Duty Service, Guard, and Reserve Members and their dependents.

E. Highlighted Features of this Clinical Practice Guideline

The 2019 edition of the VA/DoD Suicide Risk CPG is the first update to the original CPG. It provides practice recommendations for the care of individuals at risk for suicide as well as guidance for specialty referral. A particular strength of this CPG is the multidisciplinary stakeholder involvement from its inception, ensuring representation from the broad spectrum of clinicians engaged in the treatment and management of patients at risk for suicide with and without co-occurring conditions.

The framework for recommendations in this CPG considered factors beyond the strength of the evidence, including balancing desired outcomes with potential harms of the intervention, the potential for variation in patient values and preferences, and other considerations (e.g., resource use, subgroup considerations) as appropriate. Applicability of the evidence to VA/DoD populations was also taken into consideration. An algorithm accompanies the guideline to provide an overview of the recommendations in the context of the flow of patient care and to assist with training providers (see Algorithm section). The algorithm may be used to help facilitate translation of guideline recommendations into practice.

F. Patient-centered Care

VA/DoD CPGs encourage providers to use a patient-centered care (PCC) approach that is individualized based on patient needs, characteristics, and preferences. Regardless of setting, all patients in the healthcare system should be able to access evidence-based care appropriate to their specific needs or condition. When properly executed, PCC may decrease patient anxiety, increase trust in clinicians,[37] and improve treatment adherence.[38] Improved patient-clinician communication and a PCC approach conveys openness and supports disclosure of current and future concerns.

As part of the PCC approach, providers should ask each patient about any concerns he or she has or barriers to high quality care he or she has experienced.

G. Shared Decision Making

Throughout this VA/DoD CPG, the authors encourage clinicians to focus on shared decision making (SDM). The SDM model was introduced in *Crossing the Quality Chasm*, an Institute of Medicine (IOM) (now called the National Academy of Medicine [NAM]) report, in 2001.[39] It is readily apparent that patients, together with their clinicians, make decisions regarding their plan of care and management options. Patients at risk for suicide require sufficient information and time to be able to make informed decisions. Clinicians must be adept at presenting information to their patients regarding treatments, expected outcomes, and levels and/or locations of care. Clinicians are encouraged to use SDM to individualize treatment goals and plans based on patient capabilities, needs, goals, and preferences. In addition, the Department of Veterans Affairs and the Education Development Center (EDC) have jointly developed additional resources regarding mental health and SDM that can be found at: https://www.treatmentworksforvets.org/provider/.

H. Co-occurring Conditions

Co-occurring health conditions are important to recognize because they can modify the degree of risk and trajectory of an individual's suicide-related behavior, impact the assessment and management of suicide risk, influence patient or provider treatment priorities and clinical decisions, and affect the overall provider approach to the management of suicide risk. Providers should expect that many Veterans, Service Members, and their families will have one or more co-occurring health conditions. Because of the nature of suicide risk management, which sometimes takes place in parallel with ongoing care for co-occurring conditions, it is generally best to manage suicide risk collaboratively with other care providers. Some co-occurring medical, mental health, or SUD conditions may require early specialist consultation in order to discuss any necessary changes in treatment or to establish a common understanding of how care will be coordinated and delivered. VA/DoD CPGs exist for MDD[7], mild TBI[8], PTSD[9], SUD[10], and opioid therapy for chronic pain[11].

In addition to assessing for co-occurring health conditions, Veterans, Service Members and their families may also experience a number of psychosocial factors that are known to be associated with increased suicide risk. In order to fully assess risk of suicide from a whole-health approach, key psychosocial factors must be assessed as well and may require an interdisciplinary team approach. One example of a highly correlated psychosocial issue is the presence of intimate partner violence (IPV). IPV significantly affects risk, not only of suicide, but also for homicide. Survivors of IPV are twice as likely to attempt suicide multiple times and the presence of IPV increases risk of murder-suicides significantly.[40] Current assessment trends advocate for efforts to bring awareness to these intersections and for the efforts to prevent suicide as well as IPV in a mutually collaborative manner. See Recommendation 3 for further information.

I. Implementation

This CPG and algorithm are designed to be adapted by individual healthcare providers with consideration of local needs and resources. The algorithms serve as tools to prompt providers to consider key decision points during an episode of care.

Although this CPG represents the recommended practices on the date of its publication, medical practice is evolving and requires ongoing awareness by providers of newly published information. New technology and additional research will improve patient care in the future. The CPG can assist in identifying priority areas for research and informing optimal allocation of resources. Future studies examining the results of CPG implementation may lead to the development of new evidence particularly relevant to clinical practice.

[7] See the VA/DoD Clinical Practice Guideline for the Management of Major Depressive Disorder. Available at: https://www.healthquality.va.gov/guidelines/MH/mdd/

[8] See the VA/DoD Clinical Practice Guideline for the Management of Concussion-mild Traumatic Brain Injury. Available at: https://www.healthquality.va.gov/guidelines/Rehab/mtbi/

[9] See the VA/DoD Clinical Practice Guideline for the Management of Posttraumatic Stress Disorder and Acute Stress Reaction. Available at: https://www.healthquality.va.gov/guidelines/MH/ptsd/

[10] See the VA/DoD Clinical Practice Guideline for the Management of Substance Use Disorder. Available at: https://www.healthquality.va.gov/guidelines/MH/sud/

[11] See the VA/DoD Clinical Practice Guideline for the Management of Opioid Therapy for Chronic Pain. Available at: https://www.healthquality.va.gov/guidelines/pain/cot/

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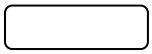
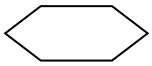
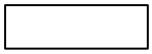
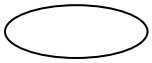
V. Algorithm

This CPG includes an algorithm that is designed to facilitate understanding of the clinical pathways and decision-making processes used in managing patients at risk for suicide. The use of the algorithm format as a way to represent patient management was chosen based on the understanding that such a format may promote more efficient diagnostic and therapeutic decision making; it also has potential to change patterns of resource use. Although the Work Group recognizes that not all clinical practices are linear, the simplified linear approach depicted through the algorithm and its format allows the provider to assess the critical information needed at the major decision points in the clinical process. It includes:

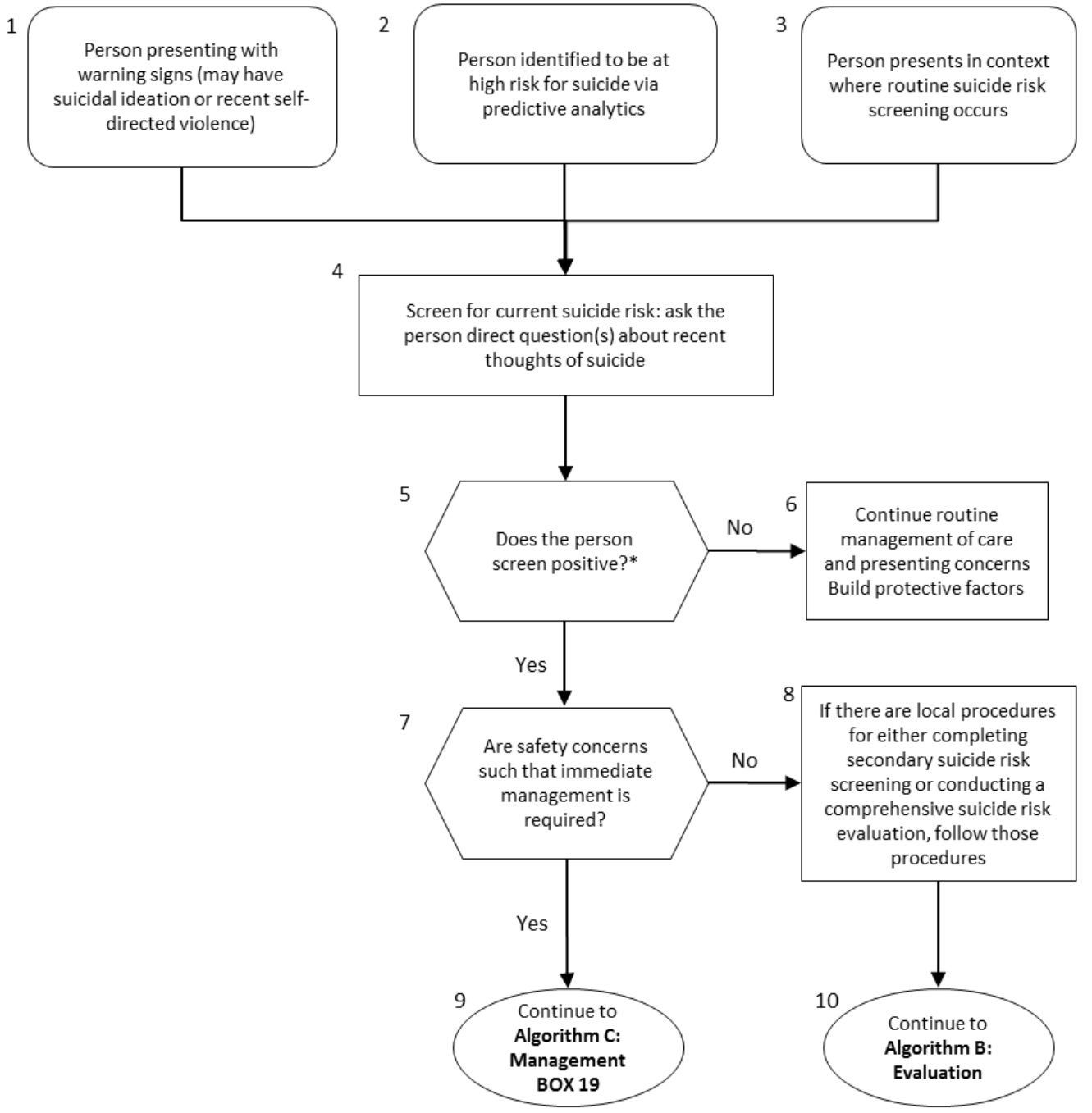
- An ordered sequence of steps of care
- Recommended observations and examinations
- Decisions to be considered
- Actions to be taken

For each VA/DoD CPG, there is a corresponding clinical algorithm that is depicted by a step-by-step decision tree. Standardized symbols are used to display each step in the algorithm, and arrows connect the numbered boxes indicating the order in which the steps should be followed.[41]

Shape	Description
	Rounded rectangles represent a clinical state or condition
	Hexagons represent a decision point in the guideline, formulated as a question that can be answered Yes or No
	Rectangles represent an action in the process of care
	Ovals represent a link to another section within the guideline.

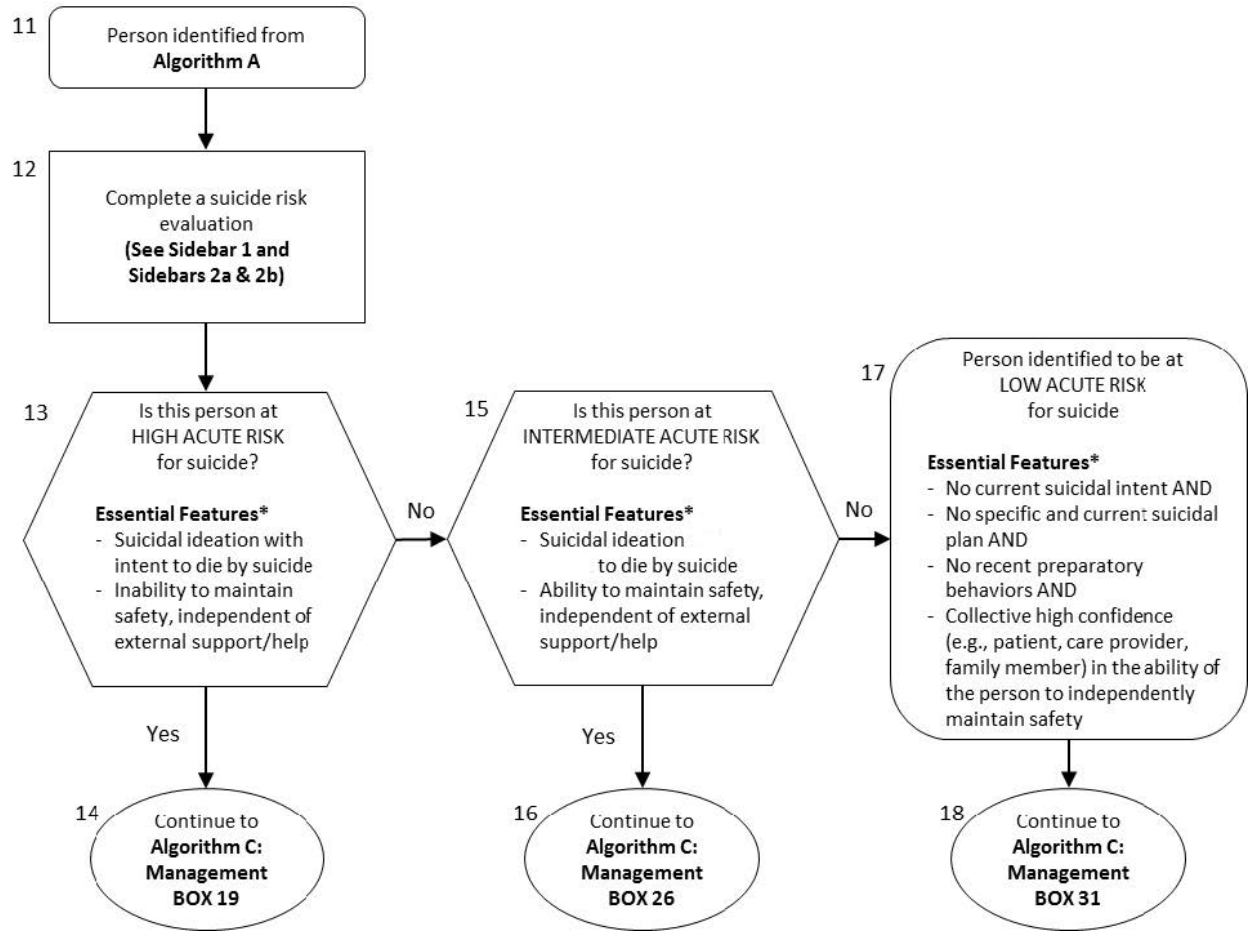
Appendix I contains alternative text descriptions of Algorithm A, Algorithm B, and Algorithm C.

Algorithm A: Identification of Risk for Suicide



*Note: Follow to Box 7 if screen is negative but additional evidence (e.g., collateral) suggests the need for continued screening and/or evaluation

Algorithm B: Evaluation by Provider



*Source: Rocky Mountain MIRECC Therapeutic Risk Management – Risk Stratification Table. Available at: https://www.mirecc.va.gov/visn19/trm/

Sidebar 1. Risk Factors for Suicide*
– Any prior suicide attempt – Current suicidal ideation – Recent psychosocial stressors – Availability of firearms – Prior psychiatric hospitalization – Psychiatric conditions (e.g., mood disorders, substance use disorders) or symptoms (e.g., hopelessness, insomnia, agitation) **Necessary as part of a comprehensive assessment of suicide risk, but not sufficient* **(See Recommendation 3)**

Sidebar 2a. Essential Features from Risk Stratification Table – Acute Risk[12]		
Level of Risk	**Essential Features**	**Action**
High Acute Risk	– Suicidal ideation with intent to die by suicide – Inability to maintain safety, independent of external support/help Common warning signs: – A plan for suicide – Recent attempt and/or ongoing preparatory behaviors – Acute major mental illness (e.g., major depressive episode, acute mania, acute psychosis, recent/current drug relapse) – Exacerbation of personality disorder (e.g., increased borderline symptomatology)	– Typically requires psychiatric hospitalization to maintain safety and aggressively target modifiable factors – These individuals may need to be directly observed until they are transferred to a secure unit and kept in an environment with limited access to lethal means (e.g., keep away from sharps, cords or tubing, toxic substances) – During hospitalization co-occurring conditions should also be addressed
Intermediate Acute Risk	– Suicidal ideation to die by suicide – Ability to maintain safety, independent of external support/help These individuals may present similarly to those at high acute risk, sharing many of the features. The only difference may be lack of intent, based upon an identified reason for living (e.g., children), and ability to abide by a safety plan and maintain their own safety. Preparatory behaviors are likely to be absent.	– Consider psychiatric hospitalization, if related factors driving risk are responsive to inpatient treatment (e.g., acute psychosis) – Outpatient management of suicidal thoughts and/or behaviors should be intensive and include: frequent contact, regular re-assessment of risk, and a well-articulated safety plan – Mental health treatment should also address co-occurring conditions
Low Acute Risk	– No current suicidal intent AND – No specific and current suicidal plan AND – No recent preparatory behaviors AND – Collective high confidence (e.g., patient, care provider, family member) in the ability of the patient to independently maintain safety Individuals may have suicidal ideation, but it will be with little or no intent or specific current plan. If a plan is present, the plan is general and/or vague, and without any associated preparatory behaviors (e.g., "I'd shoot myself if things got bad enough, but I don't have a gun"). These patients will be capable of engaging appropriate coping strategies, and willing and able to utilize a safety plan in a crisis situation.	– Can be managed in primary care – Outpatient mental health treatment may also be indicated, particularly if suicidal ideation and co-occurring conditions exist

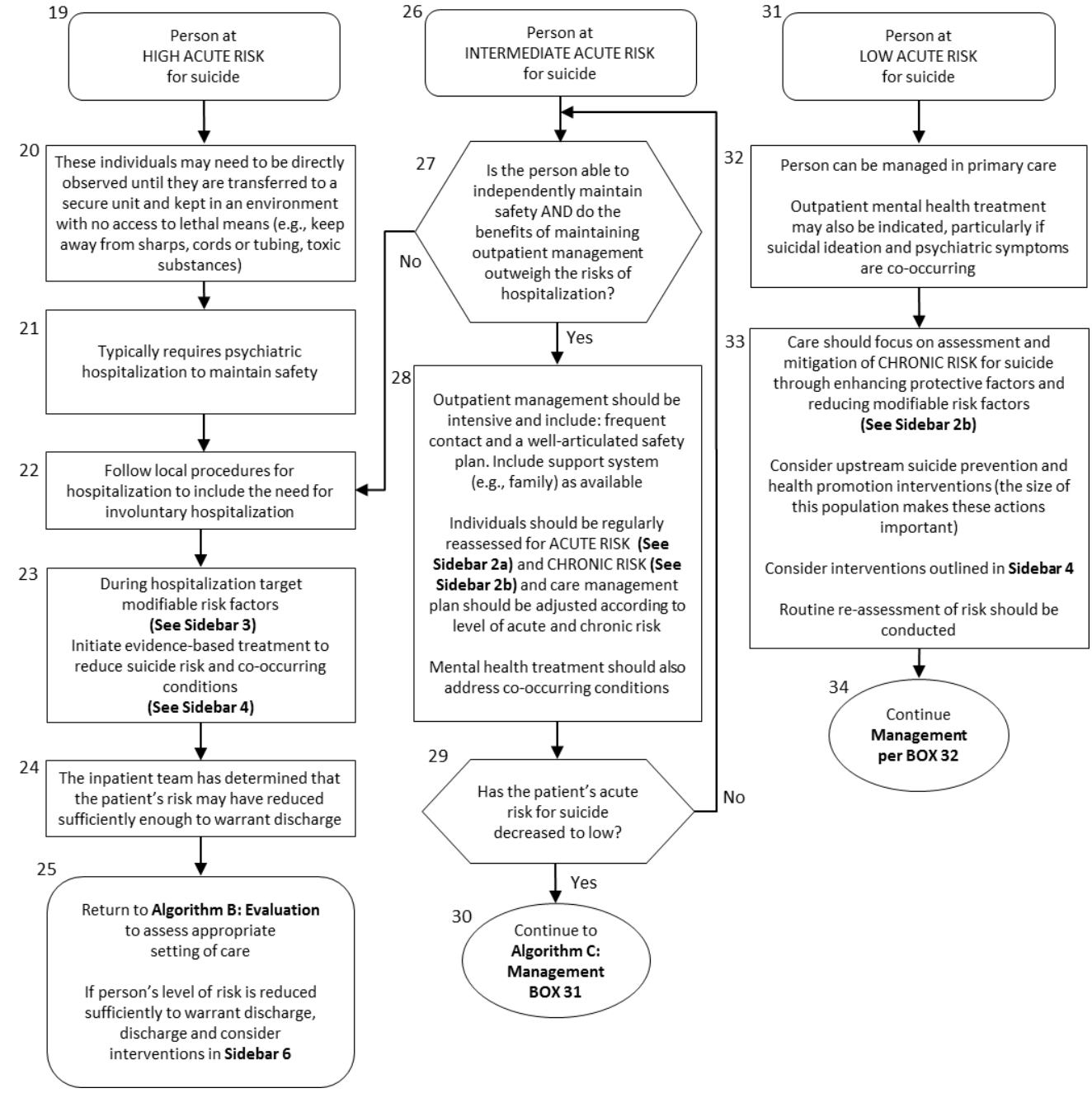
[12] Source: Rocky Mountain MIRECC Therapeutic Risk Management – Risk Stratification Table. Available at: https://www.mirecc.va.gov/visn19/trm/

Sidebar 2b. Essential Features from Risk Stratification Table – Chronic Risk[13]		
Level of Risk	**Essential Features**	**Action**
High Chronic Risk	Common warning sign: – Chronic suicidal ideation Common risk factors: – Chronic major mental illness and/or personality disorder – History of prior suicide attempt(s) – History of substance use disorders – Chronic pain – Chronic medical condition – Limited coping skills – Unstable or turbulent psychosocial status (e.g., unstable housing, erratic relationships, marginal employment) – Limited ability to identify reasons for living	These individuals are considered to be at chronic risk for becoming acutely suicidal, often in the context of unpredictable situational contingencies (e.g., job loss, loss of relationships, and relapse on drugs). These individuals typically require: – Routine mental health follow-up – A well-articulated safety plan, including lethal means safety (e.g., no access to guns, limited medication supply) – Routine suicide risk screening – Coping skills building – Management of co-occurring conditions
Intermediate Chronic Risk	– These individuals may feature similar chronicity as those at high chronic risk with respect to psychiatric, substance use, medical and pain disorders – Protective factors, coping skills, reasons for living, and relative psychosocial stability suggest enhanced ability to endure future crisis without engaging in self-directed violence	These individuals typically require: – Routine mental health care to optimize psychiatric conditions and maintain/ enhance coping skills and protective factors – A well-articulated safety plan, including lethal means safety (e.g., safe storage of lethal means, medication disposal, blister packaging) – Management of co-occurring conditions

Low Chronic Risk	– These individuals may range from persons with no or little in the way of mental health or substance use problems, to persons with significant mental illness that is associated with relatively abundant strengths/ resources
	– Stressors historically have typically been endured absent suicidal ideation
	– The following factors will generally be missing:
	  – History of self-directed violence
	  – Chronic suicidal ideation
	  – Tendency towards being highly impulsive
	  – Risky behaviors
	  – Marginal psychosocial functioning
		– Appropriate for mental health care on an as needed basis, some may be managed in primary care settings
		– Others may require mental health follow-up to continue successful treatments

[13] Source: Rocky Mountain MIRECC Therapeutic Risk Management – Risk Stratification Table. Available at: https://www.mirecc.va.gov/visn19/trm/

Algorithm C: Management of Patients at Acute Risk for Suicide



Sidebar 3. Modifiable Risk Factors
– Modifiable risk factors are things that can be changed, such as depression.[14] – Often, such risk factors can be reduced by certain interventions, such as prescribing antidepressant medication for depression, or decreasing isolation by strengthening social support.[15]

[14] Source: Suicide Prevention Resource Center, & Rodgers, P. *Understanding risk and protective factors for suicide: A primer for preventing suicide*. Newton, MA: Education Development Center, Inc. 2011.

[15] Source: Western Michigan University. *Suicide prevention program: Risk factors*. Kalamazoo, MI: 2018. https://wmich.edu/suicideprevention/basics/risk.

Sidebar 4. Evidence-Based Treatment to Reduce Repetition of Suicide Behavior

Non-pharmacologic Treatments (See Recommendations 6-9)

- Cognitive Behavioral Therapy-based interventions for suicide prevention
- Dialectical Behavior Therapy
- Problem-Solving Therapy-based interventions

Crisis Response Plan (See Sidebar 5 and Recommendation 8)

Pharmacotherapy for Suicide Prevention* (See Recommendations 10-12)

- Ketamine infusion (among patients with suicidal ideation and major depressive disorder)
- Lithium alone (among patients with bipolar disorder) or in combination with another psychotropic agent
- Clozapine (among patients with either suicidal ideation or a history of suicide attempt)

Other (See Recommendation 18)

- Reduce access to lethal means

**Other treatments may be indicated for underlying conditions (see VA/DoD CPGs for MDD, PTSD, SUD, etc.)*

Abbreviations: CPG: Clinical practice guideline; DoD: Department of Defense; MDD: major depressive disorder; PTSD: posttraumatic stress disorder; SUD: substance use disorder; VA: Department of Veterans Affairs

Sidebar 5. Crisis Response Plan

- Semi-structured interview of recent suicide ideation and chronic history of suicide attempts
- Unstructured conversation about recent stressors and current complaints using supportive listening techniques
- Collaborative identification of clear signs of crisis (behavioral, cognitive, affective or physical)
- Self-management skill identification including things that can be done on the patient's own to distract or feel less stressed
- Collaborative identification of social support including friends and family members who have helped in the past and who they would feel comfortable contacting in crisis
- Review of crisis resources including medical providers, other professionals and the suicide lifeline (1-800-273-8255)
- Referral to treatment including follow up appointments and other referrals as needed
- Consider protective factors
- Additional steps for management of military Service Members
  - Inform command
  - Determine utility of command involvement
  - Address barriers to care (including stigma)
  - Ensure follow-up during transition
  - Enroll in risk management tracking)

(See Recommendation 8)

Sidebar 6. Interventions to Improve Adherence

- Facilitating access to care
- Outreach (e.g., telephone contact, home visit, mailing caring letters/postcards)
- Case/care management
- Counseling and other psychosocial interventions

(See Recommendations 13-15)

VII. Recommendations

Topic	Sub-topic	#	Recommendation	Strength*	Category†
Screening and Evaluation	*a. Screening*	1.	With regard to universal screening, we suggest the use of a validated screening tool to identify individuals at risk for suicide-related behavior.	Weak for	Reviewed, New-added
		2.	With regard to selecting a universal screening tool, we suggest the use of the Patient Health Questionnaire-9 item 9, to identify suicide risk.	Weak for	Reviewed, New-added
	b. Evaluation	3.	We recommend an assessment of risk factors as part of a comprehensive evaluation of suicide risk, including but not limited to: current suicidal ideation, prior suicide attempt(s), current psychiatric conditions (e.g., mood disorders, substance use disorders) or symptoms (e.g., hopelessness, insomnia, and agitation), prior psychiatric hospitalization, recent bio-psychosocial stressors, and the availability of firearms.	Strong for	Reviewed, New-replaced
		4.	When evaluating suicide risk, we suggest against the use of a single instrument or method (e.g., structured clinical interview, self-report measures, or predictive analytic models).	Weak against	Reviewed, Amended
		5.	While it is an expected standard of care, there is insufficient evidence to recommend for or against the use of risk stratification to determine the level of suicide risk.	Neither for nor against	Reviewed, New-replaced
Risk Management and Treatment	*a. Non-pharmacologic Treatments*	6.	We recommend using cognitive behavioral therapy-based interventions focused on suicide prevention for patients with a recent history of self-directed violence to reduce incidents of future self-directed violence.	Strong for	Reviewed, New-added
		7.	We suggest offering Dialectical Behavioral Therapy to individuals with borderline personality disorder and recent self-directed violence.	Weak for	Reviewed, New-replaced
		8.	We suggest completing a crisis response plan for individuals with suicidal ideation and/or a lifetime history of suicide attempts.	Weak for	Reviewed, New-replaced
		9.	We suggest offering problem-solving based psychotherapies to: a. Patients with a history of more than one incident of self-directed violence to reduce repeat incidents of such behaviors b. Patients with a history of recent self-directed violence to reduce suicidal ideation c. Patients with hopelessness and a history of moderate to severe traumatic brain injury	Weak for	Reviewed, New-replaced
	b. Pharmacologic Treatments	10.	In patients with the presence of suicidal ideation and major depressive disorder, we suggest offering ketamine infusion as an adjunctive treatment for short-term reduction in suicidal ideation.	Weak for	Reviewed, New-added
		11.	We suggest offering lithium alone (among patients with bipolar disorder) or in combination with another psychotropic agent (among patients with unipolar depression or bipolar disorder) to decrease the risk of death by suicide in patients with mood disorders.	Weak for	Reviewed, New-replaced

Topic	Sub-topic	#	Recommendation	Strength*	Category†
Risk Management and Treatment (cont.)	*b. Pharmacologic Treatments*	12.	We suggest offering clozapine to decrease the risk of death by suicide in patients with schizophrenia or schizoaffective disorder and either suicidal ideation or a history of suicide attempt(s).	Weak for	Reviewed, Amended
	c. Post-acute Care	13.	We suggest sending periodic caring communications (e.g., postcards) for 12-24 months in addition to usual care after psychiatric hospitalization for suicidal ideation or a suicide attempt.	Weak for	Reviewed, New-replaced
		14.	We suggest offering a home visit to support reengagement in outpatient care among patients not presenting for outpatient care following hospitalization for a suicide attempt.	Weak for	Reviewed, Amended
		15.	We suggest offering the World Health Organization Brief Intervention and Contact treatment modality following presentation to the emergency department for suicide attempt, in addition to standard care.	Weak for	Reviewed, New-added
	d. Technology-based Modalities	16.	There is insufficient evidence to recommend for or against technology-based behavioral health treatment modalities for individuals with suicidal ideation. These include self-directed digital delivery of treatment protocols with minimal or no provider interaction (e.g., compact disc, web-based), and provider-delivered virtual treatment.	Neither for nor against	Reviewed, New-replaced
		17.	There is insufficient evidence to recommend for or against the use of technology-based adjuncts (e.g., web or telephone applications) to routine suicide prevention treatment for individuals with suicidal ideation.	Neither for nor against	Reviewed, New-replaced
Other Management Modalities	*a. Population & Community -based Interventions*	18.	We suggest reducing access to lethal means to decrease suicide rates at the population level.	Weak for	Reviewed, New-added
		19.	There is insufficient evidence to recommend for or against community-based interventions targeting patients at risk for suicide.	Neither for nor against	Reviewed, New-added
		20.	There is insufficient evidence to recommend for or against community-based interventions to reduce population-level suicide rates.	Neither for nor against	Reviewed, New-added
		21.	There is insufficient evidence to recommend for or against gatekeeper training alone to reduce population-level suicide rates.	Neither for nor against	Reviewed, New-added
		22.	There is insufficient evidence to recommend for or against buddy support programs to prevent suicide, suicide attempts, or suicidal ideation.	Neither for nor against	Reviewed, New-added

*For additional information, please refer to Grading Recommendations.

†For additional information, please refer to Recommendation Categorization and Appendix F.

A. Screening and Evaluation

a. Screening

Recommendation

1. With regard to universal screening, we suggest the use of a validated screening tool to identify individuals at risk for suicide-related behavior.
   (Weak for | Reviewed, New-added)

2. With regard to selecting a universal screening tool, we suggest the use of the Patient Health Questionnaire-9 item 9, to identify suicide risk.
   (Weak for | Reviewed, New-added)

Discussion

Consistent with previous reviews of the evidence base related to the identification of those who are at elevated risk of dying by suicide, our review found that most screening tools do not accurately predict risk of suicide.[42-48] These tools tend to yield an unacceptably high false-positive prediction rate (i.e., many of those determined to be "at risk" never experience clinically significant suicidal thoughts or behavior) alongside an unacceptably low degree of accuracy when identifying true cases (i.e., a substantial portion of those individuals who die by suicide were not identified by the screening tool[s]).[42,43]

However, several studies were identified that support the use of the Patient Health Questionnaire-9 (PHQ-9) item 9 as a universal screening instrument to identify suicide risk.[43,49] Item 9 on the PHQ-9, as well as possible responses are as follows:

> **Item 9:** "Over the past two weeks, how often have you been bothered by thoughts that you would be better off dead or of hurting yourself in some way?"
>
> **Possible Responses:** "Not at all," "Several days," "More than half the days," or "Nearly every day." [50]

Louzon et al. (2016) looked at all VHA patients who received the PHQ-9 across care settings and found that higher levels of suicidal ideation, as identified by responses on item 9, were associated with increased risk of death by suicide.[43] The number of risk days ranged from 1 to 730; analyses in terms of timing of suicide deaths relative to the most recently completed PHQ-9 stratified as follows: <7 days, <30 days, <60 days, <90 days, <180 days, and <1 year. Responses on the items were related to risk as follows: "several days" – a 75% increased risk for suicide, "more than half the days" – a 115% increased risk for suicide, and "nearly every day" – a 185% increased risk. Nonetheless, 71.6% of deaths by suicide during the study periods were among those who endorsed "not at all," highlighting that use of the item 9 alone is likely to result in a number of at risk patients being missed.[43]Similarly, Simon et al. (2013) examined the relationship between PHQ-9 item 9 scores and death by suicide among civilian outpatients receiving care for depression in mental health and primary care clinics, and found that endorsement of responses were predictive of both suicide attempts and deaths within the year post-administration.[49] However, as with the Louzon et al. study, there were a notable number of suicides among those who denied thoughts of death or self-harm ideation.[43]

As many individuals are seen by healthcare providers in the weeks and months prior to their deaths by suicide, strategies for early identification within diverse clinical settings are warranted.[51] Based on the review of the literature, emerging data suggests that one strategy to improve early identification is screening for suicide risk in both primary and specialty care settings. Implementation of such screening procedures will also require the development and implementation of tools (e.g., templated evaluation forms) and trainings, as well as work flow strategies to address the needs of patients who screen positive. Given this, the Work Group determined that at the present time, there is weak evidence to suggest that the degree of suicidal ideation, endorsed on item 9 of the PHQ-9, is positively associated with the degree of risk for suicide-related behavior. Therefore, we suggest the use of the PHQ-9 as a universal screening tool to identify suicide risk.

There are some important considerations that limited the support for many of the screening programs and tools that were reviewed, including limited sample sizes, data from non-adult cohorts, truncated follow-up windows that were too short to determine if the screening tool or process could accurately identify or predict suicidal thoughts and behavior, and the use of proxy outcomes for suicide and suicide-related behavior.[52] For example, the Columbia Suicide Severity Rating Scale (C-SSRS) was included in the Runeson et al. (2017) systematic review regarding instruments for assessing suicide risk; however, the one study identified for inclusion in Table 1 entitled, "Instruments evaluated in studies with acceptable risk of bias," was conducted among 124 adolescents.[52] In their conclusions the authors noted, "There were too few studies to assess the diagnostic accuracy of …the C-SSRS."[52]Studies that use larger samples, adult cohorts, mortality as their key outcome, and employ prolonged follow-up periods are needed.

Importantly, none of the evidence that was reviewed suggested that the act of screening for suicidal thoughts and behavior increases negative affect or the risk of experiencing suicide-related thoughts and behavior.[44,48] Further, no studies included in this review identified any risks or harms associated with specific suicide screening programs or tools. Because of this, providers and healthcare systems are encouraged to administer screening programs for suicide-related thoughts and behavior. Indeed, patient focus groups conducted as part of this CPG revision confirm that some patients will not voluntarily disclose their suicidal thinking, but would report it accurately if they had been asked about it directly.

As Recommendation 1 is a *Reviewed, New-added* recommendation, the Work Group systematically reviewed the relevant evidence.[42-48,52] The Work Group's confidence in the quality of the evidence is low. The body of evidence had some key limitations including insufficient follow-up periods after screening and the use of unreliable or invalid measurement instruments. Other considerations regarding this recommendation included the absence of potential harm of adverse events, which supports the notion that while screening may not be clinically useful for ultimately predicting who will die by suicide, the screening efforts will not increase the risk of suicidal ideations or behavior. Patient values and preferences were somewhat varied and suggested that asking about suicide-related thoughts and behavior may be an important entry point into behavioral health services. Thus, the Work Group decided upon a "Weak for" recommendation.

Recommendation 2 is also a *Reviewed, New-added* recommendation, and the Work Group systematically reviewed evidence related to this recommendation.[43,49] The overall confidence in the evidence pertaining to the PHQ-9 item 9 was moderate. As limited data exists regarding implementing the PHQ-9 item 9 in large healthcare settings, future research regarding feasibility and acceptability are warranted.

Nonetheless, there is sufficient data to encourage use of item 9 to screen for risk, particularly in non-mental health settings, as a component of system-wide suicide prevention efforts. Due to the weak evidence supporting the use of the PHQ-9 item 9, the Work Group decided upon a "Weak for" recommendation.

b. Evaluation

Recommendation

3. We recommend an assessment of risk factors as part of a comprehensive evaluation of suicide risk, including but not limited to: current suicidal ideation, prior suicide attempt(s), current psychiatric conditions (e.g., mood disorders, substance use disorders) or symptoms (e.g., hopelessness, insomnia, and agitation), prior psychiatric hospitalization, recent bio-psychosocial stressors, and the availability of firearms.
   (Strong for | Reviewed, New-replaced)

Discussion

Findings suggest that a comprehensive suicide risk evaluation should include risk factors which may be modifiable and non-modifiable.[28,53] See Table 2 for a list of factors, all with some evidence, to consider. Those that are demarcated with an asterisk (*) were identified as having the strongest evidence.[22,28,53-61]

Table 2. Factors with evidence to consider during a comprehensive evaluation of suicide risk†

Factor Category	List of Factors to Consider
SDV related	• Current suicidal ideation* • Prior suicide attempt(s)* • Preparatory behaviors • Past or present suicidal intent • Non-suicidal SDV behaviors
Current psychiatric conditions/current or past mental health treatment	• Mood disorders* • Anxiety disorders* • Psychotic disorders* • Personality disorders • Substance use disorders* • Eating disorders* • History of psychiatric hospitalization*

Factor Category	List of Factors to Consider
Psychiatric symptoms	• Hopelessness* • Depressed mood* • Anxiety/panic* • Insomnia* • Problem solving difficulties* • Agitation* • Anger* • Rumination* • Impulsivity* • Intoxication* • Decreased psychosocial functioning • Hallucinations
Recent bio-psychosocial stressors	• Loss of a relationship (e.g., break-up, divorce, death)* • Loss of job* • Risk of losing stable housing/homelessness* • Exposure to suicide* • Traumatic exposure (e.g., bullying, IPV, sexual assault, physical assault, emotional abuse)* • Social isolation* • Legal/disciplinary issues* • Financial problems • Transition of care (e.g., discharge from inpatient, change in medication, change in therapist) • Barrier to accessing care
Availability of lethal means	• Access to firearms* • Access to other lethal means
Physical health conditions	• History of TBI with moderate to severe TBI being greater than mild (concussion) • Cancer diagnosis
Demographic factors	• Lesbian, gay, bisexual, transgender sexual orientation or gender identity

†Neither the categories nor the lists of factors are rank ordered

*Denotes factors identified in evidence review and are highlighted in Recommendation 3

Abbreviations: IPV: Intimate partner violence; TBI: traumatic brain injury; SDV: self-directed violence

Factors that increase risk for suicidal thoughts and/or behaviors with the most evidence were organized into categories including: SDV related (e.g., current suicidal ideation); current psychiatric conditions/current or past mental health treatment (e.g., prior psychiatric hospitalization); psychiatric symptoms (e.g., hopelessness); recent bio-psychosocial stressors (e.g., loss of relationship); and, availability of firearms.[28,53,54,61] While these are some of the strongest predictive factors, and should be part of any comprehensive risk evaluation, clinicians are also encouraged to identify other modifiable/non-modifiable factors that may be relevant to the person being evaluated (e.g., transition of care).

The evidence base in support of factors that can protect against suicidal behavior is limited. Nonetheless, evaluation of such factors, particularly those associated with reasons for living, should be included in a comprehensive suicide risk evaluation.

As this is a *Reviewed, New-replaced* recommendation, the Work Group systematically reviewed evidence related to this recommendation.[22,28,53-61] The Work Group's confidence in the quality of the evidence is moderate. Other considerations regarding this recommendation included the benefits, including improved likelihood of a therapeutic alliance and improved prediction of suicide risk resulting from a comprehensive suicide risk assessment, outweighing the potential harm of adverse events, which was small. Patient values and preferences were consistent in their desire for an empathic provider conducting a comprehensive, understanding assessment. Thus, the Work Group decided upon a "Strong for" recommendation for the specific categories of risk factors noted in the recommendation, while cautioning that a comprehensive assessment must include significantly more factors, and that a "check list" approach is not supported by evidence.

Recommendation

4. When evaluating suicide risk, we suggest against the use of a single instrument or method (e.g., structured clinical interview, self-report measures, or predictive analytic models).
   (Weak against | Reviewed, Amended)

Discussion

A review of the evidence did not identify a specific risk evaluation instrument or method (e.g., structured clinical interview, self-report measures, and predictive analytic models) that is sufficient to determine future risk of suicide.[52,62,63] However, performing suicide risk evaluation is a critical function for mental health providers, as well as primary care, emergency department (ED), and other providers. Currently, there are many assessment tools and methods that are utilized by providers to evaluate and manage suicide risk. These assessment tools provide a standardized way of eliciting information from individuals that can help inform risk management strategies. Given the lack of evidence supporting the use of a single instrument or method, clinicians should practice caution when conducting a suicide risk evaluation, and not rely on any of these tools alone. In addition to the evidence included in the systematic review, this approach is consistent with current clinical models and best practices (e.g., therapeutic risk management), which highlight the importance of using multiple tools and methods, such as structured clinical interviews augmented with valid and reliable self-report measures, as part of an evidence-based process for evaluating suicide risk.[64-66]

The potential harms of only using a single instrument or method to assess suicide risk outweigh the burden of utilizing multiple instruments and a multi-method approach to assess an individual's risk for suicide. There is some variation in patient values and preferences that should be considered.

As this is a *Reviewed, Amended* recommendation, the Work Group systematically reviewed evidence related to this recommendation.[52,62,63] The Work Group's confidence in the quality of the evidence is low. The body of evidence had some limitations as most of the studies focused on high-risk patients. Studies varied on their criteria for high and low suicide risk. The Work Group decided upon a "Weak against" recommendation due to the lack of evidence for a single specific instrument or method.

Recommendation

5. While it is an expected standard of care, there is insufficient evidence to recommend for or against the use of risk stratification to determine the level of suicide risk.
   (Neither for nor against | Reviewed, New-replaced)

Discussion

A valid and reliable tool to classify the degree of risk that accurately represents a patient's suicide-related thoughts and behavior (i.e., risk stratification) remains elusive.[62,63,67] In Large et al. (2018), just over half of the suicide-related deaths observed occurred among patients in the high-risk category who were admitted to inpatient psychiatric facilities.[63] The odds ratio for suicide in the high-risk group compared to the low-risk group was 7.1, but this is in the context of a patient population that all met criteria for admission to inpatient psychiatry. In Large et al. (2016), similar findings were described in patients seeking psychiatric services that had a suicide attempt, demonstrating a 56% sensitivity (correct identification of true positive cases) and 79% specificity (correct identification of true negative cases) of a high-risk categorization.[62] In both systematic reviews, approximately half of all suicide-related deaths occurred in the low-risk categories. Methodological variations across these studies with respect to the patient population, as well as criteria and methods for determining different levels of risk, likely contributed to the inconsistent findings. Thus, the evidence for risk stratification remains inconclusive, resulting in a change to this recommendation from the 2013 Suicide Risk CPG.

This change in the recommendation should not discourage or prevent providers from completing comprehensive assessments to determine level of risk and appropriate risk mitigation strategies. Risk stratification, when completed as part of a comprehensive evaluation, enables providers to formulate a clinical impression of a patient's suicide risk, which can help inform risk mitigation strategies and treatment decisions. [64,68]

Additionally, as patients move between providers, relocate, progress through levels of care, and transition from military service to Veteran status, it is useful to have a consistent lexicon for identifying and communicating a patient's level of risk (i.e., high, intermediate, or low acute or chronic risk). Therefore, consistent and standardized approaches to suicide risk assessment and stratification, such as those depicted in the Algorithm, can enhance the clinical utility and feasibility of conducting risk stratification in an equitable and replicable manner.

As this is a *Reviewed, New-replaced* recommendation, the Work Group systematically reviewed evidence related to this recommendation.[62,63,67] The Work Group's confidence in the quality of the evidence was low, and the body of evidence had limitations including a small evidence base, fair methodological quality of individual trials, and poor sensitivity and low positive predictive value of risk models.[62,63] Other considerations included benefits, such as potential clinical utility of risk stratification to guide individualized, patient-centered risk management balanced with the potential harm of discouraging or preventing providers from completing comprehensive assessments informed by current risk stratification efforts. Thus, the Work Group decided upon recommending "Neither for nor against" the use of risk stratification.

B. Risk Management and Treatment

a. Non-pharmacologic Treatments

Recommendation

6. We recommend using cognitive behavioral therapy-based interventions focused on suicide prevention for patients with a recent history of self-directed violence to reduce incidents of future self-directed violence.
   (Strong for | Reviewed, New-added)

Discussion

Cognitive behavioral therapy (CBT) teaches patients to identify and change problematic thinking and behavioral patterns with the expectation that this will impact their emotional experience. All studies reviewed for this recommendation utilized CBT to directly address suicide risk.[69-75] This is typically done by having patients identify proximal thoughts, images, and core beliefs that were activated prior to SDV. Cognitive and behavioral strategies are then typically applied to address the identified thoughts and beliefs. Development of a relapse prevention plan is typically conducted near the end of therapy. In the studies reviewed, most patients attended fewer than 12 CBT sessions.

Four systematic reviews/meta-analyses examined the effect of CBT on suicide-related outcomes. [69-72] Seven studies (with a total of 988 participants) that were included in these reviews specifically targeted suicide risk as part of the intervention.[73-79] Although there are some mixed findings, there is moderate evidence overall that CBT-based interventions focused on suicide prevention are effective at reducing repeat incidents of self-harm. For example, Brown et al. (2005) found that patients who had presented to the hospital following a suicide attempt and received Cognitive Therapy for Suicide Prevention (CT-SP) as compared to those who received usual care, were 50% less likely to report a repeat suicide attempt during the follow-up period.[73] Another randomized controlled trial (RCT) of a suicide-specific, individual, brief CBT intervention for suicide prevention conducted with active duty soldiers found that soldiers who received the intervention, as compared to those who received treatment as usual, were 60% less likely to make a suicide attempt in the follow-up period.[75] While there is evidence that CBT has positive effects in terms of reducing suicide attempts, there is no evidence at this time to suggest that CBT reduces suicide, although the quality of the evidence in studies looking at this outcome was low to very low.[70,71] There were no harms related to receiving CBT reported in the systematic reviews/meta-analyses that included these studies.

The Work Group determined that there is variability in provider and patient preferences regarding this type of treatment. While many patients and providers appreciate the structured nature of CBT, and generally find it to be acceptable, some patients find the homework to be challenging and burdensome, and some decline to participate. Yet, as compared to patients not receiving evidence-based treatments, patients receiving CBT tend to get more consistent and lengthier (per session) care. CBT is also typically time-limited, which is appealing to many patients. Most behavioral health therapists in VA and DoD settings are trained in CBT but would likely need some additional training in how to employ a CBT intervention specifically focused on suicide prevention.

As this is a *Reviewed, New-added* recommendation, the Work Group systematically reviewed evidence related to this recommendation.[69-79] The Work Group's confidence in the quality of the evidence is

moderate. The body of evidence had some limitations including high rates of attrition [72] and lack of clarity regarding allocation concealment and blinding of assessors.[69,70,72] Additionally, some studies did not use intention-to-treat (ITT) analysis.[69] Other considerations regarding this recommendation included the critical benefits (e.g., decreased incidents of self-harm) that patients could have by participating in CBT focused on suicide prevention. The Work Group agreed that these benefits far outweigh the potential harm of adverse events, of which there was no evidence in the included studies and which have not been observed in practice by any of the Work Group members. Although there may be some variation with respect to CBT's alignment with patient values and preferences, most patients typically report high satisfaction with CBT focused on suicide prevention. Thus, the Work Group decided upon a "Strong for" recommendation.

Recommendation

7. We suggest offering Dialectical Behavioral Therapy to individuals with borderline personality disorder and recent self-directed violence.
   (Weak for | Reviewed, New-replaced)

Discussion

Dialectical Behavior Therapy (DBT) was originally developed to treat individuals with borderline personality disorder (BPD), a subpopulation at heightened risk for non-suicidal and suicidal SDV. DBT combines elements of CBT, skills training, and mindfulness techniques with the aim of helping individuals develop skills in: (1) emotion regulation, (2) interpersonal effectiveness, and (3) distress tolerance.

Based on a growing body of research, DBT has been found to reduce non-suicidal and suicidal SDV among patients with BPD and recent SDV.[70,80-83] This conclusion is based on findings from two systematic reviews [70,81] and one RCT.[80] The systematic review by Hawton et al. (2016) included five trials that assessed the effectiveness of DBT in participants diagnosed with BPD referred to outpatient services following a suicide attempt.[70] One small trial included in the Hawton et al. review compared a DBT-oriented psychotherapy with client-oriented therapy.[83] At post-treatment, there was evidence of a significant treatment effect for DBT compared to client-oriented therapy for suicidal ideation and repetition of SDV among patients diagnosed with BPD.

Similarly, McMain et al. (2017) evaluated the clinical effectiveness of brief DBT skills training as an adjunctive intervention to treatment as usual for patients with BPD at high risk for suicide.[80] At the conclusion of the study, the DBT group demonstrated significant reductions in non-suicidal and suicidal SDV compared to those in the active waitlist condition.

Despite general consistency in the evidence supporting DBT to reduce SDV and suicidal ideation among individuals with BPD who have reported recent SDV, there is some variability in provider and patient preferences regarding this treatment. DBT appeals to both providers and patients due to its multifaceted components (e.g., mindfulness, interpersonal effectiveness) that emphasize patient engagement and autonomy. Moreover, findings from the VA/DoD patient focus groups indicate that patients have had positive experiences with treatment modalities that include various complementary and integrative therapies such as mindfulness, which is an integral component of DBT.

DBT is typically delivered as a multimodal treatment package that includes a manualized DBT skills group, individual psychotherapy, and 24-hour crisis response (when needed). As such, it offers patients the opportunity to benefit from group discussions, and is aligned with patient preferences for 1:1 interactions with providers. Although the clinical utility and acceptability of DBT among providers and patients are well established, access to standard DBT may be restricted due to limited resources and a shortage of clinicians who have been trained in the full model of DBT.

As this is a *Reviewed, New-replaced* recommendation, the Work Group systematically reviewed evidence related to this recommendation.[70,80-83] The Work Group's confidence in the quality of the evidence is low. The body of evidence had some limitations including risk of bias due to blinding procedures and imprecision with respect to the degree of uncertainty (based on variance or sample size) around an outcome's effect size. Other considerations regarding this recommendation included the benefits (i.e., improved outcomes in depressive symptoms among individuals receiving DBT versus those receiving a client-centered therapy control [83]) outweighing the potential harm of adverse events, which was small. Patient values and preferences were somewhat varied. Thus, the Work Group decided upon a "Weak for" recommendation.

Recommendation

8. We suggest completing a crisis response plan for individuals with suicidal ideation and/or a lifetime history of suicide attempts.
   (Weak for | Reviewed, New-replaced)

Discussion

Completing a crisis response plan has been found to decrease suicide attempts among military personnel with an acute history of suicidal ideation during the past week and/or a lifetime history of suicide attempts.[84] This recommendation is based on a study by Bryan et al. (2017) that found a statistically significant difference in the number and proportion of suicide attempts, favoring crisis response planning over treatment as usual.[84] Based on the Bryan et al. (2017) study, the confidence in the quality of the evidence was low for suicide attempts.[84] This intervention was associated with significantly fewer inpatient days than the contract for safety intervention. There is no evidence in the literature or in clinical expert opinion that there is any harm with completing a crisis response plan. This process is collaborative and should be patient centered. As there is no empirical evidence to support the usage of "no harm" or "no suicide" contracts, implementing crisis response plans and safety plans are the preferred strategy.

At a minimum, the crisis response plan involves a collaborative plan between a patient and clinician including the following components: semi-structured interview of recent suicidal ideation and chronic history of suicide attempts; unstructured conversation about recent stressors and current complaints using supportive listening techniques; collaborative identification of clear signs of crisis (behavioral, cognitive, affective or physical); self-management skill identification including things that can be done on the patient's own to distract or feel less stressed; collaborative identification of social support including friends, caregivers, and family members who have helped in the past and who they would feel comfortable contacting in a crisis; review of crisis resources including medical providers, other professionals, and the suicide lifeline; and referral to treatment including follow-up appointments and other referrals as needed.

The crisis response plan and the safety planning intervention share similar components. See Table 3 below for the components of Crisis Response Planning (CRP) versus the Safety Planning Intervention (SPI).

Table 3. Components in the CRP versus SPI [85,86]

CRP	SPI
• Semi-structured interview of recent suicidal ideation and chronic history of suicide attempts • Unstructured conversation about recent stressors and current complaints using supportive listening techniques • Collaborative identification of clear signs of crisis (behavioral, cognitive, affective or physical) • Self-management skill identification including things that can be done on the patient's own to distract or feel less stressed • Collaborative identification of social support including friends, caregivers, and family members who have helped in the past and who they would feel comfortable contacting in crisis • Review of crisis resources including medical providers, other professionals and the suicide prevention lifeline (1-800-273-8255) • Referral to treatment including follow-up appointments and other referrals as needed	• Semi-structured interview of a recent suicidal crisis • Recognizing warning signs of an impending suicidal crisis • Recognizing how an increase and decrease in suicidal risk provides an opportunity to engaging in coping strategies • Employing internal coping strategies without contacting another person for distraction from suicidal thoughts • Utilizing social contacts and social settings as a means of distraction from suicidal thoughts • Utilizing family members, caregivers or friends to help resolve the crisis • Contacting mental health professionals or agencies, including crisis intervention services (e.g., the Veteran/Military Crisis Line: 1-800-273-8255) • Limiting access to lethal means ▪ Consider prescribing naloxone for patients at risk for opioid overdose (see VA/DoD Opioid Therapy CPG[16])

Abbreviations: CPG: clinical practice guideline; CRP: Crisis Response Planning; DoD: Department of Defense; SPI: Safety Planning Intervention

Since the crisis response plan and the safety planning intervention are similar, safety planning intervention literature was also reviewed. Safety planning intervention has also been associated with a reduction in suicidal behavior and increased treatment engagement among suicidal Veterans following ED discharge.[87] This large-scale study (n=1,640), not included in the systematic review, involved a cohort comparison design using the safety planning intervention plus follow-up services and was associated with about 50% fewer suicidal behaviors over a six-month follow-up and more than double the odds of engaging in outpatient behavioral health care.

Considerations for patient safety are part of a comprehensive treatment plan in behavioral health environments with the highest risk period for suicide attempts occurring up to 12 weeks after discharge from the hospital. The transition from inpatient to outpatient behavioral health care is a particularly susceptible time with current standards of care include safety planning as an important component of discharge planning to help patients maintain safety as they transition out of inpatient care.[88,89]

As this is a *Reviewed, New-replaced* recommendation, the Work Group systematically reviewed evidence related to this recommendation, specifically, the study by Bryan et al. (2017).[84] The Work Group's confidence in the quality of the evidence is low. The body of evidence had some limitations including small sample size and confounders in the analysis. Even though evidence quality was low, other domains provide

[16] See the VA/DoD Clinical Practice Guideline for the Management of Opioid Therapy for Chronic Pain. Available at: https://www.healthquality.va.gov/guidelines/pain/cot/

additional benefits such as this intervention does not require specialized training and is not setting dependent. The patient focus group revealed the importance of a patient-centered, collaborative process that encourages family and friend involvement and respectful relationships with providers which is consistent with the crisis response plan. Patients tend to be satisfied with this intervention,[90] and the Work Group determined that patients may have similar values and preferences. There were improved outcomes in suicide attempts, fewer inpatient days, and no potential harms or adverse events identified. Patient values and preferences were similar. Thus, the Work Group decided upon a "Weak for" recommendation.

Recommendation

9. We suggest offering problem-solving based psychotherapies to:
    a. Patients with a history of more than one incident of self-directed violence to reduce repeat incidents of such behaviors
    b. Patients with a history of recent self-directed violence to reduce suicidal ideation
    c. Patients with hopelessness and a history of moderate to severe traumatic brain injury

    (Weak for | Reviewed, New-replaced)

Discussion

Problem-Solving Therapy (PST) is one type of cognitive-behavioral psychotherapy specifically aimed at improving an individual's ability to cope with stressful life experiences through active problem solving. [91-95]A systematic review by Hawton et al. (2000) reported a trend towards reduced repetition of deliberate self-harm for patients enrolled in PST.[95] As noted in the previous version of this CPG, the difference was not statistically significant due, perhaps, to the heterogeneity of outcome measures across the included studies.

More recent research, however, provides support for PST on the outcomes of reduced repeat SDV and suicidal ideation among patients with a history of SDV. Notably, the majority of this research has been conducted on patients with a "history of self-harm," and "self-harm" was studied as the primary outcome; these studies have not differentiated between suicidal versus non-suicidal self-harm. The strongest evidence for PST comes from a randomized clinical trial conducted by Hatcher et al. (2011) with over 1,000 patients who presented to a hospital after SDV.[94] The primary outcome was additional hospital presentation(s) with SDV at one year. By design, the study included separate analyses for first-time and repeat presentations at the index episode. As compared to usual care, neither the total sample who received PST, nor the subsample of participants whose index visit was their first presentation with SDV had significantly different rates of repeat SDV at 12 months. Among participants for whom the index episode was a repeat event, however, those who received PST were significantly less likely to present again with SDV. This sub-group had a 39% lower risk of a further presentation for SDV after a year. Additionally, patients who received PST (regardless of type of SDV history) reported more significantly reduced suicidal ideation as compared to those who received usual care at three months and one year follow-up.

Additional studies, with much smaller samples, have examined the effect of PST on SDV and suicidal ideation. Although findings across this body of literature are mixed, three studies provide additional evidence for PST's impact on repeat SDV [91-93] and five studies support a reduction in suicidal ideation.[91,96-99] Of note, the delivery of PST varied across these studies, but all were less than 10

sessions and multiple studies (including Hatcher et al. [2011]) were based on the model of PST developed by D'Zurilla and Godfried (1971),[100] which was further described by D'Zurilla and Nezu (2010).[101] There were no harms related to PST reported in the literature.

The "Window to Hope" (WtoH) group treatment intervention was developed for patients with at least moderate levels of hopelessness and with a history of moderate to severe TBI. It has been found to improve hopelessness in patients at risk for suicide.[102] WtoH is structured around four core therapeutic strategies: (1) behavioral activation, (2) cognitive restructuring, (3) problem solving, and (4) relapse prevention. Based on the moderate quality research conducted by Brenner et al. (2018), significant patient improvement was noted in hopelessness but not suicidal ideation.[102] Findings from this RCT support the efficacy of WtoH as a psychological intervention to reduce hopelessness among those with moderate to severe TBI.

Another study by Simpson et al. (2011) was not included in the evidence review conducted for the 2019 CPG but was cited in the 2013 version of the CPG. [103] Although underpowered, the RCT of WtoH versus usual care in patients with TBI reported the WtoH intervention was effective in the reduction of hopelessness (but not suicidal ideation).[103]

The WtoH intervention is a manualized 16-20 hour group treatment intervention delivered in 8-10 group sessions composed of group formation, behavioral activation, CBT and cognitive restructuring, problem solving, compensatory techniques to address existential challenges associated with the recovery process, relapse prevention, and posttraumatic growth. The literature has shown no harms associated with this treatment.

Patients engaged with the WtoH intervention tend to get reliable and lengthier (per session) care which is consistent with their values and preferences. The WtoH program was delivered in the dyad format, which provided benefits of peer-based normalization and validation of experiences without the larger group format with which some patients are uncomfortable. This treatment has high feasibility and acceptability to patients, but providers must be trained in the specific protocol. The patient focus group revealed that group formats may be burdensome to patients, and individual treatments are sometimes preferred. There is limited access to this treatment, as there are few providers with adequate training.

As this is a *Reviewed, New-replaced* recommendation, the Work Group systematically reviewed evidence related to this recommendation. The Work Group's confidence in the quality of the evidence was low.[91-95,102] There was one study by Brenner et al. (2018) [102] and one relevant study from the previous version of the CPG supporting the use of WtoH in patients with hopelessness and a history of moderate to severe traumatic brain injury.[103] The body of evidence had some limitations including small sample size and confounders in the analysis. Additionally, the Work Group determined that the potential harm (e.g., repeated suicide attempts or self-harm, death by suicide) of not offering PST far outweighs any potential harm of offering this intervention. PST is a pragmatic approach, suitable for a sizeable proportion of patients at risk for suicide. The intervention can be relatively easily taught, is usable by a range of clinicians, brief, and comparatively inexpensive. PST is also consistent with patient values and preferences by inherently incorporating consistent and lengthier (per session) care and continuity with a single care provider. Although not all providers are trained in PST, and some patients may find the homework

challenging, in the experience of the Work Group, most providers and patients find PST to be an acceptable treatment option. A "Weak for" recommendation was made in light of these considerations.

b. Pharmacologic Treatments

Recommendation

10. In patients with the presence of suicidal ideation and major depressive disorder, we suggest offering ketamine infusion as an adjunctive treatment for short-term reduction in suicidal ideation. **(Weak for | Reviewed, New-added)**

Discussion

Ketamine infusion as a single dose at 0.5 mg/kg has moderate evidence for acute symptom improvement of suicidal ideation within 24 hours of treatment, with a moderate effect size that continues for one week [104] and even up to six weeks.[105] In a meta-analysis of ketamine trials, 55% of patients after 24 hours and 60% at seven days reported no suicidal ideation.[104] Evidence indicates there is a risk of a transient elevation in blood pressure in a small number of patients that resolved without significant sequelae. [105,106]

Despite general consistency in the evidence supporting ketamine for treatment of suicidal ideation in an acute care setting, there is some variability in provider and patient preferences regarding this treatment. Ketamine infusion was administered in inpatient hospital settings to patients who predominantly were admitted to receive the therapy and released 24 hours following positive response to treatment. Recommendations for patient management following discharge is unclear because there are no long-term studies assessing the utility of ketamine on suicidal ideation following initial infusion.[104] These studies were done in populations with MDD and suicidal ideations, other comorbidities were not addressed. Considering the potential risk of addiction, continued repeat administration of ketamine is not recommended. Ketamine has known dissociative effects and other emergence reactions that could exacerbate psychotic symptoms. However, as there are few interventions that result in such a rapid response with as large an effect size, the benefits of offering this treatment to patients with suicidal ideation make it a potentially important tool for providers to have available. At the same time, this must be balanced with important barriers to ketamine therapy as patients may not be receptive to receiving an infusion administered in an inpatient setting, and ketamine therapy may not be an option for patients living in rural areas, where its availability may be limited. Finally, an important treatment consideration is that there are no current data to support ketamine's effect on suicide attempts or deaths; further research is needed on long-term outcomes.[104]

As this is a *Reviewed, New-added* recommendation, the Work Group systematically reviewed evidence related to this recommendation.[104-106] The Work Group's confidence in the quality of the evidence is moderate for the effect on suicidal ideation. The body of evidence had some limitations, including a very narrow, targeted effect on the symptom of suicidal ideation, with unknown impact on the outcomes of suicide attempt or suicide.[105]The evidence base would benefit from more diversity in study populations; most participants in existing ketamine studies have a primary diagnosis of mood disorder and patients with SUD and psychotic disorders are excluded.[104] Given the harms versus the benefits, caution should be used for repeated administrations or in other populations. Additionally, the window of effect is a short

duration, with no evidence to support repeated administration for persistent suicidal ideation.[106] Thus, the Work Group decided upon a "Weak for" recommendation.

Recommendation

11. We suggest offering lithium alone (among patients with bipolar disorder) or in combination with another psychotropic agent (among patients with unipolar depression or bipolar disorder) to decrease the risk of death by suicide in patients with mood disorders.
    (Weak for | Reviewed, New-replaced)

Discussion

Lithium has been shown to reduce the risk of suicide in patients with unipolar depression or bipolar disorder. Several cohort studies and systematic reviews have shown lithium maintenance to be associated with fewer suicidal behaviors and deaths.[107-114] Cipriani et al. (2013) noted that these effects of lithium were not specific to a patient population with suicidal ideation, broadening the population in which lithium may be considered an appropriate treatment beyond those who present with acute suicidal ideation.[107]

Despite general consistency in the evidence supporting the use of lithium, there is some variability in provider and patient preferences regarding this treatment. Lithium discontinuation due to a variety of side effects (e.g., gastrointestinal upset, tremor, polyuria, polydipsia, weight gain, hypothyroidism, leukocytosis) contribute to a large variation in adherence. Toxicity with lithium may result in lithium overdose as a serious adverse effect, as well as additional presentations of side effects that may not resolve with removal of lithium including thyroid abnormalities, polyuria, and renal toxicity leading to reduced renal clearance. Its use is also limited by the low therapeutic index of lithium and the potential for toxicity with concurrent disease management. Lithium should be used with significant caution with elderly patients and patients with comorbidities (e.g., seizure disorder, chronic kidney disease). Achieving target blood levels requires blood monitoring, which may negatively impact the feasibility of using lithium and decrease patients' and providers' assessment of its benefits. Renal adjustments to dosage are required for creatinine clearance ≤ 50 mL/min.

As this is a *Reviewed, New-replaced* recommendation, the Work Group systematically reviewed the evidence related to this recommendation.[107-114] The Work Group's confidence in the quality of the evidence is moderate. The body of evidence had some limitations, including conflicting results on the primary outcome when an active pharmacologic control was used.[107] When prescribing lithium to patients at risk for suicide, it is important to consider extended release versus immediate release formulations, and to pay attention to the risk of overdose by limiting the amount of lithium dispensed. Consider methods to reduce risk of toxicity in overdose, such as dispensing smaller quantities and safe medication storage options (e.g., having a caregiver or family member store the medication for the patient). If overdose is identified as a lethal means for the patient, consider an alternative to lithium for treatment. Thus, the Work Group decided upon a "Weak for" recommendation.

Recommendation

12. We suggest offering clozapine to decrease the risk of death by suicide in patients with schizophrenia or schizoaffective disorder and either suicidal ideation or a history of suicide attempt(s).
    (Weak for | Reviewed, Amended)

Discussion

Clozapine has been found to reduce suicidal behaviors in patients with schizophrenia or schizoaffective disorder.[115,116] Other studies have also demonstrated a lower overall risk of suicidal behaviors compared to other treatments. A meta-analysis conducted by Hennen and Baldessarini (2005) found a lower risk of death by suicide, suicide attempts and suicidal behaviors during long-term treatment with clozapine.[117] In 2003 as a result of these findings, the U.S. Federal Drug Administration (FDA) approved the indication for reducing risk of suicidal behaviors in patients diagnosed with schizophrenia or schizoaffective illness. Unfortunately, the quality and consistency of the studies are highly variable, with only one RCT of moderate quality that compared clozapine to an alternative antipsychotic, olanzapine. This population was found to have a twelve times greater risk than the general population for death by suicide, which was highlighted in the meta-analysis.[117] The importance of weighing the potential benefits of clozapine, which may reduce risk for suicide and suicidal behavior in a high-risk population, is critical to long-term management of risk. Evidence also indicates some level of harm associated with clozapine. While study results suggest that antipsychotic medications may protect against suicide risk, the evidence appears to be most favorable for clozapine. Additionally, a review that was not included in the systematic review for this CPG (and therefore did not contribute to the strength of the recommendation) found that treating depressive symptoms in patients with schizophrenia is a vital component of suicide risk reduction.[118]

It is possible that some of the success attributed to clozapine can be attributed to the surveillance approach required by the Clozapine Risk Evaluation and Mitigation Strategy (REMS) monitoring program. The REMS program mandates frequent visits to healthcare providers for monitoring laboratory results before dispensing medication refills. Because of significant risks associated with clozapine such as agranulocytosis, it is most often used as the antipsychotic of last resort. Patients may be unwilling to commit to the level of monitoring and blood draws required for the REMS program. Repeated blood draws on a weekly basis are not only inconvenient for the patient, but may also cause pain and discomfort. Other significant adverse effects of the medication include: weight gain, lipid abnormalities, sialorrhea, somnolence, and the rarely occurring but serious adverse events of myocarditis and cardiomyopathy.

As this is a *Reviewed, Amended* recommendation, the Work Group systematically reviewed the evidence related to this recommendation. However, because no new evidence was identified since publication of the 2013 Suicide Risk CPG regarding clozapine's therapeutic effect on the reduction of suicide risk, the original evidence from the 2013 CPG was carried forward.[115-117] The Work Group's confidence in the quality of the evidence is low for reduction in suicide attempts and suicide.[115,116] We anticipate large variation in values and preferences by both providers and patients. There are significant challenges to clozapine use in certain subgroups of patients, such as the elderly and the homeless, both because of the medication's side effects and difficulties accomplishing the required monitoring through the REMS program. In the specific population of patients for whom the drug is indicated, the evidence may be

considered sufficient with small benefit. Thus, the Work Group decided upon a "Weak for" recommendation.

c. Post-acute Care

Recommendation

13. We suggest sending periodic caring communications (e.g., postcards) for 12-24 months in addition to usual care after psychiatric hospitalization for suicidal ideation or a suicide attempt. **(Weak for | Reviewed, New-replaced)**

Discussion

Sending periodic caring communications (e.g., postcards, letters) following a psychiatric hospitalization for suicidal ideation or suicide attempt has been found to reduce the rate of suicide death, attempts, and ideation for individuals receiving the communications.[119-121] The caring communications intervention was originally studied by Jerome Motto. In a 2001 RCT by Motto and Bostrom, periodic caring letters were sent to participants who had dropped out of treatment within 30 days after discharge from psychiatric inpatient care.[121] The letters were sent at least four times a year for five years. Suicide rates for those receiving the caring letters were lower in all five years studied. Analyses revealed a significantly lower suicide rate (p=0.04) for those receiving the letters for the first two years. The letters were short, non-demanding, and sent at regular intervals.

In 2016, Hassanian-Moghaddam et al. conducted a randomized study of 2,300 patients who had attempted self-poisoning to receive follow-up postcards plus usual treatment.[120] Following discharge, eight postcards were mailed at 1, 2, 3, 4, 6, 8 and 12 months with a ninth postcard sent on the patient's birthday. Among postcard recipients, Hassanian-Moghaddam et al. found a significant reduction in suicidal ideation from 58.6% to 46.6% and a reduction in suicide attempts from 9.1% to 6.2%.[120]

Chen et al. (2013) randomized 761 patients who had attempted suicide to receive case management services alone or case management services with the receipt of a single postcard (n=373) sent at the three-month conclusion of case management services. The postcard contained a list of unique coping strategies for the patient as well as a list of resources.[119] Chen et al. observed that sending the single postcard had no effect.

Based on research findings from randomized trials, the receipt of periodic caring communications (e.g., postcards, letters) has been shown to reduce the rates of suicide death, attempt, and ideation for those receiving the communication versus control groups that did not receive the communications. The research further indicates that receipt of a single postcard does not have an effect on outcomes. The common factors for caring communications showing an effect were periodic communications over a period of time of at least 12 months.

As this is a *Reviewed, New-replaced* recommendation, the Work Group systematically reviewed evidence related to this recommendation.[119-121] The Work Group's confidence in the quality of the evidence is low for suicidal ideation and very low for suicide attempt. The body of evidence had some limitations including varying communication intervals and cultural adaptations across studies. Other considerations regarding this recommendation include: communication format (e.g., postcard, letter, email, text); use of non-demanding, supportive, culturally adapted messaging; communication delivery barriers for population

subsets; and logistical considerations of staff availability to reply to communications with consideration of expectations of a time-sensitive response, such as text communications versus letters. Patient values and preferences were varied and there is a risk of communications feeling too generic or demanding. Overall, caring communications are a low-cost, low-risk intervention that has proven to show a reduction in rates for suicide death, attempt, and ideation. Therefore, the benefits are deemed to outweigh the potential harm of adverse events, and the Work Group decided upon a "Weak for" recommendation.

Recommendation

14. We suggest offering a home visit to support reengagement in outpatient care among patients not presenting for outpatient care following hospitalization for a suicide attempt.
    (Weak for | Reviewed, Amended)

Discussion

A single home visit has been shown to increase outpatient treatment engagement among patients recently discharged from psychiatric inpatient care.[122-125] Specifically, among patients who failed to attend their initial outpatient appointment, a single home visit by a nurse resulted in a subsequent increase in treatment compliance compared to those who did not receive a home visit (51.2% versus 39.8%). Findings from another study showed that an initial home visit followed by weekly or biweekly phone contacts resulted in higher treatment engagement than those in the control group.[125] Other studies focused on the delivery of time-limited interventions in the home setting post-acute care (i.e., discharge from ED or inpatient psychiatric unit) showed mixed results for reducing SDV behavior.[122,123,125] These studies did not differentiate between suicidal and non-suicidal behavior and the interventions offered in the home setting ranged from case management to brief psychodynamic interpersonal therapy.

Despite general consistency in the evidence supporting home visits for increasing treatment engagement among those recently discharged from psychiatric inpatient care, there is some variability in provider and patient preferences regarding this treatment. The patient focus group revealed an interest in including family members, caregivers, or support persons in treatment discussions. In line with this preference, home visits could provide an opportunity to interact more directly with family members, to involve them in discussions, and to problem solve around barriers to engaging in outpatient treatment. A single home visit is unlikely to be burdensome to patients and is consistent with a patient-centered approach. Home visits, on the other hand, may increase burden on the healthcare system. Issues related to provider safety also need to be considered.

As this is a *Reviewed, Amended* recommendation, the Work Group systematically reviewed evidence related to this recommendation.[122-125] The Work Group's confidence in the quality of the evidence is moderate. The body of evidence had some limitations including confounders in the analysis and how a home visit was defined. Other considerations regarding this recommendation included the fact that the benefits of improving treatment engagement during an especially high-risk period (i.e., transition from inpatient to outpatient care) outweigh the potential harm of adverse events, which was small. Patient values and preferences regarding home visits and check-ins post-acute care were not specifically addressed in the focus group. However, a home visit may prove a more natural opportunity to involve family members, caregivers, or support persons for patients who have this preference. Along these lines, some patients may have a strong preference not to include family members, caregivers, or support

persons especially if family relations are a notable source of stress. Although this recommendation focuses on a very specific subset of those at increased risk of suicide, namely those that have recently discharged from inpatient care but did not attend their initial outpatient appointment, home visits will incur additional costs and burden for the healthcare system. Feasibility will vary across systems of care and certain patient populations (e.g., those who are homeless) will not be able to access this type of follow-up care. Thus, the Work Group decided upon a "Weak for" recommendation.

Recommendation

15. We suggest offering the World Health Organization Brief Intervention and Contact treatment modality following presentation to the emergency department for suicide attempt, in addition to standard care.
    (Weak for | Reviewed, New-added)

Discussion

The World Health Organization (WHO) Brief Intervention and Contact (BIC) treatment modality consists of "a one hour individual information session as close to the time of discharge as possible and, after discharge, nine follow-up contacts (phone calls or visits, as appropriate) according to a specific time-line up to 18 months (at 1, 2, 4, 7 and 11 week(s), and 4, 6, 12 and 18 months), conducted by a person with clinical experience (e.g., doctor, nurse, psychologist)."[126] WHO BIC has been found to significantly decrease suicides among patients with a history of suicide attempt in low- to middle-income countries (e.g., China, Iran, India, Brazil, Sri Lanka).[71] In the three trials of the WHO BIC intervention, there were significantly fewer suicides in the group that received the intervention compared to those receiving usual care (3 versus 24 suicides; $p < 0.0001$).[71] The WHO BIC protocol demonstrates that systematic long-term contacts after discharge in addition to usual care can have a positive impact on preventing subsequent deaths by suicide among those presenting to the ED following a suicide attempt.

Generalizability of the intervention to high-income countries where psychiatric treatment and/or referral is a component of usual care following ED presentation for suicide attempt, may be limited.[71,126,127] Thus, the added benefit of WHO BIC to usual care in higher income countries is unclear. However, even in high-income countries, regular follow-up after ED discharge for suicide attempt is not routine, and when it does occur, can vary substantially with respect to the frequency and duration of follow-up contacts. The WHO BIC protocol provides structure for follow-up contacts, while offering flexibility because the follow-up contacts can occur either in person or over the phone and can be made by a range of providers. The follow-up contacts occur over a period of 18 months, which can be resource intensive, and it is possible that some patients may experience this as burdensome.

As this is a *Reviewed, New-added* recommendation, the Work Group systematically reviewed evidence related to this recommendation.[71,126,127] The Work Group's confidence in the quality of the evidence is low. The body of evidence had some limitations including attrition and selection bias, limited validity of source of data for suicide deaths, and confounders in the analysis.[126] Other considerations regarding this recommendation included the benefits, including reductions in suicide deaths, outweighing the potential harm of adverse events, which was small. Patient values and preferences were somewhat varied and generalizability to high-income countries is unclear. Thus, the Work Group decided upon a "Weak for" recommendation.

d. Technology-based Modalities

Recommendation

16. There is insufficient evidence to recommend for or against technology-based behavioral health treatment modalities for individuals with suicidal ideation. These include self-directed digital delivery of treatment protocols with minimal or no provider interaction (e.g., compact disc, web-based), and provider-delivered virtual treatment.
    (Neither for nor against | Reviewed, New-replaced)

Discussion

There is currently insufficient evidence to recommend for or against technology-based modalities for individuals with suicidal ideation. Available research focused on electronic delivery of treatment protocols in lieu of face-to-face delivery.[69,128-132] None of the available studies assessed the effectiveness of telehealth as it is routinely practiced across the VA and DoD (i.e., face-to-face treatment delivered in a virtual environment).

Studies assessing electronic delivery of treatment protocols included a systematic review by Witt et al. (2017) of stand-alone digital interventions (e.g., CBT based, acceptance based, problem solving, interpersonal, mood monitoring, crisis planning) for the self-management and/or treatment of suicidal ideation or behaviors compared to a variety of control conditions.[131] At follow-up, no significant between-group differences were observed in reporting of suicidal ideation or suicide attempt. However, at the post-intervention assessment there was evidence of a reduction in suicidal ideation in sub-analyses of three pre-test/post-test observational studies and five RCTs. Only one of the RCTs assessed the intervention against face-to-face delivery, finding no difference in suicidal ideation scores.[132] The authors noted that treatment adherence was poor in a majority of the included studies. Confidence in the quality of evidence was moderate. Similarly, a systematic review by Leavey and Hawkins (2017) found no difference in suicidal ideation or suicidal behavior at follow-up with e-health CBT interventions (e.g., internet, computer, telephone delivery) compared to face-to-face CBT or treatment as usual.[69] Confidence in the quality of the evidence was very low.

One RCT assessed whether web-based CBT with and without telephone support is effective in reducing suicidal ideation in callers to a helpline compared with treatment as usual.[128] No significant between-group differences in suicidal ideation were observed at 6- or 12-month follow-up; however, suicidal ideation declined significantly over the 12-month study period for all groups. The authors note this may represent regression to the mean because both study groups had high initial levels of suicidal ideation. Confidence in the quality of evidence for this study is low. Another RCT examined the effect of an online intervention, eBridge, on readiness to engage in treatment among college students screening positive for suicide risk through an online survey.[130] This intervention included personalized electronic feedback and optional online exchanges with a counselor delivered in accordance with motivational interviewing principles. Although not a primary outcome of the study, suicidal ideation was assessed at follow-up with no difference observed between the intervention and control group. The study did find a significantly higher readiness to engage in treatment in the intervention group.

Overall, although the body of evidence did not demonstrate a favorable impact on critical outcomes, there was no evidence of harm with any of the interventions. The Work Group's confidence in the quality of

evidence was very low. This was based on the evidence of impact on suicidal ideation across the studies included in the Leavey and Hawkins (2017) systematic review that assessed electronic delivery of CBT compared to face-to-face delivery or treatment as usual.[69] Although a sub-analysis of eight studies included in the Witt et al. (2017) systematic review, reflecting moderate quality of evidence, suggest the digital interventions were associated with decreased post-treatment suicidal ideation, only one of the studies directly compared electronic to face-to-face treatment delivery.[131] Although this body of evidence suggests digital interventions may lead to short-term decreases in suicidal ideation compared to no active treatment, it does not support an assumption of equivalence with face-to-face treatment delivery.

Despite insufficient evidence to make a recommendation for or against technology-based behavioral health treatment modalities over face-to-face delivery, the Work Group believes the benefits slightly outweigh the harms of considering these modalities as a vehicle for delivering treatment protocols to individuals with suicidal ideation, especially when there exist substantive barriers to in-person care. Individuals participating in the patient focus group had limited experience with telehealth modalities, but expressed enthusiasm for their use and felt these interventions would improve their access to high-quality care. Participants reported frustration with seeing multiple providers, both within a treatment facility due to provider availability and across locations due to frequent travel, resulting in decreased continuity of care. Telehealth as a mechanism for providing face-to-face treatment for suicidal thoughts and behaviors may provide opportunities for improved access to and continuity of care for patients regardless of geographic location, travel, deployment status, etc. The availability of telehealth across a variety of platforms (e.g., internet based) may also increase access by decreasing stigma related to seeking behavioral healthcare in a specific building/location. Important considerations, however, include accessibility of and comfort using technology-based interventions; concerns about Health Insurance Portability and Accountability Act (HIPAA) compliance and patient safety; network security and vulnerabilities; and comfort with using smartphones or other handheld devices/tablets. Older populations and individuals living in rural or remote areas with less reliable internet may not be able to effectively access services.

As this is a *Reviewed, New-replaced* recommendation, the Work Group systematically reviewed evidence related to this recommendation.[69,128-132] The Work Group's confidence in the quality of the evidence is very low. The body of evidence had numerous limitations including imprecision and inconsistency in study results and risk for bias in study designs.[69,128] Other considerations regarding this recommendation included the lack of evidence of harm, alignment with patient values and preferences, and the Work Group's experience with technology-based interventions. Although available evidence does not support an assumption of equivalence for electronic delivery of treatment protocols compared to face-to-face treatment, several studies demonstrated statistically significant decreases in post-treatment suicidal ideation with electronic or web-based CBT.[69,129,131] There were no studies that assessed the effectiveness of face-to-face treatment provided via telehealth (e.g., web-based or telephonic real-time encounters between a patient and a provider) as currently practiced in the VA and DoD compared to standard delivery (e.g., patient and provider encounter in the same room). The Work Group believes treatment provided via telehealth represents a potentially important opportunity to increase access and continuity of care for rural populations and individuals with frequent travel and/or deployment. Further

research is required to support recommendations for or against the use of technology-based interventions as a stand-alone treatment or as a vehicle for delivering face-to-face care.

Recommendation

17. There is insufficient evidence to recommend for or against the use of technology-based adjuncts (e.g., web or telephone applications) to routine suicide prevention treatment for individuals with suicidal ideation.
    (Neither for nor against | Reviewed, New-replaced)

Discussion

Studies evaluating the effect of technology-based interventions as adjuncts to routine suicide prevention treatment are rare. The Work Group reviewed two such studies, neither of which included the critical outcomes of suicidal ideation or suicide attempt as primary study outcomes.[133,134] A randomized pilot study by Kasckow et al. (2016) assessing the feasibility of post-discharge telehealth monitoring (Health Buddy) in addition to Intensive Case Monitoring (ICM), compared to ICM alone, in Veterans with schizophrenia hospitalized for suicidal ideation found no group differences using remission (i.e., Beck Scale for Suicidal Ideation Score = 0) as the outcome.[134] Findings did support, however, the feasibility of implementing a telehealth monitoring system for monitoring post-discharge suicide risk in Veterans with schizophrenia and suicidal ideation.[134] Bush et al. (2017) conducted a parallel-group RCT with two groups of Veterans in active mental health treatment who had recently expressed suicidal ideation.[133] Participants were randomized to use either the Virtual Hope Box (VHB); a smartphone app to improve stress coping skills, suicidal ideation, and perceived reasons for living; or printed materials about coping with suicidality. Both interventions were provided to supplement treatment as usual. VHB users reported significantly greater ability to cope with unpleasant emotions and thoughts at three and 12 weeks compared to the control group, but no between-group differences were observed for suicidal ideation or any of the other outcome measures. Participants also reported high levels of satisfaction with the intervention.

Although the body of evidence did not demonstrate a favorable impact on critical outcomes, the studies reviewed demonstrated feasibility and acceptance of technology-based adjuncts to augment routine treatment. Bush et al. (2017) demonstrated significant improvement in coping with unpleasant emotions and thoughts at all time points in the VHB study and observed a 79% completion rate in the intervention group.[133] A large proportion of VHB users reported regular and frequent engagement with the material and felt it was easy to use, helpful, and beneficial in dealing with stress and emotional difficulties.[133] There was also no evidence of harm with any of the interventions, and technology-based adjunct treatment may help with patient engagement and self-management. The Work Group's confidence in the quality of evidence was very low based on the impact on suicidal ideation in both the Kasckow et al. (2016) and Bush et al. (2017) studies.[133,134]

As this is a *Reviewed, New-replaced* recommendation, the Work Group systematically reviewed evidence related to this recommendation.[133,134] The Work Group's confidence in the quality of the evidence is very low. The body of evidence was limited by serious imprecision. Other considerations regarding this recommendation included the lack of evidence of harm, alignment with patient values and preferences, and the Work Group's experience with technology-based interventions as an adjunct to usual care.

Important considerations, however, include accessibility and patients' comfort with technology-based interventions; concerns about HIPAA compliance and patient safety; network security and vulnerabilities; and comfort with using smartphones or other handheld devices/tablets. Older populations and individuals living in rural or remote areas with less reliable internet may not be able to effectively access services. The Work Group believes technology-based adjunct treatment may help with patient engagement and self-management. Further research is required to support recommendations for or against the use of technology-based interventions as an adjunct to usual care.

C. Other Management Modalities

Background

Over a half-century of public health strategy has focused on population-level and community-based interventions for suicide prevention. A National Strategy for Suicide Prevention, renewed in 2012, encompasses three community-based strategic directions, wrapped around an all-encompassing emphasis on surveillance and research:[135]

1. Create supportive environments that promote healthy and empowered individuals, families, and communities;
2. Enhance clinical and community preventive services; and
3. Promote the availability of timely treatment and support services.

Proximate risk factors for suicide have been exhaustively identified in universal and selected military and Veteran populations. The Army Study to Address Risk and Resilience in Soldiers (STARRS) and its follow-on longitudinal study (STARRS-LS) has outperformed even the esteemed Framingham Study of cardiovascular disease, in regard to peer-reviewed manuscripts in initial years of study.[22,56] However, using the results of these studies to create effective, community-based prevention has been elusive in military and Veteran populations which have seen increases in suicide rates concomitant with the establishment of Secretary or Undersecretary-level Suicide Prevention Offices.

a. Population & Community-based Interventions

Recommendation

18. We suggest reducing access to lethal means to decrease suicide rates at the population level.
    (Weak for | Reviewed, New-added)

19. There is insufficient evidence to recommend for or against community-based interventions targeting patients at risk for suicide.
    (Neither for nor against | Reviewed, New-added)

20. There is insufficient evidence to recommend for or against community-based interventions to reduce population-level suicide rates.
    (Neither for nor against | Reviewed, New-added)

21. There is insufficient evidence to recommend for or against gatekeeper training alone to reduce population-level suicide rates.
    (Neither for nor against | Reviewed, New-added)

22. There is insufficient evidence to recommend for or against buddy support programs to prevent suicide, suicide attempts, or suicidal ideation.
(Neither for nor against | Reviewed, New-added)

Discussion

Implementing lethal means safety, including firearm restrictions, reducing access to poisons and medications associated with overdose, and barriers to jumping from lethal heights, is a means to reduce population-level suicide rates.

Access to firearms is a risk factor for death by suicide.[54,61] Firearms are used in half of suicides in the U.S.,[136] and approximately 90% of suicide attempts involving firearms result in death.[137] Recent studies have shown that differences in state laws regulating firearms access, and that higher state-level firearms ownership rates,[138] are associated with firearm-related and overall suicide rates, even after accounting for important demographic and geographic factors.[139,140] Veterans and military Service Members are more likely to use firearms as a method for dying by suicide compared to the general population.[141] Military Service Members often have ready access to firearms, and Veterans have higher rates of firearm ownership compared to their civilian counterparts.[142]

One systematic review reported statistically significant increased risk of suicide with presence of firearms in the house.[61] DoD healthcare providers, like their VA and civilian counterparts, have no restrictions regarding inquiries and recommendations pertaining to weapons ownership or carriage. The DoD has long had mechanisms for leaders to arrange sequestration of military and civilian-issued weapons in armories, for operational units during leave periods, for individuals under treatment for behavioral health conditions, or for any individual exhibiting behaviors of concern.

Weapons restrictions in individuals are buttressed by state and Federal law and policy measures in both VA and DoD. For instance, felons cannot own or carry weapons. Sentences of over one year in courts-martial result in a report to a national database that prohibits weapons purchase and ownership. Population-based weapons restrictions have been effective in a Western military population, even if limited in generalizability by geographic variability and changes in gun statutes, cultural attunements, and greater rates of weapons ownership in the U.S. compared to other Western nations. A naturalistic epidemiological study in the Israeli Defense Forces ascertained the effect of unit-by-unit weapons storage on bases for 18-21 year old soldiers on weekend leave, showing a dramatic reduction in suicide death on weekends, but not weekdays, in this population-based cohort.[143] Randomized studies have yet to systematically ascertain effects of population-based weapons restrictions.

Means safety counseling (MSC; also referred to as “lethal means counseling”) approaches have been developed in an effort to reduce deaths by firearms and other means. MSC consists of discussions between clinicians and persons at elevated risk for suicide. Less than half of U.S. gun owners report safely storing their firearms (defined as all guns stored in a locked gun safe, cabinet, or case; locked into a gun rack; or stored with a trigger lock or other lock),[144] and that one third of Veterans store at least one firearm loaded or unlocked.[145] Examples of MSC recommendations, depending on level of risk, include storing firearms in locked cabinets, using gunlocks, giving keys to these locks to family, caregivers or friends, temporarily transferring firearms to someone legally authorized to receive them, removing firing

pins, or otherwise disabling the weapon. MSC approaches have not been shown to reduce suicide, but have been shown to impact firearm storage practices.[146-149]

Another commonly used method for suicide among Veterans and military Service Members is poisoning, including medication overdose. Access to opioid medications has been associated with increased rates of intentional and unintentional overdose death.[150,151] One study demonstrated that increased access to paracetamol (acetaminophen) were paralleled with increased rates of suicide attempts and death by suicide via overdose in the United Kingdom.[152]

One study examined the impact of legislation to reduce pill pack size of paracetamol on paracetamol-induced poisoning.[153] Rates of death were decreased for individuals with death ruled as suicide or "undetermined." Two studies examined restriction of access to pesticides. One observational study compared rates of suicide before and after bans of paraquat, dimethoate, and fenthion in Sri Lanka.[154] One randomized, controlled feasibility study examined the impact of providing centralized storage facilities for pesticides versus no intervention in four villages in India.[155] Both studies reported a decrease in both pesticide suicide deaths and suicide from all causes. One systematic review of nine pre-post studies considered the impact of the installation of barriers or structural measures designed to prevent suicide by jumping from a height.[156] Jumping suicides at sites with structural barriers was decreased while jumping at other sites nearby without barriers increased. Overall, jumping suicides at all sites were decreased. This analysis did not consider suicide rates in the studied regions from other causes, so it is not possible to determine whether individuals chose a different method other than jumping or whether all-cause suicide was decreased.

Gatekeeper training for suicide prevention—a key tool for increasing engagement into preventative services for suicide, which includes programs such as Question, Persuade, and Refer (QPR) and Applied Skills in Suicide Training (ASIST)—has not been found to improve population-level suicide rates in each of the U.S. states, VA, and DoD.[157] Buddy support, incorporated into programs such as Comprehensive Soldier Fitness, which have a practical and theoretical nexus to military suicide prevention and resilience programming, does not have a sufficient evidence base to demonstrate efficacy in preventing suicide, suicide attempts, or suicidal ideation.[158]

Every state in the nation, and federal agencies including VHA, DoD, and SAMHSA, has fostered a community-based approach to suicide prevention since the turn of the century. Community-based suicide prevention may be constrained, however, by the immense complexity of population processes, including sociocultural variables, and historically suboptimal interactions between healthcare systems and suicide prevention programs. Gatekeeper training is illustrative. An initial systematic review of studies published from 1980-1995 found that knowledge about suicide improved in gatekeeper training but there were both beneficial and harmful effects in terms of help-seeking, attitudes, and peer support.[159] Mann et al. (2005) made a qualified endorsement of gatekeeper training, provided that formalized roles and care pathways were available.[81] The review noted some community-based awareness programs are not evidence based and do not reflect current knowledge of suicide prevention or provide routine evaluation of effectiveness and safety for preventing suicidal behavior. For this guideline, the Work Group evaluated a recent systematic review which looked at gatekeeper training studies in emergent community gatekeepers such as military personnel, public school staff, peer helpers, youth workers, Indigenous people, and

designated healthcare worker gatekeepers including nurses and social workers.[61] No RCT showed that gatekeeper training alone affects suicide rates.

Research gaps exist in community-based interventions as mechanisms to reduce suicide risk. A Canadian RCT in First Nations community members—family members, police, teachers, and clergy—demonstrated that the ASIST training had no positive impact on self-reported gatekeeper skills.[160] Also, compared to a resilience retreat, the ASIST training was associated with a slightly higher likelihood of reporting suicidal ideation. This study was not included in the evidence review for this CPG and did not influence the above recommendations.

One non-comparative study examined the feasibility of using an online gatekeeper to direct individuals searching for suicide-related keywords to a website encouraging use of an e-mail consultation service.[157] The results were limited, and strength of evidence was very low, but modest levels of treatment engagement and improvement in mood were seen.

No studies that address the effects of crisis lines or peer-to-peer counseling lines met inclusion criteria. These lines have existed for decades, yet there is insufficient evidence to comment on their effectiveness in reducing population-level suicide rates.

The Work Group systematically reviewed evidence related to the five recommendations above. The Work Group's confidence in the quality of the evidence on lethal means safety was very low.[54,61] The body of evidence did have fewer limitations than the evidence for community-based interventions, however, particularly in regard to benefit-risk profiles and outcome measures. Therefore the Work Group made a "Weak for" recommendation for reducing access to lethal means. The Work Group's confidence in the quality of the evidence for community-based interventions was also very low.[61,153-158] The body of evidence had limitations including confounders in the analyses. Community-based interventions, including gatekeeper training and buddy support, had insufficient evidence to make recommendations for or against their use. There was a lack of evidence that potential benefits (e.g., definitive management of suicidality resulting in an aggregate decrease in death) outweigh the potential harm of adverse events, which could include fostering contagion or bypassing evidence-based care. Patient values and preferences for care emanating from community-based training can vary greatly, with a balance needing to be struck between potentially stigmatizing care delivered in the healthcare system and confidential care delivered by non-privileged community gatekeepers. Other judgements made by the Work Group concerned variability among studies, which often measured process or self-efficacy. Importantly, programmatic evaluations of military suicide prevention efforts have not been promising. Finally, differences in resource use, equity, acceptability, and feasibility of interventions exist in many military and Veteran settings. Thus, the Work Group decided to make no recommendation for or against community-based interventions, including gatekeeper training, to reduce suicide risk in military and Veteran populations.

D. Knowledge Gaps and Recommended Research

During the development of the 2019 Suicide Risk CPG, the Work Group identified many topics for future research. Projects to address these topics will lead to stronger evidence to support current recommendations, as well as new evidence to guide future CPGs.

a. Screening for Suicide Risk

We found that there is limited evidence for using universal screening programs to identify individuals at risk for suicide-related behavior. Some evidence supports the use of the PHQ-9 item 9 as a screening instrument to identify patients with elevated suicide risk. Current research needs identified include:

- Assessing and improving temporal accuracy of screening and assessment tools. This includes development and evaluation of screening tools to predict suicide behaviors occurring across various outcome timeframes (e.g., less than one month versus long-term risk)
- Identification of suicide risk subtypes (e.g., acute versus chronic risk)
- Development and testing of strategies to predict and stratify risk that integrate multiple risk prediction methods and data sources, for example combinations of self-report, predictive analytics models which use data from the electronic health record, and/or other data sources
- Further assessment of alternative methods for administering suicide screening questions
- Determination of the appropriate frequency of screening; this topic includes evaluation of whether over-screening has impact on positive and negative predictive value of the instrument, as well as on patient satisfaction, trust, and engagement

b. Evaluation, Determining Level of Risk, and Relationship to Treatment

There is insufficient evidence to recommend for or against the use of risk stratification methods to determine levels of acute or chronic suicide risk. We suggest that when performing a suicide risk evaluation, multiple instruments or methods be used. Areas for future research include:

- Determination of the extent to which screening leads to comprehensive suicide risk evaluation, treatment referral and engagement, receipt of high-quality treatment, and improvement in health outcomes
- Use of screening and assessment results to stratify risk and determine treatment that is tailored to the predicted level of risk
- The most appropriate setting of care for patients at risk for suicide; this research will require evidence-based risk stratification processes
- Clarify which evidence-based interventions for suicide prevention are most appropriate in which care settings (e.g., inpatient, intensive outpatient, outpatient)

c. Risk and Protective Factors

While we recommend that an assessment of suicide risk include several historical, clinical, and social factors, research is needed to better understand the relationships between additional factors and suicide outcomes. These include:

- Impacts of transitions in setting and care on suicide risk
- Protective factors, including reasons for living and religion/spirituality
- Demographic factors such as lesbian, gay, bisexual, transgender, questioning (LGBTQ) status
- Racial/ethnic, age, and gender disparities in suicide prevention detection processes and treatment
- Methods for reducing access to lethal means
- Novel means of identifying and assessing risk and protective factors in combination (e.g., using machine learning algorithms)

d. Non-pharmacologic Interventions

Although evidence supported the use of a variety of non-pharmacologic treatments for individuals with suicidal ideation and/or a history of SDV behavior, additional research is needed to assess the impact of these interventions across heterogeneous populations of at-risk individuals, to identify specific components of the modalities most strongly associated with a positive effect, and to assess their impact on a wider set of outcomes. The following areas were identified as priorities for future research:

- Non-pharmacologic interventions to mitigate suicide risk should be developed and assessed across varying settings (e.g., outpatient, inpatient, residential) and contexts (e.g., individual, dyad, group), and with different types of clinical providers
- Given the recommendation for CBT, more research should be conducted around the dissemination and implementation of CBT for patients with a history of SDV
- WtoH intervention should be studied further among more general at-risk populations of Veterans and Service Members
- Assess the effectiveness of DBT in populations other than patients with BPD
- Evaluate strategies to implement protocol-adherent DBT in DoD and VA settings
- Further clarify which components of safety and crisis response planning interventions contribute most directly to reduction in risk for suicidal thoughts and behaviors (e.g., dismantling studies)
- Use of other therapies and interventions specific to certain behavioral health diagnoses could be expanded to focus on outcomes related to suicidal thoughts and behaviors

e. Pharmacologic Interventions

In evaluating the risk-benefit ratio of using antidepressants, particularly selective serotonin reuptake inhibitors (SSRIs), it is important to understand both the evidence supporting the use of these medications, as well as changes and variations in the prevalence of use after the FDA black-box warnings were issued (the validity of the warnings were addressed in the last iteration of the CPG). The Work Group acknowledges that pharmacologic approaches have revealed an association between higher rates of antidepressant use and lower rates of suicide. The impact of medication-assisted treatments (e.g., buprenorphine, naltrexone, methadone, topiramate, acamprosate, varenicline) on suicide outcomes is a particularly important area of inquiry given the increased risk of suicide among those with SUD. The following areas were identified as priorities for future research:

- Impact of antidepressants on suicide outcomes in demographic and geographic subpopulations

- Benefits and harms of polypharmacy
- Distribution of naloxone and its impact on suicide outcomes
- Impact of medication-assisted treatment on suicide outcomes for those with SUD
- Administration feasibility, dose, and duration of ketamine for suicide prevention

f. Post-acute Care Approaches

Growing evidence in the area of post-acute care points to potential benefits of close monitoring and follow-up and strategies to improve continuity of care and treatment engagement among those recently hospitalized or following an ED visit. Along these lines, there are several areas for which evidence is either emerging or lacking including the effectiveness of different modalities for conducting follow-up (e.g., telehealth), dose-response (number of follow-ups and timing), who should conduct follow-ups (clinician versus peer support) and assertive outreach for those who do not engage in outpatient treatment or follow-up care. Research on the impact of brief interventions in the ED, such as safety planning, combined with repeated follow-up contacts on suicide specific outcomes (i.e., suicide and suicide attempts), is also needed. The following areas were identified as priorities for future research:

- Buddy- or peer-delivered post-discharge support following psychiatric hospitalization on treatment engagement
- Case management and care facilitation
- Telehealth monitoring following psychiatric hospitalization
- Interventions to facilitate treatment engagement (including dose-response) following ED visit or psychiatric hospitalization for suicidal ideation or attempt
- Effective implementation strategies of WHO BIC in the U.S.
- Cultural adaptation and modernization of caring communications (e.g., caring texts)

g. Community-based Interventions for Reducing Risk of Suicide

Currently, the most robust evidence for population-level interventions to prevent suicide is lethal means reduction, particularly those supported by legislation (e.g., firearm regulations, pesticide availability, changes to packaging of analgesics) and environmental interventions (e.g., structural barriers at suicide hot spots). There continues to be limited evidence for other public health and community-based interventions, including gatekeeper training, targeted media campaigns, and 24/7 crisis lines, on population-level suicide outcomes. More research is needed on the effect on suicide rates of these programs, particularly those tailored to Service Member and Veteran populations. Given that many of these programs and interventions are delivered concurrently as part of a multi-faceted suicide prevention approach, research in this area requires special methodological approaches to examine the potential synergistic effects of combining multiple strategies. Research is also needed to understand the impact of universal or selective application of specific lethal means safety interventions (e.g., blister packaging medication, distribution of gun locks and other safe storage mechanisms) on suicide and suicide attempts. Along these lines, examining the impact of provider- or peer-driven lethal means safety counseling on individual safety behaviors (e.g., use of safe storage mechanism, removal of a weapon from home during times of crisis) and suicide outcomes is also needed. The following areas were identified as priorities for future research:

- Lethal means safety specific to firearms
    - Distribution of gun locks and other safe storage mechanisms
    - Counseling on access to lethal means (CALM)
- Lethal means safety specific to poisoning with medications
    - Blister pack medication packaging
    - Limiting supply of medication with potential toxicity dispensed in larger quantities
    - Medication lock boxes used to limit access to high risk medications used in overdose such as opioids or other central nervous system (CNS) depressants
- Availability of firearms and other weapons
- Effectiveness of crisis hotlines and chatlines
- Gatekeeper training and tailored education programs (e.g., Suicide Awareness Voices of Education [SAVE], ASIST, and QPR)
- Effectiveness and potential harm of public health campaigns
    - Social media campaigns (e.g., #BeThere, #ItMatters)
    - Public Service Announcements (e.g., "Why Gun Safety Matters" VA video)
- Interventions targeting stigma reduction and their impact on help-seeking behavior
- Benefits, harms, and ethics of predictive modeling to identify high-risk individuals
- Interventions to improve belongingness
- Interventions aimed at addressing social determinants to improve care and promote health (e.g., access to housing, employment, healthcare)
- Postvention strategies to address contagion and suicide risk

h. Technology-based Modalities

The Work Group could not recommend for or against technology-based behavioral health treatment, monitoring, and assessment modalities in lieu of traditional face-to-face care, largely due to the paucity of evidence available and the heterogeneity of interventions reflected in available research. Notably, none of the included studies assessed the efficacy of face-to-face treatment provided in a virtual, or "telehealth," environment as currently practiced across the VA and DoD. Studies assessing the use of digital delivery of established treatment protocols (e.g., CBT) for self-management of suicidal thinking and behaviors, with minimal or no direct provider interaction, show promise at reducing suicidal ideation in pre-test/post-test observational studies and RCTs using waitlist or attentional controls. However, variability in interventions, inclusion criteria, control groups, and outcomes hinders assessment of efficacy and determination of effect size. Studies assessing technology-based adjuncts to routine behavioral health care were also rare and limited. Findings suggest these approaches may be feasible and acceptable, but further research is required to assess their impact on the critical outcomes of suicidal ideation and behavior. While much research is required, these approaches represent potentially important avenues for increasing access to and augmenting existing care. Priorities for future research include:

- Assessing the equivalence or non-inferiority of real-time virtual clinical encounters versus in-person delivery of established non-pharmacologic suicide prevention interventions (e.g., CBT), including whether the effectiveness of these interventions varies by suicide risk level, population characteristics (patient and provider), and/or treatment type
- Assessing the equivalence or non-inferiority of self-guided digital receipt versus in-person delivery of established non-pharmacologic suicide prevention interventions (e.g., CBT) including whether the effectiveness of these interventions varies by suicide risk level, population characteristics (patient and provider), and/or treatment type
- Assessing the feasibility, acceptability, barriers, and facilitators to using virtual modalities, including telehealth (e.g., telephone, video) or self-guided digital interventions for both patients and providers
- Assessing the efficacy and effectiveness of adjunctive technology-based interventions (e.g., digital/mobile applications used for symptom monitoring or augmenting treatment) for suicide prevention, including whether the efficacy/effectiveness of these interventions varies by suicide risk level, population characteristics (patient and provider), and/or treatment type
- Assessing the feasibility, acceptability, barriers, and facilitators to using adjunctive technology-based interventions for both patients and providers

Appendix A: Considerations for Suicide Prevention

The CPG recommendations do not address every aspect of routine care for patients at risk for suicide. Some aspects of care do not have sufficient evidence to support a stand-alone recommendation. In many cases, clinical studies assessing the efficacy of these standards of care do not exist.

The information below can be considered to help clinicians with some additional aspects of the management of suicide risk.

A. Community-level Intervention

Gatekeeper Training

Table A-1. Gatekeeper Training Information [161]

Program Name	Description
Army ACE	• Training for gatekeepers: ACE is a four-hour peer-to-peer training. • ACE is implemented as instructed in the training protocols.
SAVE: VA Suicide Prevention Gatekeeper Training	• Training for gatekeepers: The one- to two-hour training is available at no charge from the VA. • The training is conducted by trained VA suicide prevention coordinators or other qualified professionals.

Abbreviations: ACE: Ask, Care, and Escort; SAVE: Suicide Awareness Voices of Education; VA: Department of Veterans Affairs

The following training programs are also available:

- Question, Persuade, and Refer (QPR) Gatekeeper Training for Suicide Prevention
- Applied Suicide Intervention Skills Training (ASIST)
- Working Minds: Suicide Prevention in the Workplace

B. Identification and Monitoring

Predictive Analytics

The availability and advancement of large healthcare datasets and machine learning analytics, coupled with modern statistical modelling, computing, and database technologies has introduced opportunities to develop predictive models of suicide and suicide-related behavior. These machine learning algorithms hold the potential to use existing healthcare and other large-scale data repositories to analyze patterns that allow for outcome identification and improved classification accuracy.[162]

However, attempts to predict suicide using machine learning algorithms and predictive analytics tend to have low clinical utility. Suicide prediction models, in their current state, yield good overall classification accuracy (among individuals classified as “not at risk,” the algorithm will be correct over 99% of the time), but are poor at accurately predicting future suicide events (among those classified as “at risk,” the algorithm will be correct only about 1% of the time). Said another way, these models can accurately determine who is not at risk for suicide (a high base rate outcome representing the vast majority of the population and data in the system), but are generally unable to determine who is at elevated risk for suicide-related behavior (a rare outcome).[163-165] The nascent literature on this topic already suggests

that this finding is consistent across the military, VA, and civilian healthcare systems, and is directly related to, and limited by, the suicide mortality rate in the population of interest.[166]

The inability to predict who will experience the targeted outcome is the fatal flaw for most predictive algorithms. Use of these models is likely to result in high rates of false positive identification as high risk (potentially leading to wasted resources, mistrust of healthcare systems, and discrimination), as well as an unacceptable risk of false negatives (the occurrence of suicide among those that the model determined to be "not at risk").

Additionally, the application of predictive analytics to rare healthcare-related outcomes is so new that critical ethical and practical concerns have yet to be fully addressed,[25] including what interventions should be provided to those who are classified as being at risk for suicide, especially if the majority of the cases being classified as "at risk" represent false positive identifications.[167]

Recognizing suicide is not predictable in the near term does not exclude other clinical imperatives. Regardless of suicide or suicide attempt as an eventual outcome, patients' pathways to distress and decompensation always warrant individualized support and treatment.

Acute Warning Signs

In addition to predictive analytics and routine screening, patients at risk for suicide can also be identified via the presence of acute warnings signs for suicide. Warning signs are individual factors that signal an acute increase in risk that the patient may engage in suicidal behavior in the immediate future (i.e., minutes to days). Recognition of warning signs is the key to creating an opportunity for early assessment and intervention. Three direct warning signs are particularly indicative of suicide risk: (1) communicating suicidal thought verbally or in writing; (2) seeking access to lethal means such as firearms or medications; and (3) demonstrating preparatory behaviors such as putting affairs in order. Presence of one or more of these warning signs is a strong indication that further assessment is needed. Indirect warning signs (e.g., agitation, hopelessness, insomnia, shame) are thoughts, feelings, and/or behaviors that are associated with suicidal thoughts and behavior.

Patient-specific warning signs can be assessed by asking patients to describe thoughts, feelings, and behaviors experienced prior to the most recent exacerbation of suicidal ideation or behavior. If a patient reports experiencing any common warning signs, the provider can then directly ask the patient if they are experiencing thoughts of suicide. Algorithm A contains additional guidance regarding how to follow-up with a patient who presents with current warning signs.

C. Intervention

Enhanced Care, Care Bridging, and Case Management

Case management is a complex process involving many different activities. It is an important behavioral health service delivery model composed of a number of different models for nurse and social work case management competencies. The case management model includes selecting cases, identifying and assessing patient needs, developing plans, providing needed services, and monitoring and evaluating provided services. The Case Management Society of America (2016) identifies a set of case management practice standards.[168] This includes assessment, planning, facilitation, care coordination, evaluation, and

advocacy for the comprehensive needs of individuals' families and caregivers. Case management activities include case management processes and services, resource utilization and management, sociopsychological and financial support, rehabilitation activities, effectiveness evaluation, and ethics and law. Clinical nurse and social work case management has been shown to decrease psychiatric readmission rates, decrease family burden, improve family and caregiver satisfaction with services, decrease cost of care, and improve continuity of care.

Case management services link the healthcare system to the patient and coordinate the service components so that patients can achieve successful community living. Nurse and social work case management and care coordination provide an enterprise-wide effort that ensures high-quality, integrated behavioral health care.

See Recommendation 15 for additional information.

D. Postvention

Being exposed to the death of a loved one, friend, or colleague by suicide increases the risk of suicide and other negative mental health sequelae in survivors.[169] The term "postvention" was coined by Dr. Edwin Shneidman who described it as "appropriate and helpful acts that come after a dire event." Rather than just being support for survivors, he posited that, "the largest public health problem is neither the prevention of suicide nor the management of suicide attempts, but the alleviation of the effects of stress in the survivors whose lives are forever altered."[170] The workgroup disagrees with this assertion. Facilitating healthy bereavement is a manifest goal of postvention, but it is important to state that loss survivors' suicide do occur, and reducing suicides in survivors and proxitemporal contacts has been elusive. The 2012 National Strategy for Suicide Prevention states that "helping those who have been bereaved by suicide is a direct form of suicide prevention with a population known to be at risk."[135] There is insufficient evidence for or against postvention in regard to suicide outcomes. Potential for harm exists alongside opportunities to promote health. Postvention programming is thus a challenging and largely untested endeavor; more research is needed.

One of the earliest comprehensive suicide postvention programs was the LOSSteam program developed by the Baton Rouge Crisis Intervention Center in Baton Rouge, Louisiana.[171] The LOSSteam program is unique in that it is an "active postvention" program.[17] The LOSSteam goes to the scene of a suicide to help survivors cope with their loss. LOSSteam volunteers provide referrals to a variety of support resources. There is insufficient evidence for or against the principles employed in this program in regard to suicide outcomes.

The Tragedy Assistance Program for Survivors (TAPS)[18] provides a comprehensive military and Veteran suicide postvention program that addresses each of the key principles of the Survivors of Suicide Loss Task Force National Strategy outlined above. Since beginning their suicide support program 10 years ago, TAPS has provided postvention support for over 9,000 military family survivors. TAPS uses a three-phase approach including stabilization, grief work, and posttraumatic growth. There is insufficient evidence for or against the therapeutic principles employed in this program in regard to suicide outcomes.

[17] See the LOSSteam program for more information: http://www.lossteam.com/
[18] See the Tragedy Assistance Program for Survivors (TAPS) program website for more information: https://www.taps.org/

E. Additional Steps for Management of Military Service Members

Command Consultation (DoD)

Military commanders expect to be cognizant of major events in the lives of Service Members under their charge. Command consultation is an important aspect for treatment of behavioral health conditions and is a relevant part of military treatment planning. Command involvement in the care of the Service Members is always considered in the context of balancing split fiduciary roles, to both patients and commands, in military medicine.

In order to foster a culture of support throughout the DoD and dispel the stigma of seeking mental health care, military healthcare providers employ a presumption, buttressed in DoD instructions addressing mental health evaluations and command interactions to minimize stigma, to defer notification of a Service Member's commander indefinitely unless the deferral is overcome by notification standards listed in DoD policy. In disclosure to commands, clinicians provide a minimum amount of information—only enough to satisfy the purpose of the disclosure.

Healthcare providers notify commanders under the following circumstances: harm to self, harm to others, harm to mission, inpatient care, acute medical conditions interfering with duty, substance abuse treatment, command-directed mental health evaluations, treatment of personnel in sensitive positions, or circumstances when execution of the military mission outweighs the interest served by avoiding notification.

Appendix B: Self-Directed Violence Classification System

Type	Sub-type	Definition	Modifiers	Terms
Thoughts	**Non-Suicidal Self-Directed Violence Ideation**	Self-reported thoughts regarding a person's desire to engage in self-inflicted potentially injurious behavior. There is no evidence of suicidal intent. For example, persons engage in Non-Suicidal Self-Directed Violence Ideation in order to attain some other end (e.g., to seek help, regulate negative mood, punish others, to receive attention).	N/A	• Non-Suicidal Self-Directed Violence Ideation
	Suicidal Ideation	Thoughts of engaging in suicide-related behavior. For example, intrusive thoughts of suicide without the wish to die would be classified as Suicidal Ideation, Without Intent.	Suicidal Intent: • Without • Undetermined • With	• Suicidal Ideation, Without Suicidal Intent • Suicidal Ideation, With Undetermined Suicidal Intent • Suicidal Ideation, With Suicidal Intent
Behaviors	**Preparatory**	Acts or preparation towards engaging in Self-Directed Violence, but before potential for injury has begun. This can include anything beyond a verbalization or thought, such as assembling a method (e.g., buying a gun, collecting pills) or preparing for one's death by suicide (e.g., writing a suicide note, giving things away). For example, hoarding medication for the purpose of overdosing would be classified as Suicidal Self-Directed Violence, Preparatory.	Suicidal Intent: • Without • Undetermined • With	• Non-suicidal Self-Directed Violence, Preparatory • Undetermined Self-Directed Violence, Preparatory • Suicidal Self-Directed Violence, Preparatory
	Non-Suicidal Self-Directed Violence	Behavior that is self-directed and deliberately results in injury or the potential for injury to oneself. There is no evidence, whether implicit or explicit, of suicidal intent. For example, persons engage in Non-Suicidal Self-Directed Violence in order to attain some other end (e.g., to seek help, regulate negative mood, punish others, to receive attention).	Injury: • Without • With • Fatal Interrupted by Self or Other	• Non-Suicidal Self-Directed Violence, Without Injury • Non-Suicidal Self-Directed Violence, Without Injury, Interrupted by Self or Other • Non-Suicidal Self-Directed Violence, With Injury • Non-Suicidal Self-Directed Violence, With Injury, Interrupted by Self or Other • Non-Suicidal Self-Directed Violence, Fatal

Type	Sub-type	Definition	Modifiers	Terms
Behaviors (cont.)	**Undetermined Self-Directed Violence**	Behavior that is self-directed and deliberately results in injury or the potential for injury to oneself. Suicidal intent is unclear based upon the available evidence. For example, the person is unable to admit positively to the intent to die (e.g., unconsciousness, incapacitation, intoxication, acute psychosis, disorientation, or death); **OR** the person is reluctant to admit positively to the intent to die for other or unknown reasons.	Injury: • Without • With • Fatal Interrupted by Self or Other	• Undetermined Self-Directed Violence, Without Injury • Undetermined Self-Directed Violence, Without Injury, Interrupted by Self or Other • Undetermined Self-Directed Violence, With Injury • Undetermined Self-Directed Violence, With Injury, Interrupted by Self or Other • Undetermined Self-Directed Violence, Fatal
	Suicidal Self-Directed Violence	Behavior that is self-directed and deliberately results in injury or the potential for injury to oneself. There is evidence, whether implicit or explicit, of suicidal intent. For example, a person with the wish to die cutting her wrists with a knife would be classified as Suicide Attempt, With Injury.	Injury: • Without • With • Fatal Interrupted by Self or Other	• Suicide Attempt, Without Injury • Suicide Attempt, Without Injury, Interrupted by Self or Other • Suicide Attempt, With Injury • Suicide Attempt, With Injury, Interrupted by Self or Other • Suicide

Source: Rocky Mountain MIRECC; developed in collaboration with the Centers for Disease Control and Prevention. Available at: https://www.mirecc.va.gov/visn19/education/nomenclature.asp

Key Terms

- ***Self-Directed Violence:*** Behavior that is self-directed and deliberately results in injury or the potential for injury to oneself.
- ***Suicidal Intent:*** There is past or present evidence (implicit or explicit) that an individual wishes to die, means to kill him/herself, and understands the probable consequences of his/her actions or potential actions. Suicidal intent can be determined retrospectively and in the absence of suicidal behavior.
- ***Physical Injury:*** A (suspected) bodily lesion resulting from acute overexposure to energy (this can be mechanical, thermal, electrical, chemical, or radiant) interacting with the body in amounts or rates that exceed the threshold of physiological tolerance. In some cases an injury results from an insufficiency of vital elements, such as oxygen. Acute poisonings and toxic effects, including overdoses of substances and wrong substances given or taken in error are included, as are adverse effects and complications of therapeutic, surgical and medical care. Psychological injury is excluded in this context.
- ***Interrupted by Self or Other:*** A person takes steps to injure self but is stopped by self/another person prior to fatal injury. The interruption may occur at any point.
- ***Suicide Attempt:*** A non-fatal self-inflicted potentially injurious behavior with any intent to die as a result of the behavior.
- ***Suicide:*** Death caused by self-inflicted injurious behavior with any intent to die as a result of the behavior.

Source: Rocky Mountain MIRECC; developed in collaboration with the Centers for Disease Control and Prevention. Available at: https://www.mirecc.va.gov/visn19/education/nomenclature.asp

Appendix C: Evidence Review Methodology

A. Developing the Scope and Key Questions

The CPG Champions, along with the Work Group, were tasked with identifying KQs to guide the systematic review of the literature on suicide risk. These questions, which were developed in consultation with the Lewin team, addressed clinical topics of the highest priority for the VA and DoD populations. The KQs follow the population, intervention, comparison, outcome, timing and setting (PICOTS) framework for evidence questions, as established by the Agency for Healthcare Research and Quality (AHRQ). Table C-1 provides a brief overview of the PICOTS typology.

Table C-1. PICOTS [172]

PICOTS Element	Description
Population, Patients, or Problem	A description of the patients of interest. It includes the condition(s), populations or sub-populations, disease severity or stage, co-occurring conditions, and other patient characteristics or demographics.
Intervention or Exposure	Refers to the specific treatments or approaches used with the patient or population. It includes doses, frequency, methods of administering treatments, etc.
Comparison	Describes the interventions or care that is being compared with the intervention(s) of interest described above. It includes alternatives such as placebo, drugs, surgery, lifestyle changes, standard of care, etc.
Outcome	Describes the specific results of interest. Outcomes can include short, intermediate, and long-term outcomes, or specific results such as quality of life, complications, mortality, morbidity, etc.
Timing, if applicable	Describes the duration of time that is of interest for the particular patient intervention and outcome, benefit, or harm to occur (or not occur).
Setting, if applicable	Describes the setting or context of interest. Setting can be a location (such as primary, specialty, or inpatient care).

Abbreviation: PICOTS: population, intervention, comparison, outcome, timing and setting

The Champions, Work Group, and evidence review team carried out several iterations of this process, each time narrowing the scope of the CPG and the literature review by prioritizing the topics of interest. Due to resource constraints, all developed KQs were not able to be included in the systematic evidence review. Thus, the Champions and Work Group determined which questions were of highest priority, and those were included in the review. Table C-2 contains the final set of KQs used to guide the systematic review for this CPG.

Once the KQs were finalized, the Work Group prioritized the outcomes they had defined for each KQ based on how important the Work Group judged each outcome to be. Rating outcomes by their relative importance can help focus attention on those outcomes that are considered most important for clinical decision making when making judgements regarding the overall quality of the evidence to support a recommendation.[173]

Using GRADE methodology, the Work Group rated each outcome on a 1-9 scale (7-9, critical for decision making; 4-6, important, but not critical, for decision making; and 1-3, of limited importance for decision making). Critical and important outcomes were included in the evidence review (see Outcomes); however,

only outcomes judged to be critical were used to determine the overall quality of evidence (see Grading Recommendations).

a. Population(s)

- Adults 18 years or older treated in any VA/DoD primary care setting who may be at risk of suicide

b. Interventions

- Key Question 1
  - Any suicide risk screening programs
- Key Question 2
  - Any instrument used to screen for suicide risk, such as the Columbia-Suicide Severity Rating Scale (C-SSRS) and the Suicide Assessment Five-Step Evaluation and Triage (SAFE-T)
- Key Question 3
  - Suicide risk assessment instruments
  - Structured or unstructured clinical assessment
  - Predictive analytic tools
- Key Question 4

  Non-pharmacologic/behaviorally based interventions (e.g., psychotherapy, home visits or counseling for environmental change, mental health and substance use care, coping skills training, or caring contacts), including:
  - Integrated health interventions
  - Complementary and alternative medical (CAM) interventions
  - Care environment changes
  - Safety planning intervention
  - Crisis response planning
  - Restriction of lethal means
  - Brief interventions
- Key Question 5

  Pharmacologic interventions (e.g., anti-depressant/anxiety medications) including:
  - Lithium, antipsychotics, ketamine, or naloxone
  - Medical assisted treatment
- Key Question 6
  - Who: psychiatrist, psychologist, nurse, social worker, or community provider
  - Where: In-patient hospital, intensive outpatient care, or step or step-down care
  - When: Immediate versus delayed care

- Key Question 7

  Example interventions include:

  - Follow-up plan (including intervention, assessment, frequency, timing, location)
  - Post-discharge care
  - Step down care or step care

- Key Question 8

  Individuals with addressable and non-addressable factors examples include:

  - Patient characteristics
  - Personality features
  - Resilience
  - Impulsivity
  - Social connectedness
  - Care engagement
  - Responsibility for others

- Key Question 9

  Community based interventions to reduce population-level risk, examples include:

  - Public campaigns
  - Stigma reducing interventions
  - Health literacy programs
  - Provider education programs
  - Family, caregiver and patient education

- Key Question 10

  Community based interventions or support programs to reduce individual-level risk, examples include:

  - Confidential care
  - Vet centers
  - Chaplains
  - Peer to peer programs
  - Family and patient education programs
  - “Be there” VA program

- Key Question 11

  - Any telehealth modalities

- Key Question 12

  Usual care plus technology supported management, examples include:

  - Apps (mobile, web-based)
  - Crisis call/text lines
  - Caring contact

c. Comparators

- Key Question 1
  - No screening, usual care or one screening strategy versus another
- Key Question 2
  - Valid reference standard (e.g., an established suicide screening instrument)
- Key Question 3
  - No stratification
- Key Question 4
  - No intervention (e.g., waitlist), other active non-pharmacologic intervention, or combination medication plus non-pharmacologic intervention
- Key Question 5
  - Placebo, other active medication, or combination medication plus non-pharmacologic intervention
- Key Question 6
  - Different care settings, providers and timing
- Key Question 7
  - No follow-up plan or different approaches
- Key Question 8
  - Individuals without the potential risk/protective factors
- Key Question 9
  - No intervention (non-active control or waitlist) or another type of community intervention
- Key Question 10
  - No intervention (non-active control or waitlist) or another type of community or individual intervention
- Key Question 11
  - Usual care setting (in-person care)
- Key Question 12
  - Usual care alone

d. Outcomes

- Key Question 1
  - Critical outcomes
    - Suicide deaths
    - Suicide attempts
    - Overdose (accidental/intentional)
    - Suicidal ideation
  - Important outcomes
    - Rate of false negatives
    - Treatment engagement/withdrawal
    - Functional status
    - Health status
    - Quality of life
- Key Question 2
  - Critical outcomes
    - Sensitivity
    - Specificity
    - Positive predictive value
    - Negative predictive value
- Key Question 3
  - Critical outcomes
    - Suicide attempt
    - Suicide death
- Key Question 4
  - Critical outcomes
    - Suicide deaths
    - Suicide attempts
    - Suicidal ideation
    - Harms (adverse effects) (e.g., reduction of health seeking behavior, impact on patient/provider relationship, stigma, effect on career, effect on social relationships and functioning)
    - Overdose
    - Hopelessness

    - Important outcomes
        - Readmissions
        - Post-discharge treatment engagement
        - Symptomology
        - Functional status
        - Quality of life
        - Health status
- Key Question 5
    - Critical outcomes
        - Suicide deaths
        - Suicide attempts
        - Suicidal ideation
        - Harms (adverse effects) (e.g., reduction of health seeking behavior, impact on patient/provider relationship, stigma, effect on career, effect on social relationships and functioning)
        - Overdose
        - Hopelessness
    - Important outcomes
        - Readmissions
        - Post-discharge treatment engagement
        - Symptomology
        - Functional status
        - Quality of life
        - Health status
- Key Question 6
    - Critical outcomes
        - Suicide deaths
        - Suicide attempts
        - Suicidal ideation
        - Harms (adverse effects) (e.g., reduction of health seeking behavior, impact on patient/provider relationship, stigma, effect on career, effect on social relationships and functioning)
        - Overdose
        - Hopelessness

    - Important outcomes
        - Readmissions
        - Post-discharge treatment engagement
        - Symptomology
        - Functional status
        - Quality of life
        - Health status
- Key Question 7
    - Critical outcomes
        - Suicide deaths
        - Suicide attempts
        - Suicidal ideation
        - Harms (adverse effects) (e.g., reduction of health seeking behavior, impact on patient/provider relationship, stigma, effect on career, effect on social relationships and functioning)
        - Overdose
        - Hopelessness
    - Important outcomes
        - Readmissions
        - Post-discharge treatment engagement
        - Symptomology
        - Functional status
        - Quality of life
        - Health status
- Key Question 8
    - Critical outcomes
        - Suicide attempt
        - Suicide death
- Key Question 9
    - Critical outcomes
        - Suicide death
        - Engagement
        - Stigma reduction
        - Population-level suicide risk

- Key Question 10
  - Critical outcomes
    - Suicide deaths
    - Suicide attempts
    - Suicidal ideation
    - Harms (adverse effects) (e.g., reduction of health seeking behavior, impact on patient/provider relationship, stigma, effect on career, effect on social relationships and functioning)
    - Overdose
    - Hopelessness
  - Important outcomes
    - Readmissions
    - Post-discharge treatment engagement
    - Symptomology
    - Functional status
    - Quality of life
    - Health status
- Key Question 11
  - Critical outcomes
  - Suicide deaths
  - Suicide attempts
  - Suicidal ideation
  - Harms (adverse effects) (e.g., reduction of health seeking behavior, impact on patient/provider relationship, stigma, effect on career, effect on social relationships and functioning)
  - Overdose
  - Hopelessness
  - Important outcomes
  - Readmissions
  - Post-discharge treatment engagement
  - Symptomology
  - Functional status
  - Quality of life
  - Health status

- Key Question 12
  - Critical outcomes
    - Suicide deaths
    - Suicide attempts
    - Suicidal ideation
    - Harms (adverse effects) (e.g., reduction of health seeking behavior, impact on patient/provider relationship, stigma, effect on career, effect on social relationships and functioning)
    - Overdose
    - Hopelessness
  - Important outcomes
    - Readmissions
    - Post-discharge treatment engagement
    - Symptomology
    - Functional status
    - Quality of life
    - Health status

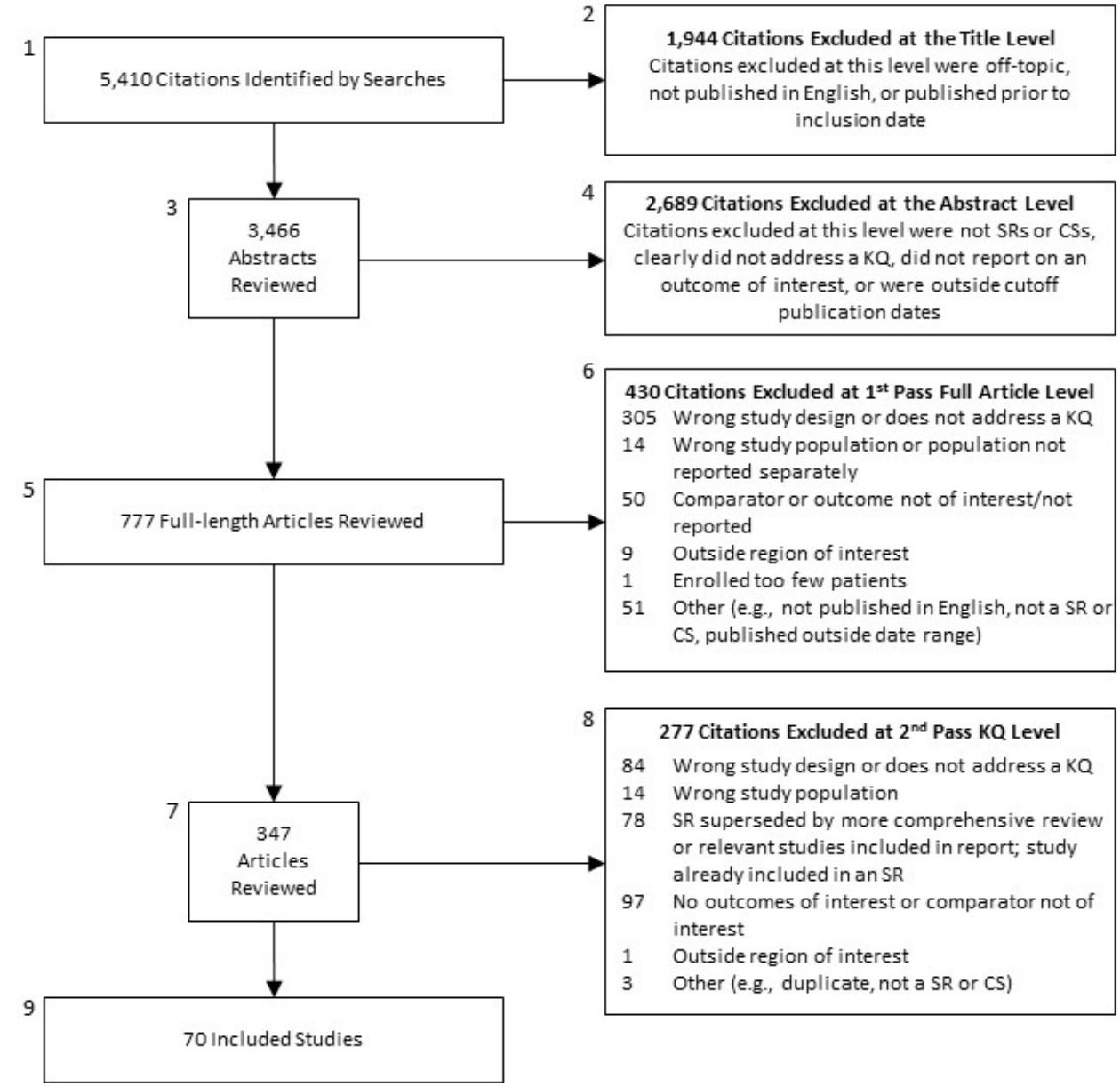
B. Conducting the Systematic Review

Based on the decisions made by the Champions and Work Group members regarding the scope, the KQs, and the PICOTS statements, the Lewin Team produced a systematic review protocol prior to conducting the review. The protocol was reviewed and approved by the Champions and Work Group members. It described in detail the final set of KQs, the methodology to be used during the systematic review process, and the inclusion/exclusion criteria to be applied to each potential study, including, but not limited to, study type, sample size, and PICOTS criteria.

Extensive literature searches identified 5,404 citations potentially addressing the KQs of interest to this evidence review. Of those, 1,948 were excluded upon title review for clearly not meeting inclusion criteria (e.g., not pertinent to the topic, not published in English, published prior to study inclusion publication date, or not a full-length article). Overall, 3,466 abstracts were reviewed with 2,689 of those being excluded for the following reasons: not a systematic review or an accepted study design (see the General Criteria for Inclusion in Systematic Review and Key Question Specific Criteria), did not address a KQ of interest to this review, did not report on an outcome of interest, or published outside cut-off publication dates. A total of 777 full-length articles were reviewed. Of those, 430 were excluded at a first pass review for the following: not addressing a KQ of interest, not enrolling the population of interest, not meeting inclusion criteria for clinical study or systematic review, not meeting inclusion criteria for any KQ, or being a duplicate. A total of 347 full-length articles were thought to address one or more KQs and were further reviewed. Of these, 277 were ultimately excluded. Reasons for their exclusion are presented in Figure C-1 (an alternative text description is available directly below the figure).

Overall, 70 studies addressed one or more of the KQs and were considered as evidence in this review. Table C-2 indicates the number of studies that addressed each of the questions.

Figure C-1. Study Flow Diagram



Abbreviations: CS: clinical study; KQ: key question; SR: systematic review

Alternative Text Description of Study Flow Diagram

Figure C-1. Study Flow Diagram is a flow chart with nine labeled boxes linked by arrows that describe the literature review inclusion/exclusion process. Arrows point down to boxes that describe the next literature review step and arrows point right to boxes that describe the excluded citations at each step (including the reasons for exclusion and the numbers of excluded citations).

1. Box 1: 5,410 Citations identified by searches
    a. Right to Box 2: 1,944 citations excluded at title level
        i. Citations excluded at this level were off-topic, not published in English, or published prior to inclusion date
    b. Down to Box 3: 3,466 abstracts reviewed
2. Box 3: 3,466 abstracts reviewed
    a. Right to Box 4: 2,689 citations excluded at the abstract level
        i. Citations excluded at this level were not SRs or clinical studies, clearly did not address a KQ, did not report on an outcome of interest, or were outside cutoff publication dates
    b. Down to Box 5: 777 full-length articles reviewed
3. Box 5: 777 full-length articles reviewed
    a. Right to Box 6: 430 citations excluded at 1st pass full article level
        i. 305 wrong study design or does not address a KQ
        ii. 14 wrong study population or population not reported separately
        iii. 50 comparator or outcome not of interest/not reported
        iv. 9 outside region of interest
        v. 1 enrolled too few patients
        vi. 51 other (e.g., not published in English, not a clinical trial or SR, published outside date range)
    b. Down to Box 7: 347 articles reviewed
4. Box 7: 347 articles reviewed
    a. Right to Box 8: 277 citations excluded at 2nd pass KQ level
        i. 84 wrong study design or does not address a KQ
        ii. 14 wrong study population
        iii. 78 SR superseded by more comprehensive review or relevant studies included in report; study already included in an SR
        iv. 97 no outcomes of interest or comparator not of interest
        v. 1 outside region of interest
        vi. 3 other (e.g., duplicate, not a clinical trial or SR
    b. Down to Box 9: 70 included studies
5. Box 9: 70 included studies

Table C-2. Evidence Base for KQs

Question Number	Question	Number of Studies and Type of Studies
1	In adults, do screening programs to detect suicide risk improve health outcomes (decreased suicide attempts, decreased suicide deaths, improved functioning, improved quality of life, or improved health status) or intermediate outcomes (decreased ideation, depressive symptomology, or hopelessness)?	1 controlled cohort trial in 2 publications 4 RCTs
2	In adults, do instruments used in healthcare settings to screen for increased risk for suicide accurately identify those who are at increased risk?	2 SRs 2 cohort trials
3	What methods are most effective in stratifying risk of suicide behavior and suicide?	2 SRs 3 Cohort trials
4	For adults identified as being at increased risk for suicide, what non-pharmacologic/behaviorally based interventions improve health outcomes or intermediate outcomes?	4 SRs 10 RCTs
5	For adults identified as being at increased risk for suicide, what pharmacologic interventions improve health outcomes or intermediate outcomes?	3 SRs 3 RCTs
6	For patients identified as being at risk for suicide, what are the most effective treatment approaches? (Who, Where, and When)	1 RCT
7	In adults with suicidal ideation/attempt, what are the most effective post-acute care approaches?	4 RCTs
8	In adult patients at risk for suicide, what factors can increase risk or reduce or protect against suicidal behavior?	4 SRs 8 longitudinal cohort trials
9	What community-based interventions are effective at reducing population-level risk of suicide?	2 SRs 2 RCTs 1 non-randomized controlled trial 4 longitudinal cohort trials
10	In adult patients at risk for suicide, what community-based interventions and/or social support programs are effective at reducing risk of suicide?	2 RCTs 1 non-comparative study
11	In adult patients at risk for suicide, what is the effectiveness of telehealth modalities compared to a usual care setting?	2 SRs
12	In adult patients at risk for suicide, what is the effectiveness of technology-based interventions as an adjunct to usual care in improving outcomes?	4 RCTs
	Total Evidence Base	**70 studies**

Abbreviations: RCT: randomized controlled trial; SR: systematic review

a. General Criteria for Inclusion in Systematic Review

- Clinical studies or systematic reviews published on or after November 18, 2011 to April 10, 2018. If multiple systematic reviews addressed a key question, we selected the most recent and/or comprehensive review. Systematic reviews were supplemented with clinical studies published subsequent to the systematic review.
- Studies must be published in English.
- Publication must have been a full clinical study or systematic review; abstracts alone were not included. Similarly, letters, editorials, and other publications that are not full-length clinical studies were not accepted as evidence.
- Systematic reviews must have searched MEDLINE or EMBASE for eligible publications, performed a risk of bias assessment of included studies, and assessed the quality of evidence using a recognizable rating system, such as GRADE or something compatible (e.g., the one used by the AHRQ Evidence-based Practice Centers). If an existing review did not assess the overall quality of the evidence, evidence from the review must be reported in a manner that allowed us to judge the overall risk of bias, consistency, directness, and precision of evidence. We did not use an existing review as evidence if we were not able to assess the overall quality of the evidence in the review.
- Intervention studies must have assessed pharmacologic or non-pharmacologic treatment, care management approach, or community-based interventions and be a prospective, randomized controlled trial with an independent control group. Crossover trials were not included.
- Study must have enrolled at least 20 patients (10 per study group) unless otherwise noted (see Key Question Specific Criteria)
- Study must have enrolled at least 85% of patients who meet the study population criteria: adults aged 18 years or older who might be at risk of suicide
- Study must have reported on at least one outcome of interest

b. Key Question Specific Criteria

- For KQ 1, systematic reviews or best evidence studies that evaluated the efficacy of different screening programs.
- For KQ 2, systematic reviews of acceptable study designs and studies that compared a suicide screening instrument to a valid reference standard (an established suicide screening instrument) and report on the diagnostic characteristics of the screening instrument (e.g., sensitivity, specificity, repeatability).
- For KQ3, systematic reviews or best evidence studies that evaluated the use of the following examples to stratify patients according to risk of suicide: suicide risk screening instruments, structured or unstructured clinical assessment, or predictive analytic tools.
- For KQs 4, 5, 6, 7, 9, 10, 11, and 12, systematic reviews of acceptable study designs and RCTs.
- For KQ 8, systematic reviews that included longitudinal or comparative observational studies (e.g., cohort or case-controlled trials), and calculated or provided a pooled estimate of risk for a given

risk factor that was reported as an odds ratio, risk ratio, or hazard ratio. Individual comparative observational trials of military populations published from January 2016 to present with at least 12 months follow-up were also included.

- For KQ 8, systematic reviews of primarily cross-sectional trials (trials without an independent control group) or psychological autopsy studies were not included. Systematic reviews that reported only on the prevalence of suicide among a certain population of individuals were not included.
- Individual trials addressing KQ 8 were limited to high-income, Western countries (U.S., Canada, United Kingdom, Western Europe, Israel, Australia, Mexico, and New Zealand), inclusion of systematic reviews was limited to those including more than half of the studies from eligible regions.

c. Literature Search Strategy

Information regarding the bibliographic databases, date limits, and platform/provider can be found in the table below. Additional information on the search strategies, including topic-specific search terms and search strategies can be found in Appendix H.

Table C-3. Bibliographic Database Information

Name	Date Limits	Platform/Provider
Cochrane Database of Systematic Reviews (Cochrane Reviews)	January 1, 2011 to May 2, 2018	Wiley
Cochrane Central Register of Controlled Trials	January 1, 2011 to May 2, 2018	Wiley
Database of Abstracts of Reviews of Effects	January 1, 2011 to May 2, 2018	Wiley
EMBASE (Excerpta Medica)	November 18, 2011 to April 10, 2018	Elsevier
Health Technology Assessment Database (HTA)	January 1, 2011 to May 2, 2018	Wiley
MEDLINE/PreMEDLINE	November 18, 2011 to April 10, 2018	Elsevier
PsycINFO	January 1, 2011 to May 21, 2018	OvidSP
PubMed (In-process and Publisher records)	November 18, 2011 to April 10, 2018	National Library of Medicine

C. Convening the Face-to-face Meeting

In consultation with the COR, the Champions, and the Work Group, the Lewin Team convened a three and one half day face-to-face meeting of the CPG Champions and Work Group members on July 17 – 20, 2018. These experts were gathered to develop and draft the clinical recommendations for an update to the 2013 Suicide Risk CPG. The Lewin Team presented findings from the evidence review in order to facilitate and inform the process.

Under the direction of the Champions, the Work Group members were charged with interpreting the results of the evidence review and were asked to categorize and carry forward recommendations from the 2013 Suicide Risk CPG, modifying the recommendations as necessary. The members also developed new clinical practice recommendations not presented in the 2013 Suicide Risk CPG based on the 2018 evidence review. The subject matter experts were divided into three smaller subgroups at this meeting.

As the Work Group members drafted clinical practice recommendations, they also assigned a grade for each recommendation based on a modified GRADE and USPSTF methodology. Each recommendation was graded by assessing the quality of the overall evidence base, the associated benefits and harms, the variation in values and preferences, and other implications of the recommendation.

In addition to developing recommendations during the face-to-face meeting, the Work Group members also revised the 2013 Suicide Risk CPG algorithms to reflect the new and amended recommendations. They discussed the available evidence as well as changes in clinical practice since 2013, as necessary, to update the algorithms.

D. Grading Recommendations

This CPG uses the GRADE methodology to assess the quality of the evidence base and assign a strength for each recommendation. The GRADE system uses the following four domains to assess the strength of each recommendation:[29]

- Balance of desirable and undesirable outcomes
- Confidence in the quality of the evidence
- Values and preferences
- Other implications, as appropriate,
    - Resource use
    - Equity
    - Acceptability
    - Feasibility
    - Subgroup considerations

The following sections further describe each domain.

Balance of desirable and undesirable outcomes refers to the size of anticipated benefits (e.g., increased longevity, reduction in morbid event, resolution of symptoms, improved quality of life, decreased resource use) and harms (e.g., decreased longevity, immediate serious complications, adverse event, impaired quality of life, increased resource use, inconvenience/hassle) relative to each other. This domain is based on the understanding that the majority of clinicians will offer patients therapeutic or preventive measures as long as the advantages of the intervention exceed the risks and adverse effects. The certainty or uncertainty of the clinician about the risk-benefit balance will greatly influence the strength of the recommendation.

Some of the discussion questions that fall under this domain include:

- Given the best estimate of typical values and preferences, are you confident that the benefits outweigh the harms and burden or vice versa?
- Are the desirable anticipated effects large?
- Are the undesirable anticipated effects small?

- Are the desirable effects large relative to undesirable effects?

Confidence in the quality of the evidence reflects the quality of the evidence base and the certainty in that evidence. This second domain reflects the methodological quality of the studies for each outcome variable. In general, the strength of recommendation follows the level of evidence, but not always, as other domains may increase or decrease the strength. The evidence review used for the development of recommendations, conducted by ECRI, assessed the confidence in the quality of the evidence base using GRADE methodology and assigned a rating of "High," "Moderate," "Low," or "Very Low." The outcomes judged to be critical were used to determine the overall quality of evidence. Per GRADE, if the quality of evidence differs across the critical outcomes, the lowest quality of evidence for any of the relevant critical outcomes determines the overall quality of the evidence for a recommendation; the overall confidence cannot be higher than the lowest confidence in effect estimates for any outcome that is determined to be critical for clinical decision making.[36,173]

The elements that go into the confidence in the quality of the evidence include:

- Is there high or moderate quality evidence that answers this question?
- What is the overall certainty of this evidence?

Values and preferences is an overarching term that includes patients' perspectives, beliefs, expectations, and goals for health and life. More precisely, it refers to the processes that individuals use in considering the potential benefits, harms, costs, limitations, and inconvenience of the therapeutic or preventive measures in relation to one another. For some, the term "values" has the closest connotation to these processes. For others, the connotation of "preferences" best captures the notion of choice. In general, values and preferences increase the strength of the recommendation when there is high concordance and decrease it when there is great variability. In a situation in which the balance of benefits and risks are uncertain, eliciting the values and preferences of patients and empowering them and their surrogates to make decisions consistent with their goals of care becomes even more important. A recommendation can be described as having "similar values," "some variation," or "large variation" in typical values and preferences between patients and the larger populations of interest.

Some of the discussion questions that fall under the purview of values and preferences include:

- Are you confident about the typical values and preferences and are they similar across the target population?
- What are the patient's values and preferences?
- Are the assumed or identified relative values similar across the target population?

Other implications consider the practicality of the recommendation, including resource use, equity, acceptability, feasibility and subgroup considerations. Resource use is related to the uncertainty around the cost-effectiveness of a therapeutic or preventive measure. For example statin use in the frail elderly and others with multiple co-occurring conditions may not be effective and, depending on the societal benchmark for willingness to pay, may not be a good use of resources. Equity, acceptability, feasibility, and subgroup considerations require similar judgments around the practically of the recommendation.

The framework below (Table C-4) was used by the Work Group to guide discussions on each domain.

Table C-4. GRADE Evidence to Recommendation Framework

Decision Domain	Questions to Consider	Judgment
Balance of desirable and undesirable outcomes	Given the best estimate of typical values and preferences, are you confident that the benefits outweigh the harms and burden or vice versa? Are the desirable anticipated effects large? Are the undesirable anticipated effects small? Are the desirable effects large relative to undesirable effects?	Benefits outweigh harms/burden Benefits slightly outweigh harms/ burden Benefits and harms/burden are balanced Harms/burden slightly outweigh benefits Harms/burden outweigh benefits
Confidence in the quality of the evidence	Is there high or moderate quality evidence that answers this question? What is the overall certainty of this evidence?	High Moderate Low Very low
Values and preferences	Are you confident about the typical values and preferences and are they similar across the target population? What are the patient's values and preferences? Are the assumed or identified relative values similar across the target population?	Similar values Some variation Large variation
Other implications (e.g., resource use, equity, acceptability, feasibility, subgroup considerations)	Are the resources worth the expected net benefit from the recommendation? What are the costs per resource unit? Is this intervention generally available? Is this intervention and its effects worth withdrawing or not allocating resources from other interventions? Is there lots of variability in resource requirements across settings?	Various considerations

The strength of a recommendation is defined as the extent to which one can be confident that the desirable effects of an intervention outweigh its undesirable effects and is based on the framework above, which combines the four domains.[174] GRADE methodology does not allow for recommendations to be made based on expert opinion alone. While strong recommendations are usually based on high or moderate confidence in the estimates of effect (quality of the evidence) there may be instances where strong recommendations are warranted even when the quality of evidence is low.[29] In these types of instances where the balance of desirable and undesirable outcomes and values and preferences played large roles in determining the strength of a recommendation, this is explained in the discussion section for the recommendation.

The GRADE of a recommendation is based on the following elements:

- Four decision domains used to determine the strength and direction (described above)
- Relative strength (Strong or Weak)
- Direction (For or Against)

The relative strength of the recommendation is based on a binary scale, "Strong" or "Weak." A strong recommendation indicates that the Work Group is highly confident that desirable outcomes outweigh undesirable outcomes. If the Work Group is less confident of the balance between desirable and undesirable outcomes, they present a weak recommendation.

Similarly, a recommendation for a therapy or preventive measure indicates that the desirable consequences outweigh the undesirable consequences. A recommendation against a therapy or preventive measure indicates that the undesirable consequences outweigh the desirable consequences.

Occasionally, instances may occur when the Work Group feels there is insufficient evidence to make a recommendation for or against a specific therapy or preventive measure. This can occur when there is an absence of studies on a particular topic that met evidence review inclusion criteria, studies included in the evidence review report conflicting results, or studies included in the evidence review report inconclusive results regarding the desirable and undesirable outcomes.

Using these elements, the grade of each recommendation is presented as part of a continuum:

- Strong For (or "We recommend offering this option …")
- Weak For (or "We suggest offering this option …")
- No recommendation for or against (or "There is insufficient evidence…")
- Weak Against (or "We suggest not offering this option …")
- Strong Against (or "We recommend against offering this option …")

Note that weak (For or Against) recommendations may also be termed "Conditional," "Discretionary," or "Qualified." Recommendations may be conditional based upon patient values and preferences, the resources available, or the setting in which the intervention will be implemented. Recommendations may be at the discretion of the patient and clinician or they may be qualified with an explanation about the issues that would lead decisions to vary.

E. Recommendation Categorization

a. Recommendation Categories and Definitions

A set of recommendation categories was adapted from those used by NICE.[32,33] These categories, along with their corresponding definitions, were used to account for the various ways in which recommendations could have been updated from the 2013 Suicide Risk CPG. The categories and definitions can be found in Table C-5.

Table C-5. Recommendation Categories and Definitions

Evidence Reviewed*	Recommendation Category*	Definition*
Reviewed	New-added	New recommendation following review of the evidence
	New-replaced	Recommendation from previous CPG that has been carried over to the updated CPG that has been changed following review of the evidence
	Not changed	Recommendation from previous CPG that has been carried forward to the updated CPG where the evidence has been reviewed but the recommendation is not changed
	Amended	Recommendation from the previous CPG that has been carried forward to the updated CPG where the evidence has been reviewed and a minor amendment has been made
	Deleted	Recommendation from the previous CPG that has been removed based on review of the evidence
Not reviewed	Not changed	Recommendation from previous CPG that has been carried forward to the updated CPG, but for which the evidence has not been reviewed
	Amended	Recommendation from the previous CPG that has been carried forward to the updated CPG where the evidence has not been reviewed and a minor amendment has been made
	Deleted	Recommendation from the previous CPG that has been removed because it was deemed out of scope for the updated CPG

*Adapted from the NICE guideline manual (2012) [32] and Garcia et al. (2014) [33]

Abbreviation: CPG: clinical practice guideline

b. Categorizing Recommendations with an Updated Review of the Evidence

Recommendations were first categorized by whether or not they were based on an updated review of the evidence. If evidence had been reviewed, recommendations were categorized as "New-added," "New-replaced," "Not changed," "Amended," or "Deleted."

"Reviewed, New-added" recommendations were original, new recommendations that were not in the 2013 Suicide Risk CPG. "Reviewed, New-replaced" recommendations were in the previous version of the guideline, but were modified to align with the updated review of the evidence. These recommendations could have also included clinically significant changes to the previous version. Recommendations categorized as "Reviewed, Not changed" were carried forward from the previous version of the CPG unchanged.

To maintain consistency between 2013 recommendations, which were developed using the USPSTF methodology, and 2019 recommendations, which were developed using the GRADE methodology, it was necessary to modify the 2013 recommendations to include verbiage to signify the strength of the recommendation (e.g., "We recommend," "We suggest"). Because the 2013 recommendations inherently needed to be modified at least slightly to include this language, the "Not changed" category was not used. For recommendations carried forward to the updated CPG with review of the evidence and slightly modified wording, the "Reviewed, Amended" recommendation category was used. This allowed for the wording of the recommendation to reflect GRADE methodology as well as for any other non-substantive (i.e., not clinically meaningful) language changes deemed necessary. The evidence used to support these

recommendations was carried forward from the previous version of the CPG and/or was identified in the evidence review for the update.

Recommendations could have also been designated "Reviewed, Deleted." These were recommendations from the previous version of the CPG that were not brought forward to the updated guideline after review of the evidence. This occurred if the evidence supporting the recommendations was out of date, to the extent that there was no longer any basis to recommend a particular course of care and/or new evidence suggests a shift in care, rendering recommendations in the previous version of the guideline obsolete.

c. Categorizing Recommendations without an Updated Review of the Evidence

There were also cases in which it was necessary to carry forward recommendations from the previous version of the CPG without an updated systematic review of the evidence. Due to time and budget constraints, the update of the Suicide Risk CPG could not review all available evidence on management of suicide, but instead focused its KQs on areas of new or updated scientific research or areas that were not previously covered in the CPG.

For areas of research that have not changed, and for which recommendations made in the previous version of the guideline were still relevant, recommendations could have been carried forward to the updated guideline without an updated systematic review of the evidence. The support for these recommendations in the updated CPG was thus also carried forward from the previous version of the CPG. These recommendations were categorized as "Not reviewed." If evidence had not been reviewed, recommendations could have been categorized as "Not changed," "Amended," or "Deleted."

"Not reviewed, Not changed" recommendations refer to recommendations from the previous version of the Suicide Risk CPG that were carried forward unchanged to the updated version. The category of "Not reviewed, Amended" was used to designate recommendations which were modified from the 2013 Suicide Risk CPG with the updated GRADE language, as explained above.

Recommendations could also have been categorized as "Not reviewed, Deleted" if they were determined to be out of scope. A recommendation was out of scope if it pertained to a topic (e.g., population, care setting, treatment, and condition) outside of the scope for the updated CPG as defined by the Work Group.

The categories for the recommendations included in the 2019 version of the guideline are noted in the Recommendations. The categories for the recommendations from the 2013 Suicide Risk CPG are noted in Appendix F.

F. Drafting and Submitting the Final Clinical Practice Guideline

Following the face-to-face meeting, the Champions and Work Group members were given writing assignments to craft discussion sections to support each of the new recommendations and/or to update discussion sections from the 2013 Suicide Risk CPG to support the amended "carried forward" recommendations. The Work Group also considered tables, appendices, and other sections from the 2013 Suicide Risk CPG for inclusion in the update. During this time, the Champions and Work Group also made additional revisions to the algorithms, as necessary.

After developing the initial draft of the updated CPG, an iterative review process was used to solicit feedback on and make revisions to the CPG. Once they were developed, the first two drafts of the CPG were posted on a wiki website for a period of 14-20 business days for internal review and comment by the Work Group. All feedback submitted during each review period was reviewed and discussed by the Work Group and appropriate revisions were made to the CPG.

Draft 3 of the CPG was made available for peer review and comment. This process is described in the section titled Peer Review Process. After revisions were made based on the feedback received during the peer review and comment period, the Champions presented the CPG to the EBPWG for their approval. Changes were made based on feedback from the EBPWG and the guideline was finalized.

The Work Group also produced a set of guideline toolkit materials which included a provider summary, pocket card, and patient summary. The final 2019 Suicide Risk CPG was submitted to the EBPWG in May 2019.

Appendix D: Patient Focus Group Methods and Findings

A. Methods

As part of the effort to update this CPG, the VA and DoD Leadership held two patient focus groups. The first was held with one participant on March 23, 2018 at the Colorado Springs Vet Center in Colorado Springs, CO. The second was held with six participants on June 7, 2018 at the Washington DC VA Medical Center in Washington, DC. The aim of the focus groups was to further understand and incorporate the perspective of patients at risk for suicide and who are covered and/or receiving their care through the VA and/or DoD healthcare systems, as these patients are most affected by the recommendations put forth in the CPG. The focus groups delved into the patients' perspectives on a set of topics related to their suicide prevention care, including their priorities, challenges they have experienced, the information they received regarding their care, as well as the impact of their care on their lives.

Participants for the focus group were recruited by VA and DoD Leadership as well as by the Suicide Risk CPG Champions. Patient focus group participants were not designed to be a representative sample of VA and DoD patients. However, recruitment focused on eliciting a range of perspectives likely to be relevant and informative in the guideline development process. Patients were not incentivized for their participation or reimbursed for travel expenses.

The Suicide Risk CPG Champions and Work Group, with support from Lewin, developed a set of questions to help guide the focus group. The focus group facilitator led the discussion using the previously prepared questions as a general guide to elicit the most important information from the patients regarding their experiences and views about their treatment and overall care. Given the limited time and the range of interests of the focus group participants, not all of the listed questions were addressed.

B. Patient Focus Group Findings

a. Recognize the importance of trust between the patient and his or her provider and/or care team and the necessity for the patient to have consistent, open, and respectful communication in the management of his or her care

- Patients sought and valued open, trusting, and respectful relationships with each of their healthcare providers and/or care teams.
- Especially in this patient population, providers need to be aware of the patient's history and provide healthcare that is sensitive to the patient's experiences.

b. Provide patients with comprehensive, digestible information regarding available prevention interventions and treatment options, including information on complementary and alternative therapies

- Patients desired formal, reliable, and easy-to-navigate sources of information related to suicide risk management, including comprehensive information about different treatment options.
- Several patients acknowledged the role that pharmacotherapies could play in improving their health outcomes, but were hesitant to take medications long-term due to concerns about side effects and impact on quality of life.

- The majority of the patients had positive experiences with various complementary and integrative therapies and believed that these were helpful in managing their risk for suicide.
- Patients noted a preference for outpatient versus inpatient settings, and were mixed in their experiences with group versus individual therapies.

c. Use a team approach to improve care coordination and information sharing among providers to ensure that patients receive comprehensive, individualized and integrated care plans that are responsive to their goals, values, and preferences

- Patients valued consistency in their relationships with providers throughout their care.
- Consult with other providers (e.g., psychiatrists, social workers) and patient advocates as appropriate, especially when patients express the need for more information or other clinical support.
- Patients stressed the need for improved technology, communication, and information sharing (e.g., billing information, medical records) between the VA and the community providers under the Choice Program.

d. Involve family members, caregivers and other support persons in the patient's care whenever possible in accordance with patient preferences

- Patients valued the support they received from their families and friends, and advised offering more formal support groups to enhance involvement, develop networks, and share information.
- Foster family and caregiver involvement in shared decision making and patient support in accordance with patient preferences and in a way that is beneficial to the patient.
- Include family members and caregivers in treatment discussions, especially regarding what to expect during and following treatment.

e. Encourage a culture shift surrounding suicide risk management within the VA and DoD systems to address stigma

- Encourage a culture shift surrounding suicide risk management within the VA and DoD systems; patients often "hide" their suicidal ideology or "pretend" that everything is fine.
- Provide education to patients and have preemptive discussions with military personnel before deployment addressing the risk of suicide, preventive resources, and available treatments for comorbid conditions.

Appendix E: Evidence Table

Recommendation	2013 Grade[1]	Evidence[2]	Strength of Recommendation[3]	Recommendation Category[4]
1. With regard to universal screening, we suggest the use of a validated screening tool to identify individuals at risk for suicide-related behavior.	Not applicable	[42-48,52] Additional References: [50,51]	Weak for	Reviewed, New-added
2. With regard to selecting a universal screening tool, we suggest the use of the Patient Health Questionnaire-9 item 9, to identify suicide risk.	Not applicable	[43,49] Additional References: [50,51]	Weak for	Reviewed, New-added
3. We recommend an assessment of risk factors as part of a comprehensive evaluation of suicide risk, including but not limited to: current suicidal ideation, prior suicide attempt(s), current psychiatric conditions (e.g., mood disorders, substance use disorders) or symptoms (e.g., hopelessness, insomnia, and agitation), prior psychiatric hospitalization, recent bio-psychosocial stressors, and the availability of firearms.	None	[22,28,53-61]	Strong for	Reviewed, New-replaced
4. When evaluating suicide risk, we suggest against the use of a single instrument or method (e.g., structured clinical interview, self-report measures, or predictive analytic models).	None	[52,62,63] Additional References: [64-66]	Weak against	Reviewed, Amended
5. While it is an expected standard of care, there is insufficient evidence to recommend for or against the use of risk stratification to determine the level of suicide risk.	None	[62,63,67] Additional References: [64,68]	Neither for nor against	Reviewed, New-replaced

[1] The 2013 VA/DoD Suicide Risk CPG used the USPSTF evidence grading system (http://www.uspreventiveservicestaskforce.org). Inclusion of more than one 2013 Grade indicates that more than one 2013 CPG recommendation is covered under the 2019 recommendation. The strength of recommendations were rated as follows: A- a strong recommendation that the clinicians provide the intervention to eligible patients; B- a recommendation that clinicians provide (the service) to eligible patients; C- no recommendation for or against the routine provision of the intervention is made; D- recommendation is made against routinely providing the intervention; I- the conclusion is that the evidence is insufficient to recommend for or against routinely providing the intervention. "None" indicates there was no evidence grade assigned to the recommendation in the 2013 Suicide Risk CPG. "Not applicable" indicates that the 2019 Suicide Risk CPG recommendation was a new recommendation, and therefore does not have an associated 2013 Grade.

[2] The first set of references listed in each row in the evidence column constitutes the evidence base for the recommendation. To be included in the evidence base for a recommendation, a reference needed to be identified through the 2018 evidence review or included in the evidence base for the 2013 VA/DoD Suicide Risk CPG. The second set of references in the evidence column (called "Additional References") includes references that provide additional information related to the recommendation, but which were not systematically identified through a literature review. These references were not included in the evidence base for the recommendation and therefore did not influence the strength and direction of the recommendation.

[3] Refer to the Grading Recommendations section for more information on how the strength of the recommendation was determined using GRADE methodology.

[4] Refer to the Recommendation Categorization section for more information on the description of the categorization process and the definition of each category.

Recommendation	2013 Grade[1]	Evidence[2]	Strength of Recommendation[3]	Recommendation Category[4]
6. We recommend using cognitive behavioral therapy-based interventions focused on suicide prevention for patients with a recent history of self-directed violence to reduce incidents of future self-directed violence.	Not applicable	[69-79]	Strong for	Reviewed, New-added
7. We suggest offering Dialectical Behavioral Therapy to individuals with borderline personality disorder and recent self-directed violence.	I	[70,80-83]	Weak for	Reviewed, New-replaced
8. We suggest completing a crisis response plan for individuals with suicidal ideation and/or a lifetime history of suicide attempts.	None	[84] Additional References: [85-90]	Weak for	Reviewed, New-replaced
9. We suggest offering problem-solving based psychotherapies to: a. Patients with a history of more than one incident of self-directed violence to reduce repeat incidents of such behaviors b. Patients with a history of recent self-directed violence to reduce suicidal ideation c. Patients with hopelessness and a history of moderate to severe traumatic brain injury	B, C, I	[91-95,102] Additional References: [96-101,103]	Weak for	Reviewed, New-replaced
10. In patients with the presence of suicidal ideation and major depressive disorder, we suggest offering ketamine infusion as an adjunctive treatment for short-term reduction in suicidal ideation.	Not applicable	[104-106]	Weak for	Reviewed, New-added
11. We suggest offering lithium alone (among patients with bipolar disorder) or in combination with another psychotropic agent (among patients with unipolar depression or bipolar disorder) to decrease the risk of death by suicide in patients with mood disorders.	B, C	[107-114]	Weak for	Reviewed, New-replaced
12. We suggest offering clozapine to decrease the risk of death by suicide in patients with schizophrenia or schizoaffective disorder and either suicidal ideation or a history of suicide attempt(s).	C	[115-117] Additional References: [118]	Weak for	Reviewed, Amended
13. We suggest sending periodic caring communications (e.g., postcards) for 12-24 months in addition to usual care after psychiatric hospitalization for suicidal ideation or a suicide attempt.	I	[119-121]	Weak for	Reviewed, New-replaced
14. We suggest offering a home visit to support reengagement in outpatient care among patients not presenting for outpatient care following hospitalization for a suicide attempt.	C, I	[122-125]	Weak for	Reviewed, Amended

Recommendation	2013 Grade[1]	Evidence[2]	Strength of Recommendation[3]	Recommendation Category[4]
15. We suggest offering the World Health Organization Brief Intervention and Contact treatment modality following presentation to the emergency department for suicide attempt, in addition to standard care.	Not applicable	[71,126,127]	Weak for	Reviewed, New-added
16. There is insufficient evidence to recommend for or against technology-based behavioral health treatment modalities for individuals with suicidal ideation. These include self-directed digital delivery of treatment protocols with minimal or no provider interaction (e.g., compact disc, web-based), and provider-delivered virtual treatment.	None	[69,128-132]	Neither for nor against	Reviewed, New-replaced
17. There is insufficient evidence to recommend for or against the use of technology-based adjuncts (e.g., web or telephone applications) to routine suicide prevention treatment for individuals with suicidal ideation.	None	[133,134]	Neither for nor against	Reviewed, New-replaced
18. We suggest reducing access to lethal means to decrease suicide rates at the population level.	Not applicable	[54,61]	Weak for	Reviewed, New-added
19. There is insufficient evidence to recommend for or against community-based interventions targeting patients at risk for suicide.	Not applicable	[22,54,56,61,81,153-158] Additional References: [135-152,159,160]	Neither for nor against	Reviewed, New-added
20. There is insufficient evidence to recommend for or against community-based interventions to reduce population-level suicide rates.	Not applicable		Neither for nor against	Reviewed, New-added
21. There is insufficient evidence to recommend for or against gatekeeper training alone to reduce population-level suicide rates.	Not applicable		Neither for nor against	Reviewed, New-added
22. There is insufficient evidence to recommend for or against buddy support programs to prevent suicide, suicide attempts, or suicidal ideation.	Not applicable		Neither for nor against	Reviewed, New-added

Appendix F: 2013 Recommendation Categorization Table

2013 Location[1]			2013 Recommendation Text[2]	2013 Grade[3]	Recommendation Category[4]	2019 Recommendation[5]
Section	Number	Page				
A	A	23	Any patient with the following conditions should be assessed and managed using this guideline: a. Person is identified as possibly having risk for suicide during evaluation and management of mental disorders (Depression, bipolar, schizophrenia, PTSD), or medical condition (TBI, pain, sleep disturbance) known to be associated with increased risk for suicide b. Person reports suicidal thoughts on deployment-related assessments (e.g., PDHA/ PDHRA), or on annual screening tools, or other evaluation such as mental health intake c. Person scores very high on depression screening tool and is identified as having concerns of suicide d. Person reports suicidal thoughts on depression screening tool e. Woman reports suicidal thoughts on depression screening tool during pregnancy or postpartum visits f. Person is seeking help (self-referral) and reporting suicidal thoughts g. Service member referred to health care provider by command, clergy, or family/unit members who have expressed concerns about the person's behavior h. Person for whom the provider has concerns about suicide- based on the provider's clinical judgment i. Person with history of suicide attempt or recent history of self-directed violence.	None	Reviewed, Deleted	--

[1] The first three columns indicate the location of each recommendation within the 2013 VA/DoD Suicide Risk CPG.
[2] The 2013 Recommendation Text column contains the wording of each recommendation from the 2013 VA/DoD Suicide Risk CPG.
[3] The 2013 VA/DoD Suicide Risk CPG used the U.S. Preventive Services Task Force (USPSTF) evidence grading system: http://www.uspreventiveservicestaskforce.org. The strength of recommendations were rated as follows: A- a strong recommendation that the clinicians provide the intervention to eligible patients; B- a recommendation that clinicians provide (the service) to eligible patients; C- no recommendation for or against the routine provision of the intervention is made; D- recommendation is made against routinely providing the intervention; I- the conclusion is that the evidence is insufficient to recommend for or against routinely providing the intervention. "None" indicates there was no grade assigned to the recommendation in the 2013 VA/DoD Suicide Risk CPG.
[4] The Recommendation Category column indicates the way in which each 2013 VA/DoD Suicide Risk CPG recommendation was updated.
[5] For recommendations that were carried forward to the 2019 VA/DoD Suicide Risk CPG, this column indicates the new recommendation(s) to which they correspond.

2013 Location[1]			2013 Recommendation Text[2]	2013 Grade[3]	Recommendation Category[4]	2019 Recommendation[5]
Section	Number	Page				
A	B	27	A suicide risk assessment should first evaluate the three domains: suicidal thoughts, intent, and behavior including warning signs that may increase the patient's acuity. (See Annotation C)	None	Reviewed, New-replaced	Recommendation 3
A	B	27	The suicide risk assessment should then include consideration of risk and protective factors that may increase or decrease the patient's risk of suicide. (See Annotation D)	None	Reviewed, New-replaced	Recommendation 3
A	B	27	Observation and existence of warning signs and the evaluation of suicidal thoughts, intent, behaviors, and other risk and protective factors should be used to inform any decision about referral to a higher level of care. (See Annotation E)	None	Not reviewed, Deleted	--
A	B	27	Mental state and suicidal ideation can fluctuate considerably over time. Any person at risk for suicide should be re-assessed regularly, particularly if their circumstances have changed.	None	Reviewed, Deleted	--
A	B	27	The clinician should observe the patient's behavior during the clinical interview. Disconnectedness or a lack of rapport may indicate increased risk for suicide.	None	Reviewed, Deleted	--
A	B	27	The provider evaluating suicide risk should remain both empathetic and objective throughout the course of the evaluation. A direct non-judgmental approach allows the provider to gather the most reliable information in a collaborative way, and the patient to accept help.	None	Reviewed, Deleted	--

2013 Location[1]			2013 Recommendation Text[2]	2013 Grade[3]	Recommendation Category[4]	2019 Recommendation[5]
Section	Number	Page				
A	C1	28	Patients should be directly asked if they have thoughts of suicide and to describe them. The evaluation of suicidal thoughts should include the following: a. Onset (When did it begin) b. Duration (Acute, Chronic, Recurrent) Intensity (Fleeting, Nagging, Intense) c. Frequency (Rare, Intermittent, Daily, Unabating) d. Active or passive nature of the ideation ('Wish I was dead' vs. 'Thinking of killing myself') e. Whether the individual wishes to kill themselves, or is thinking about or engaging in potentially dangerous behavior for some other reason (e.g., cutting oneself as a means of relieving emotional distress) f. Lethality of the plan (No plan, Overdose, Hanging, Firearm) g. Triggering events or stressors (Relationship, Illness, Loss) h. What intensifies the thoughts i. What distract the thoughts j. Association with states of intoxication (Are episodes of ideation present or exacerbated only when individual is intoxicated? This does not make them less serious; however may provide a specific target for treatment) k. Understanding regarding the consequences of future potential actions	None	Reviewed, Deleted	--
A	C2	30	Patients should be asked the degree to which they wish to die, mean to kill him/herself, and understand the probable consequences of his/her actions or potential actions	None	Reviewed, Deleted	--
A	C2	30	The evaluation of intent to die should be characterized by: a. Strength of the desire to die b. Strength of determination to act c. Strength of impulse to act or ability to resist the impulse to act	None	Reviewed, Deleted	--

2013 Location[1]			2013 Recommendation Text[2]	2013 Grade[3]	Recommendation Category[4]	2019 Recommendation[5]
Section	Number	Page				
A	C2	30	The evaluation of suicidal intent should be based on indication that the individual: a. Wishes to die b. Means to kill him/herself c. Understands the probable consequences of the actions or potential actions d. These factors may be highlighted by querying regarding how much the individual has thought about a lethal plan, has the ability to engage that plan, and is likely to carry out the plan	None	Reviewed, Deleted	--
A	C3	31	Clinicians should evaluate preparatory behaviors by inquiring about: a. Preparatory behavior like practicing a suicide plan. For example: § Mentally walking through the attempt § Walking to the bridge § Handling the weapon § Researching for methods on the internet b. Thoughts about where they would do it and the likelihood of being found or interrupted? c. Action to seek access to lethal means or explored the lethality of means. For example: (See Annotation D5) § Acquiring a firearm or ammunition § Hoarding medication § Purchasing a rope, blade, etc. § Researching ways to kill oneself on the internet d. Action taken or other steps in preparing to end one's life: § Writing a will, suicide note § Giving away possessing § Reviewing life insurance policy	None	Reviewed, Deleted	--
A	C3	32	Obtain collateral information from sources such as family members, medical records, and therapists.	None	Reviewed, Deleted	--

2013 Location[1]			2013 Recommendation Text[2]	2013 Grade[3]	Recommendation Category[4]	2019 Recommendation[5]
Section	Number	Page				
A	C4	32	The assessment of risk for suicide should include information from the patient and collateral sources about previous suicide attempt and circumstances surrounding the event (i.e., triggering events, method used, consequences of behavior, role of substances of abuse) to determine the lethality of any previous attempt: a. Inquire if the attempt was interrupted by self or other, and other evidence of effort to isolate or prevent discovery b. Inquire about other previous and possible multiple attempts c. For patients who have evidence of previous interrupted (by self or other) attempts, obtain additional details to determine factors that enabled the patient to resist the impulse to act (if self-interrupted) and prevent future attempts.	None	Reviewed, Deleted	--
A	C5	34	Assess for other warning signs that may indicate likelihood of suicidal behaviors occurring in the near future, and require immediate attention: • Substance abuse – increasing or excessive substance use (alcohol, drugs, smoking) • Hopelessness – expresses feeling that nothing can be done to improve the situation • Purposelessness – express no sense of purpose, no reason for living, decreased self-esteem • Anger – rage, seeking revenge • Recklessness –engaging impulsively in risky behavior • Feeling Trapped – expressing feelings of being trapped with no way out • Social Withdrawal – withdrawing from family, friends, society • Anxiety – agitation, irritability, angry outbursts, feeling like wants to "jump out of my skin" • Mood changes – dramatic changes in mood, lack of interest in usual activities/friends • Sleep Disturbances – insomnia, unable to sleep or sleeping all the time • Guilt or Shame – Expressing overwhelming self-blame or remorse	None	Not reviewed, Deleted	--
A	D	35	Providers should obtain information about risk factors during a baseline evaluation – recognizing that risk factors have limited utility in predicting future behavior.	None	Reviewed, Deleted	--
A	D	35	Providers should draw on available information including prior history available in the patient's record, inquiry and observation of the patient, family or military unit members and other sources where available.	None	Not reviewed, Deleted	--

2013 Location[1]			2013 Recommendation Text[2]	2013 Grade[3]	Recommendation Category[4]	2019 Recommendation[5]
Section	Number	Page				
A	D	35	Assessment tools may be used to evaluate risk factors, in addition to the clinical interview, although there is insufficient evidence to recommend one tool over another.	None	Reviewed, New-replaced	Recommendation 4
A	D	35	The baseline assessment should include information about risk factors sufficient to inform further assessment if conditions change such as firearm in the home, social isolation, history of depression, etc.	None	Reviewed, New-replaced	Recommendation 3
A	D	35	Risk factors should be considered to denote higher risk individuals (e.g., those with a history of depression) and higher risk periods (e.g., recent interpersonal difficulties).	None	Reviewed, New-replaced	Recommendation 3
A	D	35	Risk factors should be solicited and considered in the formulation of a patient's care.	None	Reviewed, New-replaced	Recommendation 3
A	D	35	Reassessment of risk should occur when there is a change in the patient's condition (e.g., relapse of alcoholism) or psychosocial situation (e.g., break-up of intimate relationship) to suggest increased risk. Providers should update information about risk factors when there are changes in the individual's symptoms or circumstances to suggest increased risk.	None	Not reviewed, Deleted	--
A	D	35	Patients ages 18 to 25 who are prescribed an antidepressant are at increased risk for suicidal ideation and warrant increase in the frequency of monitoring of these patients for such behavior	None	Reviewed, Deleted	--
A	D	35	For Military Service person in transition the provider should: a. Inquire about changes in the patient's life and be aware of other indicators of change (retirement physical, overseas duty screening, etc.). b. Be willing to discuss and consider methods to strengthen social support during the transition time if there are other risk factors present.	None	Not reviewed, Deleted	--
A	D2	39	The assessment of risk for suicide should include evaluation of impulsivity by determining whether the patient is feeling out of control, engaging impulsively in risky behavior	None	Reviewed, Deleted	--
A	D2	39	Assess if impulsive recklessness and risk-taking characterize the pattern of behavior and life style of the individual and therefore may limit the ability to control his/her behavior.	None	Reviewed, Deleted	--
A	D3	40	Assessment should include evaluation of protective factors, patient's reason to for living, or other factors that mitigate the risk for suicide.	None	Reviewed, New-replaced	Recommendation 3

2013 Location[1]			2013 Recommendation Text[2]	2013 Grade[3]	Recommendation Category[4]	2019 Recommendation[5]
Section	Number	Page				
A	D4	41	All patients at acute risk for suicide who are under the influence (intoxicated by drugs or alcohol) should be evaluated in an urgent care setting and be kept under observation until they are sober. a. Patients who are under the influence should be reassessed for risk for suicide when the patient is no longer acutely intoxicated, demonstrating signs or symptoms of intoxication, or acute withdrawal b. Obtaining additional information from family members treatment providers, medical records, etc., can be invaluable in making the determination between intentional and unintentional overdose in equivocal cases. c. Intoxicated or psychotic patients who are unknown to the clinician and who are suspected to be in at acute risk for suicide should be transported securely to the nearest crisis center or emergency department for evaluation and management. These patients can be dangerous and impulsive; assistance in transfer from law enforcement may be considered.	None	Reviewed, Deleted	--
A	D4	41	Intoxication with drugs or alcohol impairs judgment and increases the risk of suicide attempt. Use of drugs or alcohol should routinely be assessed with all persons at any risk for suicide.	None	Reviewed, Deleted	--
A	D4	41	Assess the presence of psychiatric and behavioral comorbidities (e.g., mood, anxiety disorder, aggression) in patients with substance use disorder at risk for suicide.	None	Reviewed, Deleted	--
A	D4	41	Recognize that assessment of social risk factors such as disruptions in relationships and legal and financial difficulties are important in individuals with substance use disorders.	None	Reviewed, Deleted	--
A	D5	43	Assessment of presence and access to lethal means should include: a. Fire Arms: Always inquire about access to fire arms and ammunition (including privately-owned firearm) and how they are stored b. Medications: Perform medication reconciliation for all patients. For any current and/or proposed medications consider the risk/benefit of any medications which could be used as a lethal agent to facilitate suicide. Consider prescribing limited supplies for those at elevated risk for suicide, or with histories of overdose or the availability of a caregiver to oversee the administration of the medications. c. Household poisons: Assess availability of chemical poisons, especially agricultural and household chemicals. Many of these are highly toxic.	None	Reviewed, New-replaced	Recommendation 3

2013 Location[1]			2013 Recommendation Text[2]	2013 Grade[3]	Recommendation Category[4]	2019 Recommendation[5]
Section	Number	Page				
A	E	48	Patients at HIGH ACUTE RISK should be immediately referred for a specialty evaluation with particular concern for insuring the patient's safety and consideration for hospitalization.	None	Not reviewed, Deleted	--
A	E	48	Patients at INTERMEDIATE ACUTE RISK should be evaluated by Behavioral Health specialty.	None	Not reviewed, Deleted	--
A	E	48	Patients at LOW ACUTE RISK should be considered for consultation with or referral to a Behavioral Health Practitioner.	None	Not reviewed, Deleted	--
A	E	48	Patients at NO elevated ACUTE RISK should be followed in routine care with treatment of their underlying condition, and evaluated periodically for ideation or suicidal thoughts.	None	Not reviewed, Deleted	--
A	E	48	Patient for whom the risk remains UNDETERMINED (no collaboration of the patient or provider concerns about the patients despite denial of risk) should be evaluated by a by Behavioral Health Practitioner.	None	Not reviewed, Deleted	--
A	E1	49	Formulation of the level of suicide risk should be based on a comprehensive clinical evaluation that is aimed to assess suicidal thoughts, intent and behavior and information about risk and protective factors for estimating the level of risk.	None	Reviewed, New-replaced	Recommendation 5
A	E1	49	Behavioral Health provider use of a standardized assessment framework may serve to inform a comprehensive clinical evaluation. The framework should: a. Estimate the level of risk b. Support clinical decision-making c. Determine the level of intervention and indication for referral d. Allow monitoring of risk level over time e. Serve as the foundation for clinical documentation f. Facilitate consistent data collection for process improvement	None	Reviewed, New-replaced	Recommendation 4
A	E1	49	Assessment of risk for suicide should not be based on any single assessment instrument alone and cannot replace a clinical evaluation. The assessment should reflect the understanding [recognizing] that an absolute risk for suicide cannot be predicted with certainty.	None	Reviewed, Amended	Recommendation 4
A	E1	49	There is insufficient evidence to recommend any specific measurement scale to determine suicide risk.	None	Reviewed, Amended	Recommendation 4

2013 Location[1]			2013 Recommendation Text[2]	2013 Grade[3]	Recommendation Category[4]	2019 Recommendation[5]
Section	Number	Page				
A	E2	54	Whether they have mental disorder or not, patients identified as having suicidal ideation (e.g., through routine screening for major depression or other health conditions) should receive a complete suicide risk assessment as defined in this guideline (See Annotation B).	None	Not reviewed, Deleted	--
A	E2	54	When evidence of a mood, anxiety, or substance use disorder is present, patients should be asked about suicidal thoughts and behavior directly.	None	Reviewed, New-replaced	Recommendation 3
A	E2	54	If suicidal ideation is present, the initial suicide risk assessment should be performed (See Annotation B).	None	Not reviewed, Deleted	--
A	E2	54	Referral to specialty behavioral health care should be based on the level of risk and the available resources: a. Patients at HIGH ACUTE RISK should remain under constant observation and monitoring before arranging for immediate transfer for psychiatric evaluation or hospitalization b. Patients at INTERMEDIATE ACUTE RISK should be referred to, and managed by Behavioral Health Specialty Provider. c. Patients at LOW ACUTE RISK should be considered for consultation with a Behavioral Health Practitioner. d. When risk is UNDETERMINED (due to difficulty in determining the level of risk, or provider concerns about the patient despite denial of ideation or intent) the patient should be immediately referred for an evaluation by a Behavioral Health Specialty Provider.	None	Not reviewed, Deleted	--

2013 Location[1]			2013 Recommendation Text[2]	2013 Grade[3]	Recommendation Category[4]	2019 Recommendation[5]
Section	Number	Page				
A	E2	55	Providers should choose the setting for the initial evaluation to ensure the safety of the patient and the clinical staff so that potentially life-threatening conditions can be managed effectively. And make the appropriate steps to: a. Secure all belongings to prevent access to lethal means and elopement from the Emergency Department. b. Monitor the patient in a visible area, away from exits, with limited access to equipment that may be used to harm self or others. c. Conduct a focused medical assessment to identify and manage any life-threatening conditions such as overdose, and assess medical stability. • Vital Signs, Physical Exam, Neurologic Exam, Mental Status Exam • ECG, Toxicology Screen, BAL, and other tests as indicated. • Treat life-threatening conditions. d. Request Behavioral Health Consultation to conduct a thorough suicide risk assessment and recommend a treatment plan.	None	Not reviewed, Deleted	--
A	E3	56	Gather collateral history from family/unit members, the medical record, escorts, unit commanders (or their representatives), referring physicians, EMS, and police as appropriate.	None	Reviewed, Deleted	--
A	E3	56	Approach the patient with a non-judgmental, collaborative attitude with the aim of fully understanding the patient's suicidality.	None	Reviewed, Deleted	--
A	E3	56	Secure all belongings to prevent access to lethal means and elopement from the clinic.	None	Not reviewed, Deleted	--
A	E3	56	Choose the setting for the initial evaluation to ensure the safety of the patient and the clinical staff so that potentially life-threatening conditions can be managed effectively. If the patient is intoxicated, re-evaluate when intoxication has resolved.	None	Not reviewed, Deleted	--

2013 Location[1]			2013 Recommendation Text[2]	2013 Grade[3]	Recommendation Category[4]	2019 Recommendation[5]
Section	Number	Page				
A	E3	56	Conduct a mental status examination and a comprehensive assessment of mental health history that includes: a. Past and present suicidal thoughts, intent, and behaviors, impulsivity, hopelessness and the patient view of the future b. Alcohol use assessed per standardized tools (Audit-C), and other substance abuse history, since impaired judgment may increase the severity of the suicidality and risk for suicide act c. Psychiatric illness, comorbid diagnoses, and history of treatment interventions. d. Elicit family history of suicidal behavior.	None	Reviewed, New-replaced	Recommendation 3
A	E3	56	Assess for access and past use of lethal means (firearms, drugs, toxic agents).	None		--
A	E3	56	Assess social history of support system, living situation and potential stressful life events.	None	Reviewed, Deleted	--
A	E3	56	Consider suicidal thinking, intent, behavior, risk factors and protective factors to stratify the risk.	None	Reviewed, New-replaced	Recommendation 5
A	E3	57	Consider the use of a standardized suicide risk assessment framework to inform the evaluation for estimating the risk for suicide.	None	Reviewed, Deleted	--
A	E3	57	Determine appropriate setting for further evaluation and management based on level of risk, legal guidance, and local policy.	None	Not reviewed, Deleted	--
A	E3	57	Document in detail the data supporting the assigned level of risk, the level of care required, and treatment plans to reduce suicide risk.	None	Not reviewed, Deleted	--
B	F1	59	Consider hospitalization for patients at high acute risk for suicide who need crisis intervention, intensive structure and supervision to ensure safety, management of complex diagnoses, and delivery of intensive therapeutic procedures.	None	Not reviewed, Deleted	--
B	F1	59	The inpatient psychiatric hospital setting is particularly suitable for the treatment of acute risk for suicide rather than chronic risk.	None	Not reviewed, Deleted	--
B	F1	59	An individualized treatment plan should be determined to meet the patient's needs and aimed to allow as much self-control and autonomy as possible, balanced against the risk level.	None	Reviewed, Deleted	--
B	F1	59	Although suicidality may persist, the treatment goal is to transition the patient toward a less restrictive environment based on clinical improvement and the assessment that the suicide risk has been reduced.	None	Reviewed, Deleted	--

2013 Location[1]			2013 Recommendation Text[2]	2013 Grade[3]	Recommendation Category[4]	2019 Recommendation[5]
Section	Number	Page				
B	F2	61	A patient may be discharged to a less restrictive level of care from an acute setting (emergency department/hospital/acute specialty care) after a behavioral health clinician evaluated the patient, or a behavioral health clinician was consulted, and all three of the following conditions have been met: A. Clinician assessment that the patient has no current suicidal intent AND B. The patient's active psychiatric symptoms are assessed to be stable enough to allow for reduction of level of care AND C. The patient has the capacity and willingness to follow the personalized safety plan (including having available support system resources).	None	Reviewed, Deleted	--
B	F3	63	Any patient with suicidal intent or behavior who cannot be maintained in a less restrictive environment requires hospitalization in order to provide an optimal controlled environment to maintain the patient's safety and initiate treatment.	None	Not reviewed, Deleted	--
B	F3	63	A complete biopsychosocial assessment should be performed upon hospitalization to determine all direct and indirect contributing factors to suicidal thoughts and behaviors. Patient and family education should be provided on techniques to manage these factors.	None	Not reviewed, Deleted	--
B	F4	69	There is insufficient evidence to recommend that partial hospitalization is preferable to other treatment settings for reducing the risk of suicide.	None	Not reviewed, Deleted	--
B	F5	70	A collaborative discharge plan should be developed to allow a suicidal patient to be discharged from inpatient psychiatric care or the Emergency Department in order to mitigate the increased risk of suicide post discharge.	None	Reviewed, Deleted	--
B	F5	70	Patients who are discharged from acute care (hospitalization, Emergency Department) remain at high risk for suicide and should be followed up within seven days of discharge.	None	Reviewed, Deleted	--

2013 Location[1]			2013 Recommendation Text[2]	2013 Grade[3]	Recommendation Category[4]	2019 Recommendation[5]
Section	Number	Page				
B	F5	70	Discharge planning should include the following: a. Re-assessment of the Suicide Risk b. Education to patient and support system about the risks of suicide in the post-discharge timeframe c. Providing suicide prevention information (such as a crisis hotline) to the patient and family/unit members. d. Post-discharge treatment plans for psychiatric conditions and for suicide-specific therapies e. Safety plan with validation of available support systems f. Coordination of the transition to appropriate of care setting with warm hand-offs g. Identifying the responsible provider during the transition h. Monitoring of adherence to the discharge plan for 12 weeks	None	Reviewed, Deleted	--
B	G1	73	The patient should be educated about conditions that are associated with their suicidal crisis, factors that increase and decrease their risk of suicide, and the risks and benefits associated with treatment options included in the treatment plan to target suicidality and associated conditions.	None	Reviewed, Deleted	--
B	G1	73	Patient and family should receive information about the resources available through the Veterans or Military Crisis Line (including phone, chat and text services).	None	Reviewed, Deleted	--
B	G1	73	The patient and family education should be done with empathy, and appropriate respect for autonomy and patient privacy. Family/unit members should be engaged with the patient consent. This education should aim to instill hope of recovery and reduce stigma and shame.	None	Not reviewed, Deleted	--
B	G1	73	Strongly recommend advising all patients at intermediate to high acute risk for suicide against the use of alcohol and non-prescribed medications, and educate on the potential for drug-drug and drug-alcohol interactions that can impair decision-making and increase the risk of impulsive suicide attempts.	None	Not reviewed, Deleted	--
B	G1	73	Patient and family education should be provided with the following characteristics: a. Tailored to the needs (e.g. language and educational level) and situational factors of the identified family or supports and patient b. Ensure specific focus on self-directed violence or suicide behaviors c. Allow plenty of time to answer patient and family member questions and establish a collaborative relationship.	None	Not reviewed, Deleted	--

2013 Location[1]			2013 Recommendation Text[2]	2013 Grade[3]	Recommendation Category[4]	2019 Recommendation[5]
Section	Number	Page				
B	G1	73	At a minimum, patient and family education should include: a. The nature of self-directed violence or suicide behaviors, the episodic recurrent nature of suicide risk and the applicable biological, cognitive, emotional, or psychosocial risk factors b. The impact of any existing psychiatric diagnoses or high risk situational stresses c. Risk factors associated with suicide d. Warning signs, reviewing any particular warning signs the patient may have demonstrated prior to any attempts or reported ideation e. The protective role of positive family relationships and the potential harmful impact of negative family interaction on risk mitigation f. The importance of assisting the patient with his/ her safety plan and means restriction, removing potentially lethal means of self-harm (e.g., firearms, medications, knives, or razor blades) from the person and their home environment, particularly if the person has mentioned specific means. g. Methods for contacting the patient's provider and other medical or community support resources (e.g., hotlines) should the family member become concerned h. The importance of encouraging the patient to comply with a collaboratively established treatment plan and follow-up care.	None	Reviewed, Deleted	--

2013 Location[1]			2013 Recommendation Text[2]	2013 Grade[3]	Recommendation Category[4]	2019 Recommendation[5]
Section	Number	Page				
B	G2	75	Provide education about actions to reduce associated risks and measured to limit the availability of means with emphasis on more lethal methods available to the patient: a. Fire Arms (military or privately owned): For patients at highest risk, exercise extreme diligence to ensure firearms are made inaccessible to the patient. For all patients at intermediate to high acute risk of suicide, discuss the possibility of safe storage of firearms with the patient, command, and family (e.g., lock firearms up, use trigger locks or store firearms at the military armory, at a friend's home, or local police station. Store ammunition separately.) b. Medications: When clinically possible, include limiting access to medications that carry risk for suicide, at least during the periods when patient is at high acute risk for suicide. This may include prescribing limited quantities, supplying the medication in blister packaging, providing printed warnings about the dangers of overdose, or ensuring that currently prescribed medications are actively controlled by a responsible party. c. Household Poisons: Educate how to secure chemical poisons, especially agricultural and household chemicals, to prevent accidental or intentional ingestions. Many of these chemicals are highly toxic.	None	Not reviewed, Deleted	--
B	G3	79	Safety planning that is developed collaboratively with the patient should be part of discharge planning for all patients who were evaluated with high acute risk for suicide before being released to a lower level of care.	None	Reviewed, Deleted	--
B	G3	79	For patients at intermediate acute risk for suicide, the safety planning process can be abbreviated to recognizing signs of elevating safety concerns and listing of practical steps for individual coping, safety precautions and support-seeking.	None	Reviewed, New-replaced	Recommendation 8
B	G3	79	For patient at low risk, provider should discuss signs that the patient can use to recognize escalating stress or risk, provide key phone numbers and resources for help, and educate about lethal means restriction. A handout can be used to reinforce the discussion.	None	Reviewed, Deleted	--
B	G3	79	A Safety plan should be: a. Collaborative between the provider team and the patient b. Proactive–by explicitly anticipating a future suicidal crisis c. Individually tailored d. Oriented towards a no-harm decision e. Based on existing social support.	None	Reviewed, Deleted	--

2013 Location[1]			2013 Recommendation Text[2]	2013 Grade[3]	Recommendation Category[4]	2019 Recommendation[5]
Section	Number	Page				
B	G3	79	The Safety plan should include the following elements, as appropriate: a. Early identification of warning signs or stressors b. Enhancing coping strategies (e.g., to distract and support) c. Utilizing social support contacts (discuss with whom to share the plan) d. Contact information about access to professional help e. Minimizing access to lethal means (as, weapons and ammunition or large quantities of medication).	None	Reviewed, New-replaced	Recommendation 8
B	G3	79	The development of the safety plan with the person, family/unit members should anticipate and discuss contingencies to address possible obstructions to plan implementation and where to keep the plan.	None	Reviewed, Deleted	--
B	G3	79	The safety plan should be reviewed and updated by the health care team working with the patient as needed and shared with family/unit members and other related if the patient consents.	None	Reviewed, Deleted	--
B	G3	79	Safety plans should be updated to remain relevant during changes in clinical state and transitions of care.	None	Reviewed, Deleted	--
B	G3	79	Providers should document the safety plan within the medical record or reasons for not completing such a plan (i.e. “Patient admitted. Inpatient provider to complete safety plan at time of discharge.”)	None	Reviewed, Deleted	--
B	G4	81	Recommend against the use of no-suicide contracts as intervention to prevent future suicide in patients at high acute risk for suicide.	None	Reviewed, Deleted	--
B	G4	81	Patient management should include a comprehensive evaluation of current risk factors and warning signs for suicide, a personalized safety plan that best anticipates triggers for future suicidal thoughts and collaboratively develops coping strategies that make sense for the individual patient.	None	Reviewed, Deleted	--
B	G5	83	Providers should consider psychosocial interventions to address unique family, social, cultural, spiritual and socioeconomic needs of the individual identified by the treatment team and patient.	None	Not reviewed, Deleted	--
B	G5	83	Providers should refer the patient to available psychosocial resources to address the identified individual patient needs.	None	Not reviewed, Deleted	--

2013 Location[1]			2013 Recommendation Text[2]	2013 Grade[3]	Recommendation Category[4]	2019 Recommendation[5]
Section	Number	Page				
B	G5	83	Provider should maintain awareness of available coping skills programs and use clinical judgment in determining if a particular patient will benefit from referral or inclusion in such a program. These modalities may not be appropriate for some Service members.	None	Reviewed, Deleted	--
B	G5	83	Underlying psychosocial factors impacting the provision of care may include: a. Unemployment b. Homelessness or housing instability c. Financial difficulties d. Legal issues e. Lack of social support (i.e. self-induced or circumstantial) f. Substance abuse g. Inability to coordinate comprehensive care h. Spiritual issues.	None	Not reviewed, Deleted	--
B	G6	85	Providers must take reasonable steps to limit the disclosure of Protected Health Information (PHI) to the minimum necessary to accomplish the intended purpose.	None	Not reviewed, Deleted	--
B	G6	85	Providers should involve command in the treatment plan of Service member at high acute risk for suicide to assist in the recovery and the reintegration of the patient to the unit. For SM at other risk levels, provider should evaluate the risk & benefit of involving command and follow service Department policies, procedures, and local regulations.	None	Reviewed, Deleted	--
B	G6	85	When performing a medical profile, the provider should discuss with command the medical recommendation and the impact on the SM's limitations to duty and fitness for continued service.	None	Reviewed, Deleted	--
B	G6	85	Provider should discuss with Service members the benefit of having command involved in their plan and assure them their rights to Protected Health Information with some exceptions regarding to the risk for suicide.	None	Reviewed, Deleted	--
B	G6	85	As required by pertinent military regulations, communicate to the Service member's chain of command regarding suicidal ideation along with any recommended restrictions to duty, health and welfare inspection, security clearance, deployment, and firearms access. Consider redeployment to home station any Service member deployed to a hazardous or isolated area.	None	Reviewed, Deleted	--

2013 Location[1]			2013 Recommendation Text[2]	2013 Grade[3]	Recommendation Category[4]	2019 Recommendation[5]
Section	Number	Page				
B	G6	85	Service members at high acute risk for suicide who meet criteria for hospitalization and require continuous (24-hours) direct supervision should be hospitalized in almost all instances. If not, the rationale should specifically state why this was not the preferred action with appropriate documentation.	None	Not reviewed, Deleted	--
B	G6	85	During operational deployment conditions or other extreme situations during which hospitalization or evacuation is not possible, 'Unit watch' may be considered as appropriate in lieu of a high level care setting (hospitalization) and service Department policies, procedures, and local regulations should be followed.	None	Not reviewed, Deleted	--
B	G6	85	Because of the high risk of suicide during the period of transition providers should pay particular attention to ensure follow-up, referral, and continuity of care during the transition of Service members at risk for suicide to a new duty station, after separation from unit, or separation from military service.	None	Reviewed, Deleted	--
C	H	89	Patients should receive optimal evidence-based treatment for any mental health and medical conditions that may be related to the risk of suicide. Patients diagnosed with a mental health and/or medical condition should receive evidence-based treatments for their underlying condition following Evidence-based Clinical Practice Guidelines: a. Substance Use Disorders b. Major Depressive Disorder c. Psychosis (Schizophrenia) d. Bipolar Disorder e. Post-traumatic Stress Disorder f. Traumatic Brain Injury g. Chronic Pain h. Medically Unexplained Symptoms.	None	Not reviewed, Deleted	--
C	H	89	Care for the relevant condition-focused treatments may need to be modified to address the risk of suicide. For example, limiting the quantities of medications dispensed at any one time, enhancing social support, hospitalization and protection from harm, increasing the frequency of follow-up, increasing efforts to monitor and promote treatment adherence.	None	Not reviewed, Deleted	--

2013 Location[1]			2013 Recommendation Text[2]	2013 Grade[3]	Recommendation Category[4]	2019 Recommendation[5]
Section	Number	Page				
C	H	89	Treatment interventions that have been shown to be effective in reducing the risk for repeated self-directed violence or preventing suicide in patients with specific conditions need to be considered or optimized in those with these conditions who are at risk for suicide (e.g., lithium for patients with bipolar disorder, suicide-focused psychotherapy).	None	Not reviewed, Deleted	--
C	H	90	Family/unit members should be involved in the treatment plan when the patient consents. For Active Duty Service members the command should always be involved in the treatment plan of a high-risk suicidal patient.	None	Not reviewed, Deleted	--
C	J	92	Suicide-focused psychotherapies that have been shown to be effective in reducing risk for repeated self-directed violence should be included in the treatment plan of patients at high risk for suicide, if the risk for suicide is not adequately addressed by psychotherapy specific to the underlying condition. Psychotherapy may include: a. Cognitive therapy (CT) for suicide prevention for non-psychotic patients who have survived a recent suicide attempt [B] and others at high risk. [I] b. Problem-solving therapy (PST) that directly addresses the risk for suicide related behaviors for non-psychotic patients with more than one previous suicide attempt [B], and for other patients at high risk. [C]	B, C, I	Reviewed, New-replaced	Recommendations 6, 9
C	K	96	There is inconsistent evidence regarding the efficacy of psychotherapy in reducing the risk for repetition of self-directed violence in patients with co-occurring disorders. Specific psychotherapies may be considered in the following contexts:	None	Not reviewed, Deleted	--
C	K1	96	Dialectical Behavioral Therapy (DBT) for patients with Borderline Personality Disorder (BPD) or other personality disorders characterized by emotional dysregulation and a history of suicide attempts and/or self-harm. [I]	I	Reviewed, New-replaced	Recommendation 7
C	K1	96	Specific psychotherapies based on cognitive or behavioral approaches or skills training (i.e., CBT for Borderline Personality Disorder, MACT, Acceptance Based Emotion Regulation Group Intervention) for patients with BPD who are at high risk for suicide. [I]	I	Not reviewed, Deleted	--
C	K1	96	Specific psychodynamic psychotherapies (i.e., MBT, brief psychodynamic interpersonal therapy) for patients with BPD who are a high risk for suicide. [I]	I	Not reviewed, Deleted	--
C	K3	104	There is insufficient evidence to recommend for or against use of CBT to reduce the risk of suicide behavior in patients with schizophrenia [I]	I	Not reviewed, Deleted	--
C	K4	105	Ongoing management of suicidal patients with SUD should include treatment by a licensed mental health practitioner.	None	Reviewed, Deleted	--

2013 Location[1]			2013 Recommendation Text[2]	2013 Grade[3]	Recommendation Category[4]	2019 Recommendation[5]
Section	Number	Page				
C	K4	105	In addition to suicidality-focused interventions, treatment should be provided for an underlying SUD condition (e.g., addiction). Ensure that management of suicide risk is coordinated or integrated with treatment for substance use disorder and comorbid conditions	None	Not reviewed, Deleted	--
C	K4	105	Intervention strategies in patients in whom suicide risk is associated with using substances should emphasize safety, relapse prevention, and addressing the substance use.	None	Not reviewed, Deleted	--
C	K4	105	In the effort to limit access to lethal means, pay special attention in this population to restriction of lethal means as firearms, and prescribed medication (dosage and quantities).	None	Not reviewed, Deleted	--
C	L	106	This Guideline recommends against the use of drug treatment as a specific intervention for prevention of self-directed violence in patients with no diagnosis of a mental disorder	None	Reviewed, Deleted	--
C	L	106	When a person expresses thoughts of self-harm or has demonstrated self-harm behavior, the patient's medication regimen [prescription drugs, over-the-counter medications, and supplements (e.g., herbal remedies)] should be reviewed for medications associated with suicidal thoughts or behavior. The continuation of such medications should be carefully evaluated and documented. (See Appendix B-3 Table: Drugs Associated with Suicidality)	None	Reviewed, Deleted	--
C	M	106	Pharmacological intervention may be markedly helpful in managing underlying mental disorders and the danger of repeated or more dangerous self-directed violence.	None	Reviewed, Deleted	--
C	M	106	All medications (prescription drugs, over-the-counter medications, and supplements [e.g., herbal remedies]) used by patients at risk for suicide should be reviewed to assure effective and safe treatment without adverse drug interactions.	None	Reviewed, Deleted	--
C	M	107	When prescribing drugs to people who self-harm, consider the toxicity of prescribed drugs in overdose and limit the quantity dispensed or available, and/or identify another person to be responsible for securing access to medications. The need for follow-up and monitoring for adverse events should also be considered.	None	Reviewed, Deleted	--
C	M1	108	Antidepressants may provide benefit to address suicidal behavior in patients with mood disorders. Treatment for the underlying cause should be optimized according to evidence-based guidelines for the respective disorder.	None	Reviewed, Deleted	--

2013 Location[1]			2013 Recommendation Text[2]	2013 Grade[3]	Recommendation Category[4]	2019 Recommendation[5]
Section	Number	Page				
C	M1	108	Young adults (18-24) started on an antidepressant for treatment of depression or another psychiatric disorder should be monitored and observed closely for emergence or worsening of suicidal thoughts or behaviors during the initiation phase of treatment. [B]	B	Reviewed, Deleted	--
C	M1	108	Patients of all age groups who are managed with antidepressants should be monitored for emergence or worsening of suicidal thoughts or behaviors after any change in dosage.	None	Reviewed, Deleted	--
C	M1	108	When prescribing antidepressants for patients at risk for suicide, to pay attention to the risk of overdose and limit the amount of medication dispensed and refilled.	None	Reviewed, Deleted	--
C	M2	110	There is no evidence that antipsychotics provide additional benefit in reducing the risk of suicidal thinking or behavior in patients with co-occurring psychiatric disorders. Treatment for the psychiatric disorder should be optimized according to evidence-based guidelines for the respective disorder.	None	Reviewed, Deleted	--
C	M2	110	Patients who are treated with antipsychotics should be monitored for changes in behavior and emergence of suicidal thoughts during the initiation phase of treatment or after any change in dosage.	None	Reviewed, Deleted	--
C	M2	110	When prescribing antipsychotics in patients at risk for suicide pay attention to the risk of overdose and limit the amount of medication dispensed and refilled.	None	Reviewed, Deleted	--
C	M3	111	Lithium augmentation should be considered for patients diagnosed with unipolar depressive disorder who have had a partial response to an antidepressant and for those with recurrent episodes who are at high risk for suicidal behavior, provided they do not have a contraindication to lithium use and the potential benefits outweigh the risks. [C]	C	Reviewed, New-replaced	Recommendation 11
C	M3	111	Lithium should be avoided or used in caution in patients with impaired renal function, those taking concurrent medications that increase or decrease lithium concentrations or those with other risk factors for lithium toxicity.	None	Reviewed, Deleted	--
C	M3	111	When prescribing lithium to patients at risk for suicide, it is important to pay attention to the risk of overdose by limiting the amount of lithium dispensed and the form in which it is provided.	None	Reviewed, Deleted	--
C	M4	112	Lithium should be considered for patients diagnosed with bipolar disorder who do not have contraindications to lithium as it has been shown to reduce the increased risk of suicide associated with this illness. [B]	B	Reviewed, New-replaced	Recommendation 11

2013 Location[1]			2013 Recommendation Text[2]	2013 Grade[3]	Recommendation Category[4]	2019 Recommendation[5]
Section	Number	Page				
C	M4	112	Lithium should be avoided or used in caution in patients with impaired renal functions, taking concurrent medications that increase or decrease lithium concentrations or other risk factors for lithium toxicity.	None	Reviewed, Deleted	--
C	M4	112	When prescribing lithium to patients at risk for suicide, it is important to pay attention to the risk of overdose by limiting the amount of lithium dispensed, and to the form in which it is provided.	None	Reviewed, Deleted	--
C	M5	114	Clozapine should be considered for patients diagnosed with schizophrenia at high risk for suicide, who do not have contraindications to clozapine, and will be compliant with all required monitoring. [C]	C	Reviewed, Amended	Recommendation 12
C	M6	116	Patients started or who are managed with antiepileptics should be monitored for changes in behavior and the emergence of suicidal thoughts.	None	Reviewed, Deleted	--
C	M6	116	There is no evidence that AEDs are effective in reducing the risk of suicide in patients with a mental disorder	None	Reviewed, Deleted	--
C	M7	118	Use caution when prescribing benzodiazepines to patients at risk for suicide. It is important to pay attention to the risk of disinhibition from the medication, and respiratory depression (particularly when combined with other depressants) by limiting the amount of benzodiazepines dispensed. Avoid benzodiazepines with a short half-life and the long-term use of any benzodiazepine to minimize the risk of addiction and depressogenic effects.	None	Reviewed, Deleted	--
C	M8	118	Methadone substitution therapy should be considered in opiate dependent patients to reduce the risk of death by overdose. (See VA/DoD Guideline for Management of SUD)	None	Reviewed, Deleted	--
C	M8	118	Providers should consider dispensing intranasal naloxone for patients with history of opioid overdose and those who are at high risk. When dispensed, patient and family or other caregiver should be educated on the use of the intranasal naloxone to treat the overdose while waiting for the emergency team to arrive.	None	Reviewed, Deleted	--
C	N	119	ECT is recommended as a treatment option for severe episodes of major depression that are accompanied by suicidal thoughts or behaviors indicating imminent risk for suicide, considering patient preferences.	None	Reviewed, Deleted	--
C	N	119	Under certain clinical circumstances and, considering patient preference, ECT may also be considered to treat suicidal patients with schizophrenia, schizoaffective disorder, or mixed or manic episodes of bipolar disorder.	None	Reviewed, Deleted	--

2013 Location[1]			2013 Recommendation Text[2]	2013 Grade[3]	Recommendation Category[4]	2019 Recommendation[5]
Section	Number	Page				
C	N	119	The decision of whether to initiate ECT treatment should follow evidence-based recommendation for the specific disorder, and be based on documented assessment of the risks and potential benefits to the individual, including: the risks associated with the anesthetic; current co-morbidities; anticipated adverse events; and the risks of not having treatment.	None	Reviewed, Deleted	--
C	N	119	Since there is no evidence of a long-term reduction of suicide risk with ECT, continuation or maintenance treatment with pharmacotherapy or with ECT is recommended after an acute ECT course.	None	Reviewed, Deleted	--
C	N	119	ECT should be performed by experts in centers that are properly equipped and experienced in the treatment.	None	Reviewed, Deleted	--
C	N	119	In general, the following conditions increase the indications to use ECT: a. A history of prior good response to ECT b. Need for rapid, definitive treatment response c. Risks of other treatments outweigh the risks of ECT d. History of poor response to medication treatment e. Intolerable side effects to medication treatments f. Patient preference.	None	Reviewed, Deleted	--
C	N	119	The risk-versus-benefits ratio must be considered in patients with relative contraindications such as [B]: a. Space occupying lesions b. Elevated intracranial pressure c. Cardiovascular problems to include recent myocardial infarction, severe cardiac ischemic disease, or profound hypertensive illness. d. Degenerative skeletal disease e. Monoamine Oxidase Inhibitors should be discontinued two weeks prior to ECT to prevent possible hypertensive crisis f. Lithium: patients may develop neurotoxic syndrome with confusion, disorientation, and unresponsiveness g. Retinal detachment h. Pheochromocytoma i. High Anesthesia Risk: American Society of Anesthesiologists level 4 or 5	B	Reviewed, Deleted	--

2013 Location[1]			2013 Recommendation Text[2]	2013 Grade[3]	Recommendation Category[4]	2019 Recommendation[5]
Section	Number	Page				
D	O	125	Establish timely and ongoing follow-up care for those who attempt suicide and others at high acute risk in the immediate period after discharge from acute care settings and identify the responsible provider during this period.	None	Reviewed, Deleted	--
D	O	125	Patient should be re-evaluated following an inpatient or Emergency Department discharge, as soon as possible, but not later than 7 days.	None	Reviewed, Deleted	--
D	O	125	High acute risk patient should be actively managed to assure adherence and coordinated care.	None	Reviewed, Deleted	--
D	O	125	Patients at high acute risk should be followed closely (e.g., weekly for the first month) after they are identified or after inpatient or ED discharge.	None	Reviewed, Deleted	--
D	O	125	Consider contacting the patient before initial follow-up appointment to monitor transition to the outpatient care plan and to reinforce adherence to the discharge plan.	None	Reviewed, Deleted	--
D	O	125	The frequency of outpatient follow-up should be determined on a case-by-case basis. It should be greatest after attempts and related behaviors, after change in treatment, or after transitions to a less restrictive setting of care. Once the patient stabilizes and is engaged in care the frequency of follow-up can be decreased based on: a. The current level of risk b. The requirement of the treatment modality c. The patient's preference	None	Reviewed, Deleted	--
D	O	125	Patients who survived a suicide attempt or identified as high acute risk for suicide should be monitored for at least one year. Patients identified as intermediate acute risk for suicide (who have never engaged in suicidal behaviors) should be followed for at least six months after suicidal ideation has resolved. Patients who have been identified as low acute risk may be followed by their primary care provider and periodically re-assessed for suicide risk.	None	Reviewed, Deleted	--

2013 Location[1]			2013 Recommendation Text[2]	2013 Grade[3]	Recommendation Category[4]	2019 Recommendation[5]
Section	Number	Page				
D	P	127	Follow-up appointments should include: a. Reassessment of: interim events, changes in suicide risk; symptoms of mental disorder; and medical conditions b. Provision of specific treatment targeting suicidality c. Continuation of treatment of co-occurring underlying conditions d. Monitoring the symptoms of co-occurring conditions e. Assessment of adherence and adverse effects f. Modification of treatment, as indicated g. Support, reinforcement, and update of the safety plan h. Addressing patient/family concerns i. Determination of the frequency of future follow-up	None	Reviewed, Deleted	--
D	Q	128	A follow-up care plan should be developed with input from the patient and, where appropriate, available support system (e.g., family, unit, friends), to address the treatment of conditions that may have contributed to the risk of suicide.	None	Reviewed, Deleted	--
D	Q	128	Follow-up care should be coordinated by an interdisciplinary team and communicated with the patient through a single identified point of contact.	None	Reviewed, Deleted	--
D	Q	128	Barriers to adherence to the care plan after discharge may be addressed by follow-up programs that include the use of: a. Telecommunications (phone, web based, v-tel) [I] b. Mailing multiple “caring letters” [I] c. Community workers reaching out to those at high acute risk d. Methods to enhance and facilitate access to care ("Green cards") [I] e. Home visits to support engagement [I] f. A facility-based registry of all high acute risk patients [I]	I	Reviewed, New-replaced	Recommendations 13, 14
D	Q	128	Patients who continue to be at risk for suicide and do not arrive to their follow-up appointment require a reassessment of risk, since not showing may demonstrate a risk behavior. The assessment should include: locating the patient and establishing contact, reassessment of level of risk, reinforcement of the safety plan, and directing the patient to the appropriate level of care.	None	Reviewed, Deleted	--

2013 Location[1]			2013 Recommendation Text[2]	2013 Grade[3]	Recommendation Category[4]	2019 Recommendation[5]
Section	Number	Page				
D	Q	128	If patient contact cannot be established, available data should be used to reassess the level of risk and corresponding effort should be made to locate the patient though direct contacts (e.g., next of kin), other points of available contacts (friends, peers, command), or, in cases of high acute risk, local emergency response (mobile crisis team, law enforcement).	None	Reviewed, Deleted	--
D	Q	128	Consider the use of caring letters for suicide attempters who refuse treatment. [I]	I	Reviewed, New-replaced	Recommendation 13
D	Q	128	Home visit may be considered to support re-engagement of patients at high acute risk who discontinue outpatient care. [C]	C	Reviewed, Amended	Recommendation 14
D	R1	136	When patients are identified in primary care with intermediate or high acute risk for suicide they should be evaluated by behavioral health providers. Warm handoffs are helpful in ensuring that patients receive the evaluations they require without interruption.	None	Not reviewed, Deleted	--
D	R1	136	All providers involved in the patient's care must actively attempt to connect with others in the suicidal patients' chain of healthcare (e.g., primary care) and with the patient's consent, helping services network (e.g., chaplains) to ensure timely communication, coordination of care, and aftercare.	None	Not reviewed, Deleted	--
D	R1	136	As patients are recovering from crisis and reduce their risk for suicide they may also be transitioning to less restrictive care settings, as to routine care by primary clinicians. It is the responsibility of the healthcare team to update the patient's written Safety Plan over time.	None	Reviewed, Deleted	--
D	R2	137	Adequate clinical documentation of the care provided to suicidal patients is required for optimizing continuity of care. Providers must consider ethical, clinical, and legal issues when documenting their assessment, management and treatment of suicidal patients.	None	Not reviewed, Deleted	--
D	S	137	Patients with a history of suicide attempt or behavior should continue to be evaluated for risk of relapse on a regular base.	None	Reviewed, Deleted	--

Appendix G: Participant List

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Appendix H: Literature Review Search Terms and Strategy

A. Embase.com syntax

Question	Set #	Concept	Strategy
Question 1 – Suicide risk screening programs	#1	Problem (suicide)	'suicidal behavior'/exp/mj OR sdv:ti,ab OR 'self-directed violence':ti OR 'self-directed violent':ti OR 'self-harm':ti OR 'self-inflicted':ti OR 'self injur*':ti OR suicid*:ti
	#2	Screening	'screening'/exp/mj OR assessment*:ti OR 'clinical interview*':ti OR 'clinical assessment interview*':ti OR instrument*:ti OR measur*:ti OR 'predictive analytic*':ti OR questionnaire*:ti OR scale*:ti OR screen*:ti OR 'structured assessment':ti OR tool*:ti OR 'unstructured assessment':ti
	#5	Combine sets	#1 AND #2
Question 2 – Suicide risk screening instruments	#1	Problem (Suicide)	'suicidal behavior'/exp/mj OR sdv:ti,ab OR 'self-directed violence':ti OR 'self-directed violent':ti OR 'self-harm':ti OR 'self-inflicted':ti OR 'self injur*':ti OR suicid*:ti
	#2	Screening instruments	'4P screener' OR 'Beck Scale' OR 'columbia suicide severity rating scale'/exp OR 'columbia suicide severity rating scale' OR 'c ssrs' OR 'ec ssrs' OR 'item 9' OR 'phq-9' OR 'concise health risk tracking self-report' OR 'chrt-sr' OR 'Nurses' Global Assessment of Suicide Risk' OR 'rocky mountain mirecc' OR 'SAMHSA/SPRC safety card' OR 'Sheehan Suicide Tracking Scale' OR 'suicide assessment five-step evaluation and triage' OR 'safe-t' OR 'Suicide Intent Scale' OR 'Harkavy Asnis Suicide Survey'
	#3	Combine sets	#1 AND #2
Question 3 – Risk stratification	#1	Problem (Suicide)	'suicidal behavior'/exp/mj OR sdv:ti,ab OR 'self-directed violence':ti OR 'self-directed violent':ti OR 'self-harm':ti OR 'self-inflicted':ti OR 'self injur*':ti OR suicid*:ti
	#2	Risk	'risk'/exp/mj OR 'risk stratification'/exp/mj OR risk*:ti OR stratif*:ti
	#3	Combine sets	#1 AND #2
Question 4 – Non-pharmacological/ behaviorally based interventions	#1	Problem (Suicide)	'suicidal behavior'/exp/mj OR sdv:ti,ab OR 'self-directed violence':ti OR 'self-directed violent':ti OR 'self-harm':ti OR 'self-inflicted':ti OR 'self injur*':ti OR suicid*:ti
	#2	Non-pharmacological/ behaviorally based interventions	'behavior therapy'/exp OR 'cognitive therapy'/exp OR 'narrative therapy'/mj OR 'virtual reality exposure therapy'/mj OR 'accelerated resolution therapy':ab,ti OR art:ab,ti OR 'behavior therapy':ti,ab OR 'behaviour therap':ti,ab OR 'behavioral therapy':ti,ab OR 'behavioural therapy':ti,ab OR 'bep tg':ab,ti OR cbct:ab,ti OR cbt:ab,ti OR 'cognitive behavioral conjoint therapy':ab,ti OR 'cognitive behavioral therapy':ab,ti OR 'cognitive behavioural therapy':ab,ti OR 'cognitive processing therapy':ab,ti OR 'cognitive therapy':ab,ti OR eclectic:ab,ti OR ehlers:ab,ti OR emdr:ab,ti OR 'emotional freedom':ab,ti OR 'exposure therapy':ab,ti OR 'eye movement desensitization':ab,ti OR 'imagery rehearsal therapy':ab,ti OR 'implosive therapy':ab,ti OR mindfulness:ab,ti OR 'narrative therapy':ab,ti OR 'prolonged exposure therapy':ab,ti OR 'thought field therapy':ab,ti OR 'trauma focused':ab,ti OR 'virtual reality':ab,ti OR 'written exposure therapy':ab,ti

Question	Set #	Concept	Strategy
Question 4 – Non-pharmacological/ behaviorally based interventions (continued)	#3	Non-pharmacological/ behaviorally based interventions	'acceptance and commitment therapy'/exp OR 'family therapy'/exp OR 'marital therapy'/exp OR 'mindfulness'/exp OR 'psychodynamic psychotherapy'/exp OR 'psychotherapy'/exp OR 'acceptance and commitment therapy':ti,ab OR act:ti,ab OR 'behavioral activation':ti,ab OR 'behavioural activation':ti,ab OR 'couples counseling':ti,ab OR 'couples therapy':ti,ab OR 'emotion focused couples therapy':ti,ab OR 'family therapy':ti,ab OR 'interpersonal therapy':ti,ab OR ipt:ti,ab OR 'marital therapy':ti,ab OR 'marriage therapy':ti,ab OR mindfulness:ti,ab OR 'neurolinguistic programming':ti,ab OR pct:ti,ab OR 'present centered therapy':ti,ab OR 'problem solving therapy':ti,ab OR psychoanalysis:ti,ab OR psychodynamic*:ti,ab OR psychotherap*:ti,ab OR relaxation:ti,ab OR 'seeking safety':ti,ab OR sit:ti,ab OR 'socioenvironmental therapy':ti,ab OR 'stress inoculation therapy':ti,ab OR 'supportive counseling':ti,ab OR “home visit*”:ti,ab OR “environmental change*”:ti,ab OR “coping skills”:ti,ab OR “caring contacts”:ti,ab OR “care environment change*”:ti,ab OR
	#4	CAM interventions	'acupuncture'/exp OR 'alternative medicine'/exp OR 'animal assisted therapy'/exp OR 'art therapy'/de OR 'dance therapy'/de OR 'diet supplementation'/de OR 'exercise'/exp OR 'herbal medicine'/de OR 'homeopathic agent'/de OR 'integrative medicine'/de OR 'meditation'/de OR 'mindfulness'/de OR 'music therapy'/de OR 'phytotherapy'/de OR 'psychodrama'/de OR 'recreational therapy'/de OR 'tai chi'/de OR 'transcendental meditation'/de OR 'yoga'/de
	#5	CAM interventions	Acupuncture:ti,ab OR ((“animal assisted” OR art OR “creative art” OR “creative arts” OR dance OR drama OR movement OR music OR recreational) NEAR/2 therap*):ti,ab OR ((alternative OR complementary OR integrative) NEAR/2 medicine):ti,ab OR (dietary NEAR/2 supplement*):ti,ab OR exercise:ti,ab OR fishing:ti,ab OR herbs:ti,ab OR herbal:ti,ab OR Homeopath*:ti,ab OR mantram:ti,ab OR meditation:ti,ab OR meditate*:ti,ab OR mindbody:ti,ab OR “mind body”:ti,ab OR mindfulness:ti,ab OR phytotherapy:ti,ab OR “progressive muscle relaxation”:ti,ab OR Psychodrama:ti,ab OR relaxation:ti,ab OR “Tai Chi”:ti,ab OR “Tai Ji”:ti,ab OR Yoga:ti,ab
	#6	Safety planning	((safety OR crisis) NEAR/2 plan*):ti,ab
	#7	Lethal means restriction	('lethal means':ti,ab OR gun*:ti,ab OR firearm*:ti,ab) AND restrict*:ti,ab
	#8	Combine interventions	#2 OR #3 OR #4 OR #5 OR #6 OR #7
	#9	Combine sets	#1 AND #8
	#10	Meta-analyses and systematic reviews	See hedge at end of table
	#11	RCTs	See hedge at end of table
	#12	Combine sets	#10 OR #11

Question	Set #	Concept	Strategy
Question 5 – Pharmacological interventions	#1	Problem (Suicide)	'suicidal behavior'/exp/mj OR sdv:ti,ab OR 'self-directed violence':ti OR 'self-directed violent':ti OR 'self-harm':ti OR 'self-inflicted':ti OR 'self injur*':ti OR suicid*:ti
	#2	Pharmacotherapy general	'drug therapy'/exp OR ((drug* OR pharma*) NEAR/2 (therap* OR treatment*)) OR pharmacological OR 'pharmaco-therapy' OR 'pharmaco-therapies' OR pharmacotherapy*
	#3	Pharmacotherapy antipsychotics	'neuroleptic agent'/exp OR 'anti psychotic' OR 'anti psychotics' OR antipsychotic* OR chlorpromazine OR fluphenazine OR haloperidol OR loxapine OR neuroleptic OR perphenazine OR pimozide OR thioridazine OR thiothixene OR trifluoperazine
	#4	Pharmacotherapy atypical antipsychotics	'atypical antipsychotic agent'/mj OR aripiprazole OR asenapine OR brexpiprazole OR clozapine OR iloperidone OR lurasidone OR olanzapine OR paliperidone OR quetiapine OR risperidone OR ziprasidone
	#5	Pharmacotherapy mood stablizers	'anticonvulsive agent'/mj OR anticonvuls* OR carbamazepine OR divalproex OR gabapentin OR lamotrigine OR lithium OR 'mood stabilizer*' OR oxcarbazepine OR pregabalin OR tiagabine OR topiramate OR valproate OR 'valproic acid'
	#6	Sedatives	'hypnotic sedative agent'/mj OR 'sedative agent'/mj OR 'anti anxiety' OR antianxiety OR buspirone OR clonidine OR diphenhydramine OR eszopiclone OR guanfacine OR hydroxyzine OR hypnotic* OR ramelteon OR sedative* OR suvorexant OR tasimelteon OR zaleplon OR zolpidem OR zopiclone
	#7	Pharmacotherapy antidepressants	'antidepressant agent'/exp/mj OR 'serotonin noradrenalin reuptake inhibitor'/exp/mj OR 'serotonin uptake inhibitor'/exp/mj OR 'tricyclic antidepressant agent'/exp/mj OR 'triple reuptake inhibitor'/exp/mj OR amitriptyline OR amoxapine OR buproprion OR 'anti-depressant' OR 'anti-depressants' OR antidepressant* OR citalopram OR clomipramine OR desipramine OR desvenlafaxine OR doxepin OR duloxetine OR escitalopram OR fluoxetine OR fluvoxamine OR hydroxyzine OR imipramine OR levomilnacipran OR maprotiline OR milnacipran OR mirtazapine OR nefazodone OR nortriptyline OR paroxetine OR protriptyline OR 'selective serotonin reuptake inhibitor' OR 'selective serotonin reuptake inhibitors' OR 'serotonin noradrenaline reuptake inhibitor' OR 'serotonin noradrenaline reuptake inhibitors' OR 'serotonin norepinephrine reuptake inhibitor' OR 'serotonin norepinephrine reuptake inhibitors' OR sertraline OR snri* OR ssri* OR trazodone OR trimipramine OR venlafaxine OR vilazodone OR vortioxetine OR (tricyclic NEAR/2 antidepressant*)
	#8	Pharmacotherapy	ketamine OR naloxone OR 'medication assisted treatment' OR MAT
	#9	Combine interventions	#2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8
	#10	Combine sets	#1 AND #9
	#11	Meta-analyses and systematic reviews	See hedge at end of table
	#12	RCTs	See hedge at end of table
	#13	Combine sets	#11 OR #12

Question	Set #	Concept	Strategy
Question 6 – What are the most effective treatment approaches? (Who, Where and When)	#1	Problem (Suicide)	'suicidal behavior'/exp/mj OR sdv:ti,ab OR 'self-directed violence':ti OR 'self-directed violent':ti OR 'self-harm':ti OR 'self-inflicted':ti OR 'self injur*':ti OR suicid*:ti
	#2	Treatment approaches	'hospitalization'/exp OR 'stepped care'/exp OR "care provider*" OR "care setting*" OR "delayed treatment" OR hospitalization OR "immediate treatment" OR "intensive outpatient" OR (step* NEAR/2 care)
	#3	Combine sets	#1 AND #2
	#4	Meta-analyses and systematic reviews	See hedge at end of table
	#5	RCTs	See hedge at end of table
	#6	Combine sets	#4 OR #5
Question 7 – Post acute care	#1	Problem (Suicide)	'suicidal behavior'/exp/mj OR sdv:ti,ab OR 'self-directed violence':ti OR 'self-directed violent':ti OR 'self-harm':ti OR 'self-inflicted':ti OR 'self injur*':ti OR suicid*:ti
	#2	Post acute care	'aftercare'/exp OR 'follow up'/exp OR 'subacute care'/exp OR aftercare OR "Follow-up" OR "post-acute care" OR "post-discharge care"
	#3	Combine sets	#1 AND #2
	#4	Meta-analyses and systematic reviews	See hedge at end of table
	#5	RCTs	See hedge at end of table
	#6	Combine sets	#4 OR #5
Question 8 – Factors that can increase risk or reduce or protect against suicidal behavior	#1	Problem (Suicide)	'suicidal behavior'/exp/mj OR sdv:ti,ab OR 'self-directed violence':ti OR 'self-directed violent':ti OR 'self-harm':ti OR 'self-inflicted':ti OR 'self injur*':ti OR suicid*:ti
	#2	Risk reduction / increase	'risk reduction'/exp/mj OR 'protection'/exp/mj OR "protective factor*" OR "protect against" OR (increase* NEAR/1 risk*) OR (reduc* NEAR/1 risk*)
	#3	Combine sets	#1 AND #2
Questions 9 & 10 – Community-based interventions	#1	Problem (Suicide)	'suicidal behavior'/exp/mj OR sdv:ti,ab OR 'self-directed violence':ti OR 'self-directed violent':ti OR 'self-harm':ti OR 'self-inflicted':ti OR 'self injur*':ti OR suicid*:ti
	#2	Community based interventions	'community intervention'/exp OR 'health literacy'/exp OR "community resources" OR "community support" OR "health literacy" OR 'patient education'/exp OR "family education" OR "patient education" OR "provider education" OR 'public health campaign'/exp OR (community NEAR/2 intervention*) OR (stigma NEAR/2 reduc*)
	#3	Community based interventions	'clergy'/exp OR 'social support'/exp OR clergy OR chaplain* OR 'family support'/exp OR (peer* NEAR/2 (program* OR support)) OR "Confidential care" OR "Vet centers" OR "Be there" OR "social support"
	#4	Combine sets	#2 OR #3
	#5	Combine sets	#1 AND #4
	#6	Meta-analyses and systematic reviews	See hedge at end of table
	#7	RCTs	See hedge at end of table
	#8	Combine sets	#6 OR #7

Question	Set #	Concept	Strategy
Questions 11 & 12 – Telehealth modalities/Technology	#1	Problem (Suicide)	'suicidal behavior'/exp/mj OR sdv:ti,ab OR 'self-directed violence':ti OR 'self-directed violent':ti OR 'self-harm':ti OR 'self-inflicted':ti OR 'self injur*':ti OR suicid*:ti
	#2	Telehealth	'telehealth'/exp OR mobile OR phone OR remote OR telemedicine OR telenursing OR telehealth* OR telephone OR virtual
	#3	Technology	'mobile application'/exp OR apps OR "crisis line*" OR "text line*" OR "caring contact" OR "Technology supported management" OR "technology based intervention*" OR "web-based"
	#4	Combine sets	#2 OR #3
	#5	Combine sets	#1 AND #4
	#6	Meta-analyses and systematic reviews	See hedge at end of table
	#7	RCTs	See hedge at end of table
	#8	Combine sets	#6 OR #7
General Hedges Applied to Each Search		Limit to English language publications	AND [English]/lim
		Remove undesired age ranges	NOT child*:ti
		Remove undesired publication types (e.g., conferences, editorials)	NOT (abstract:nc OR annual:nc OR 'book'/exp OR 'case study'/exp OR conference:nc OR 'conference abstract':it OR 'conference paper'/exp OR 'conference paper':it OR 'conference proceeding':pt OR 'conference review':it OR congress:nc OR 'editorial'/exp OR editorial:it OR 'erratum'/exp OR letter:it OR 'note'/exp OR note:it OR meeting:nc OR sessions:nc OR 'short survey'/exp OR symposium:nc OR [conference abstract]/lim OR [conference paper]/lim OR [conference review]/lim OR [editorial]/lim OR [letter]/lim OR [note]/lim OR [short survey]/lim OR comment:ti OR book:pt OR 'case report'/de OR 'case report':ti OR 'a case':ti OR 'a patient':ti OR 'year old':ti,ab)
		Limit by publication date within range	AND [18-11-2011]/sd NOT [11-4-2018]/sd
Study Type Hedges Applied as Needed		Limit to meta-analyses and systematic reviews	AND ([cochrane review]/lim OR [systematic review]/lim OR [meta analysis]/lim OR 'meta analysis'/de OR 'meta analysis (topic)'/de OR 'systematic review'/de OR 'systematic review (topic)'/de OR ((systematic* NEAR/2 review*):ab,ti) OR metaanaly*:ab,ti OR 'meta analysis':ab,ti OR 'meta analyses':ab,ti OR search*:ab)
		Limit to randomized controlled trials	AND ('random sample'/de OR 'randomized controlled trial'/de OR 'randomized controlled trial (topic)'/de OR randomization/de OR random*:ti,ab)

B. PsycINFO syntax

Questions	Set #	Concept	Strategy
Question 1 – Suicide risk screening programs	#1	Problem (suicide)	*SUICIDE/ or sdv.ti,ab. or "self-directed violence".ti. or "self-directed violent".ti. or "self-inflicted".ti. or suicid*.ti.
	#2	Screening	*screening/ or *screening tests/ or assessment*.ti. or "clinical interview".ti. or "clinical assessment interview".ti. or instrument*.ti. or measur*.ti. or "predictive analytics".ti. or questionnaire*.ti. or scale*.ti. or screen*.ti. or "structured assessment".ti. or tool*.ti. or "unsctructured assessment".ti.
	#5	Combine sets	1 and 2
Question 2 – Suicide risk screening instruments	#1	Problem (Suicide)	*SUICIDE/ or sdv.ti,ab. or "self-directed violence".ti. or "self-directed violent".ti. or "self-inflicted".ti. or suicid*.ti.
	#2	Screening instruments	("4P screener" or "Beck Scale" or "columbia suicide severity rating scale" or "c ssrs" or "ec ssrs" or "item 9" or "phq-9" or "concise health risk tracking self-report" or "chrt-sr" or "Nurses Global Assessment of Suicide Risk" or "rocky mountain mirecc" or "SAMHSA/SPRC safety card" or "Sheehan Suicide Tracking Scale" or "suicide assessment five-step evaluation and triage" or "safe-t" or "Suicide Intent Scale" or "Harkavy Asnis Suicide Survey").ti,ab.
	#3	Combine sets	1 and 2
Question 3 – Risk stratification	#1	Problem (Suicide)	*SUICIDE/ or sdv.ti,ab. or "self-directed violence".ti. or "self-directed violent".ti. or "self-inflicted".ti. or suicid*.ti.
	#2	Risk	*risk assessment/ OR *risk factors/ OR risk*:ti OR stratif*:ti
	#3	Combine sets	1 and 2
Question 4 – Non-pharmacological/behaviorally based interventions	#1	Problem (Suicide)	*SUICIDE/ or sdv.ti,ab. or "self-directed violence".ti. or "self-directed violent".ti. or "self-inflicted".ti. or suicid*.ti.
	#2	Non-pharmacological/ behaviorally based interventions	exp Cognitive Therapy/ OR Eye Movement Desensitization Reprocessing/ OR Virtual Reality Exposure Therapy/ OR exp Behavior Therapy/ OR exp Cognitive Behavior Therapy/ OR Cognitive Therapy/ OR Eclectic Psychotherapy/ OR exp Exposure Therapy/ OR Eye Movement Desensitization Therapy/ OR Virtual Reality/ OR (Accelerated Resolution Therapy OR ART OR (Behavior* ADJ2 therap*) OR (behaviour* ADJ2 therap*) OR BEP-TG OR Brief eclectic psychotherapy OR CBCT OR CBT OR cognitive behavioral conjoint therapy OR cognitive behavioral therapy OR Cognitive Processing Therapy OR (cognitive ADJ2 therap*) OR Ehlers OR EMDR OR emotional freedom OR exposure therapy OR Eye Movement Desensitization OR imagery rehearsal OR Mindfulness OR Narrative Therapy OR Prolonged Exposure Therapy OR thought field therapy OR trauma focused OR virtual reality exposure OR Written Exposure Therapy).ti,ab.

Questions	Set #	Concept	Strategy
Question 4 – Non-pharmacological/behaviorally based interventions (continued)	#3	Non-pharmacological/ behaviorally based interventions	Acceptance and Commitment Therapy/ OR Family Therapy/ OR exp Mind-Body Therapies/ OR mindfulness/ OR Neurolinguistic Programming/ OR exp psychotherapy/ OR Psychotherapy, Psychodynamic/ OR px.fs OR Relaxation Therapy/ OR exp Socioenvironmental Therapy/ OR th.fs OR Acceptance and Commitment Therapy/ OR Brief Psychotherapy/ OR exp Cognitive Behavior Therapy/ OR Cognitive Therapy/ OR Conjoint Therapy/ OR Couples Therapy/ OR Emotion Focused Therapy/ OR exp Family Therapy/ OR Interpersonal Psychotherapy/ OR exp Marriage Counseling/ OR Meditation/ OR mindfulness/ OR Neurolinguistic Programming/ OR exp Psychoanalysis/ OR Psychodynamic Psychotherapy/ OR Psychotherapy/ OR Relaxation/ OR exp Relaxation Therapy/ OR (acceptance and commitment therapy OR behavioral activation OR couples therapy OR emotion focused couples therapy OR family therapy OR interpersonal therapy OR IPT OR marital therapy OR marriage therapy OR meditation OR mindfulness OR Neurolinguistic programming OR PCT OR Present Centered Therapy OR Problem Solving Therapy OR Psychoanalysis OR psychodynamic* OR psychotherap* OR relaxation OR Seeking Safety OR SIT OR Socioenvironmental Therapy OR Stress Inoculation Therapy OR supportive counseling).ti,ab. OR (“home visit*” OR “environmental change” OR “coping skills” OR “caring contacts”).ti,ab.
	#4	CAM interventions	Acupuncture/ OR Acupuncture Therapy/ OR Animal Assisted Therapy/ OR Art Therapy/ OR Dance Therapy/ OR Dietary Supplements/ OR exp Exercise/ OR Herbal Medicine/ OR Homeopathy/ OR Integrative Medicine/ OR Meditation/ OR exp Mind-Body Therapies/ OR Music Therapy/ OR Plants, Medicinal/ OR Psychodrama/ OR Recreation Therapy/ OR Relaxation/ OR Relaxation Therapy/ OR Tai Ji/ OR yoga/ OR Acupuncture/ OR exp Alternative Medicine/ OR Art Therapy/ OR Animal Assisted Therapy/ OR exp Creative Arts Therapy/ OR Dietary Supplements/ OR exp Exercise/ OR Holistic Health/ OR Martial Arts/ OR exp "medicinal herbs and plants"/ OR Mind Body Therapy/ OR Mindfulness/ OR Meditation/ OR Movement Therapy/ OR Music Therapy/ OR Progressive Relaxation Therapy/ OR Psychodrama/ OR Recreation Therapy/ OR Relaxation/ OR Relaxation Therapy/ OR Yoga/
	#5	CAM interventions	Acupuncture.ti,ab. OR ((“animal assisted” OR art OR “creative art” OR “creative arts” OR dance OR drama OR movement OR music OR recreational) ADJ2 therap*).ti,ab. OR ((alternative OR complementary OR integrative) ADJ2 medicine).ti,ab. OR (dietary ADJ2 supplement*).ti,ab. OR exercise.ti,ab. OR fishing.ti,ab. OR herbs.ti,ab. OR herbal.ti,ab. OR Homeopath*.ti,ab. OR mantram.ti,ab. OR meditation.ti,ab. OR meditate*.ti,ab. OR mind-body.ti,ab. OR mindfulness.ti,ab. OR phytotherapy.ti,ab. OR “progressive muscle relaxation”.ti,ab. OR Psychodrama.ti,ab. OR relaxation.ti,ab. OR “Tai Chi”.ti,ab. OR “Tai Ji”.ti,ab. OR Yoga.ti,ab.
	#6	Safety planning	((safety OR crisis) ADJ2 plan*).ti,ab.
	#7	Lethal means restriction	((“lethal means” OR gun* OR firearm*) AND restrict*).ti,ab.
	#8	Combine interventions	2 OR 3 OR 4 OR 5 OR 6 OR 7
	#9	Combine sets	1 AND 8
	#10	Meta-analyses and systematic reviews	See hedge at end of table
	#11	RCTs	See hedge at end of table
	#12	Combine sets	10 OR 11

Questions	Set #	Concept	Strategy
Question 5 – Pharmacologic interventions	#1	Problem (Suicide)	*SUICIDE/ or sdv.ti,ab. or "self-directed violence".ti. or "self-directed violent".ti. or "self-inflicted".ti. or suicid*.ti.
	#2	Pharmacotherapy general	dt.fs or exp Drug Therapy/ OR (drug* ADJ2 (therap* OR treatment*)).ti,ab. or pharmacological.ti,ab. or pharmaco-therap*.ti,ab. or pharmacotherap*.ti,ab.
	#3	Pharmacotherapy antipsychotics	Antipsychotic Agents/ OR chlorpromazine/ OR fluphenazine/ OR haloperidol/ OR loxapine/ OR perphenazine/ OR pimozide/ OR thioridazine/ OR thiothixene/ OR trifluoperazine/ OR exp Neuroleptic Drugs/ OR (anti-psychotic* OR antipsychotic* OR chlorpromazine OR fluphenazine OR haloperidol OR loxapine OR neuroleptic OR perphenazine OR pimozide OR thioridazine OR thiothixene OR trifluoperazine).ti,ab.
	#4	Pharmacotherapy atypical antipsychotics	Antipsychotic Agents/ OR aripiprazole/ OR clozapine/ OR lurasidone hydrochloride/ OR paliperidone palmitate/ OR quetiapine fumarate/ OR risperidone/ OR aripiprazole/ OR exp Neuroleptic Drugs/ OR (aripiprazole OR asenapine OR brexpiprazole OR clozapine OR iloperidone OR lurasidone OR olanzapine OR paliperidone OR quetiapine OR risperidone OR ziprasidone).ti,ab.
	#5	Pharmacotherapy mood stablizers	carbamazepine/ OR clonidine/ OR lithium/ OR pregabalin/ OR valproic acid/ OR anticonvulsive drugs/ OR Carbamazepine/ OR exp Lithium/ OR Mood Stabilizers/ OR Valproic Acid/ OR (anticonvuls* OR carbamazepine OR divalproex OR gabapentin OR lamotrigine OR lithium OR (mood ADJ2 stabiliz*) OR oxcarbazepine OR pregabalin OR tiagabine OR topiramate OR valproate OR valproic acid).ti,ab.
	#6	Sedatives	anti-anxiety agents/ OR buspirone/ OR diphenhydramine/ OR eszopiclone/ OR guanfacine/ OR Hypnotics and Sedatives/ OR exp sedatives/ OR (buspirone OR clonidine OR diphenhydramine OR eszopiclone OR guanfacine OR hydroxyzine OR hypnotic* OR ramelteon OR sedative* OR suvorexant OR tasimelteon OR zaleplon OR zolpidem OR zopiclone).ti,ab.
	#7	Pharmacotherapy antidepressants	amitriptyline/ OR amoxapine/ OR exp Antidepressive Agents/ OR Antidepressive Agents, Tricyclic/ OR citalopram/ OR clomipramine/ OR desipramine/ OR Desvenlafaxine Succinate/ OR doxepin/ OR Duloxetine Hydrochloride/ OR fluoxetine/ OR fluvoxamine/ OR imipramine/ OR maprotiline/ OR nortriptyline/ OR paroxetine/ OR protriptyline/ OR Serotonin and Noradrenaline Reuptake Inhibitors/ OR exp serotonin uptake inhibitors/ OR sertraline/ OR trazodone/ OR trimipramine/ OR Venlafaxine Hydrochloride/ OR Vilazodone Hydrochloride/ OR exp Antidepressant Drugs/ OR exp Serotonin Norepinephrine Reuptake Inhibitors/ OR exp Serotonin Reuptake Inhibitors/ OR exp Tricyclic Antidepressant Drugs/ OR (amitriptyline OR amoxapine OR buproprion OR anti-depressant* OR antidepressant* OR citalopram OR clomipramine OR desipramine OR desvenlafaxine OR doxepin OR duloxetine OR escitalopram OR fluoxetine OR fluvoxamine OR hydroxyzine OR imipramine OR levomilnacipran OR maprotiline OR milnacipran OR mirtazapine OR nefazodone OR nortriptyline OR paroxetine OR protriptyline OR selective serotonin reuptake inhibitor* OR serotonin noradrenaline reuptake inhibitor* OR Serotonin norepinephrine reuptake inhibitor* OR sertraline OR SNRI* OR SSRI* OR trazodone OR tricyclic antidepressant* OR trimipramine OR venlafaxine OR vilazodone OR vortioxetine).ti,ab.
	#8	Pharmacotherapy	(ketamine OR naloxone OR 'medication assisted treatment' OR MAT).ti,ab.
	#9	Combine interventions	2 OR 3 OR 4 OR 5 OR 6 OR 7 OR 8

Questions	Set #	Concept	Strategy
Question 5 – Pharmacologic interventions (continued)	#1	Combine sets	1 AND 9
	#11	Meta-analyses and systematic reviews	See hedge at end of table
	#12	RCTs	See hedge at end of table
	#13	Combine sets	11 OR 12
Question 6 – What are the most effective treatment approaches? (Who, Where and When)	#1	Problem (Suicide)	*SUICIDE/ or sdv.ti,ab. or "self-directed violence".ti. or "self-directed violent".ti. or "self-inflicted".ti. or suicid*.ti.
	#2	Treatment approaches	exp Hospitalization/ or "care provider".mp. or "care providers".mp. or "care setting".mp. or "care settings".mp. or "delayed treatment".mp. or hospitalization.mp. or "immediate treatment".mp. or "intensive outpatient".mp. or (step* adj2 care).mp.
	#3	Combine sets	1 AND 2
	#4	Meta-analyses and systematic reviews	See hedge at end of table
	#5	RCTs	See hedge at end of table
	#6	Combine sets	4 OR 5
Question 7 – Post acute care	#1	Problem (Suicide)	*SUICIDE/ or sdv.ti,ab. or "self-directed violence".ti. or "self-directed violent".ti. or "self-inflicted".ti. or suicid*.ti.
	#2	Post acute care	aftercare/ or Discharge Planning/ or Posttreatment Followup/ or aftercare.mp. or "Follow-up".mp. or "post-acute care".mp. or "post-discharge care".mp.
	#3	Combine sets	1 AND 2
	#4	Meta-analyses and systematic reviews	See hedge at end of table
	#5	RCTs	See hedge at end of table
	#6	Combine sets	4 OR 5
Question 8 – Factors that can increase risk or reduce or protect against suicidal behavior	#1	Problem (Suicide)	*SUICIDE/ or sdv.ti,ab. or "self-directed violence".ti. or "self-directed violent".ti. or "self-inflicted".ti. or suicid*.ti.
	#2	Risk reduction / increase	“protective factor” OR “protective factors” OR “protect against” OR (increase* ADJ1 risk*) OR (reduc* ADJ1 risk*)
	#3	Combine sets	1 AND 2
Questions 9 & 10 – Community based interventions	#1	Problem (Suicide)	*SUICIDE/ or sdv.ti,ab. or "self-directed violence".ti. or "self-directed violent".ti. or "self-inflicted".ti. or suicid*.ti.
	#2	Community based interventions	exp Community Services/ or Health Promotion/ or exp Community Mental Health Services/ or Health Education/ or exp Public Health/ or "community resources".mp. or "community support".mp. or "health literacy".mp. or "family education".mp. or "patient education".mp. or "provider education".mp. or (community adj2 intervention*).mp. or (stigma adj2 reduc*).mp.
	#3	Community based interventions	exp clergy/ or exp social support/ or clergy.mp. or chaplain*.mp. or ((family or peer* or spouse or parent*) adj2 (program* or support)).mp. or "Confidential care".mp. or "Vet centers".mp. or "Be there".mp. or "social support".mp.
	#4	Combine sets	2 OR 3
	#5	Combine sets	1 AND 4

Questions	Set #	Concept	Strategy
Questions 9 & 10 – Community based interventions (continued)	#6	Meta-analyses and systematic reviews	See hedge at end of table
	#7	RCTs	See hedge at end of table
	#8	Combine sets	6 OR 7
Questions 11 & 12 – Telehealth modalities/Technology	#1	Problem (Suicide)	*SUICIDE/ or sdv.ti,ab. or "self-directed violence".ti. or "self-directed violent".ti. or "self-inflicted".ti. or suicid*.ti.
	#2	Telehealth	exp Telemedicine/ or mobile.mp. or phone.mp. or remote.mp. or telemedicine.mp. or telenursing.mp. or telehealth*.mp. or telephone.mp. or virtual.mp.
	#3	Technology	exp Mobile Devices/ or exp Computer Applications/ or exp Technology/ or apps.mp. or "crisis line".mp. or "text line".mp. or "caring contact".mp. or "Technology supported management".mp. or "technology based intervention".mp. or "web-based".mp.
	#4	Combine sets	2 OR 3
	#5	Combine sets	1 AND 4
	#6	Meta-analyses and systematic reviews	See hedge at end of table
	#7	RCTs	See hedge at end of table
	#8	Combine sets	6 OR 7
General Hedges Applied to Each Search		Limit to English language publications	limit # to english language
		Remove undesired publication types (e.g., conferences, editorials)	not ((authored book or autobiography or biography or book or case reports or comment or conference* or dissertation abstract edited book or editorial or encyclopedia or lectures or letter or news or note or proceeding or video-audio media or webcasts).pt. or (bibliography or chapter or column/opinion or comment/reply or dissertation or editorial or encyclopedia entry or letter or obituary or review-book).dt. or child.ti.)
		Limit by publication date within range	limit # to yr="2011 - 2018"
Study Type Hedges Applied as Needed		Limit to meta-analyses and systematic reviews	and (research synthesis or pooled or systematic review/ or meta analysis/ or meta-analysis/ or ((evidence base$ or methodol$ or systematic or quantitative$ or studies or search$).mp. and (review/ or review.pt. or literature review/)))
		Limit to randomized controlled trials	and ((Randomized controlled trials or random allocation).de. or random$.ti,ab.)

C. PILOTS syntax

Set #	Concept	Strategy
#1	Problem (suicide)	(MAINSUBJECT(suicidality) OR ti(suicid*)
#2	Publication type	(stype.exact("Scholarly Journals")
#3	Date range	pd(20111118-20180410)))
#4	Combine sets	#1 AND #2 AND #3

Appendix I: Alternative Text Descriptions of Algorithms

The following outlines narratively describe Algorithm A, Algorithm B, and Algorithm C. An explanation of the purpose of the algorithms and description of the various shapes used within the algorithms can be found in the Algorithm section. The sidebars referenced within these outlines can also be found in the Algorithm section.

Algorithm A: Identification of Risk for Suicide

1. Algorithm A has three starting points:
    a. Box 1, in the shape of a rounded rectangle: "Person presenting with warning signs (may have suicidal ideation or recent self-directed violence)"
    b. Box 2, in the shape of a rounded rectangle: "Person identified to be at high risk for suicide via predictive analytics"
    c. Box 3, in the shape of a rounded rectangle: "Person presents in context where routine suicide risk screening occurs"
2. Boxes 1, 2, and 3 connect to Box 4, in the shape of a rectangle: "Screen for current suicide risk: ask the person direct question(s) about recent thoughts of suicide"
3. Box 4 connects to Box 5. Box 5, in the shape of a hexagon, asks the question: "Does the person screen positive?" (Note: Follow to Box 7 if screen is negative but additional evidence [e.g., collateral] suggests the need for continued screening and/or evaluation)
    a. If the answer is "Yes" to Box 5, then Box 7, in the shape of a hexagon, asks the question: "Are safety concerns such that immediate management is required?"
        i. If the answer is "Yes" to Box 7, then Box 9, in the shape of an oval: "Continue to Algorithm C: Management, Box 19"
        ii. If the answer is "No" to Box 7, then Box 8, in the shape of a rectangle: "If there are local procedures for either completing secondary suicide risk screening or conducting a comprehensive suicide risk evaluation, follow those procedures"
            a. Box 8 connects to Box 10. Box 10, in the shape of an oval: "Continue to Algorithm B: Evaluation"
    b. If the answer is "No" to Box 5, then Box 6, in the shape of a rectangle: "Continue routine management of care and presenting concerns; build protective factors"

Algorithm B: Evaluation by Provider

1. Algorithm B begins with Box 11, in the shape of a rounded rectangle: "Person identified from Algorithm A"
2. Box 11 connects to Box 12, in the shape of a rectangle: "Complete a suicide risk evaluation (See Sidebar 1 and Sidebar 2a and 2b)

3. Box 12 connects to Box 13. Box 13, in the shape of a hexagon, asks the question: "Is this person at high acute risk for suicide? Essential Features: Suicidal ideation with intent to die by suicide; inability to maintain safety, independent of external support/help"
    a. If the answer is "Yes" to Box 13, then Box 14, in the shape of an oval: "Continue to Algorithm C: Management, Box 19"
    b. If the answer is "No" to Box 13, then Box 15, in the shape of a hexagon, asks the question: "Is this person at intermediate acute risk for suicide? Essential Features: Suicidal ideation to die by suicide; ability to maintain safety, independent of external support/help"
        i. If the answer is "Yes" to Box 15, then Box 16, in the shape of an oval: "Continue to Algorithm C: Management, Box 26"
        ii. If the answer is "No" to Box 15, then Box 17, in the shape of a rounded rectangle: "Person identified to be at low risk for suicide; Essential Features: No current suicidal intent, no specific and current suicidal plan, no recent preparatory behaviors, and collective high confidence (e.g., patient, care provider, family member) in the ability of the person to independently maintain safety"
            1. Box 17 connects to Box 18, in the shape of an oval: "Continue to Algorithm C: Management, Box 31"

Algorithm C: Management of Patients at Acute Risk for Suicide

Algorithm C has three starting points:

1. Person at high acute risk of suicide
2. Person at intermediate acute risk of suicide
3. Person at low acute risk for suicide

Starting point 1: Person at high acute risk of suicide

1. Box 19, in the shape of a rounded rectangle: "Person at high acute risk for suicide"
2. Box 19 connects to Box 20, in the shape of a rectangle: "These individuals may need to be directly observed until they are transferred to a secure unit and kept in an environment with no access to lethal means (e.g., keep away from sharps, cords or tubing, toxic substances)"
3. Box 20 connects to Box 21, in the shape of a rectangle: "Typically requires psychiatric hospitalization to maintain safety"
4. Box 21 connects to Box 22, in the shape of a rectangle: "Follow local procedures for hospitalization to include the need for involuntary hospitalization"
5. Box 22 connects to Box 23, in the shape of a rectangle: "During hospitalization target modifiable risk factors (See Sidebar 3); initiate evidence-based treatment to reduce suicide risk and co-occurring conditions (See Sidebar 4)"
6. Box 23 connects to Box 24, in the shape of a rectangle: "The inpatient team has determined that the patient's risk may have reduced sufficiently enough to warrant discharge"

7. Box 24 connects to Box 25, in the shape of a rounded rectangle: "Return to Algorithm B, assessing appropriate setting of care; if person's level of risk is reduced sufficiently to warrant discharge, discharge and consider interventions in Sidebar 6"

Starting point 2: Person at intermediate acute risk of suicide

1. Box 26, in the shape of a rounded rectangle: "Person at intermediate acute risk for suicide"
2. Box 26 connects to Box 27. Box 27, in the shape of a hexagon, asks the question: "Is the person able to independently maintain safety AND do the benefits of maintaining outpatient management outweigh the risks of hospitalization?"
    a. If the answer is "Yes" to Box 27, then Box 28, in the shape of a rectangle: "Outpatient management should be intensive and include: frequent contact and a well-articulated safety plan. Include support system (e.g., family) as available. Individuals should be regularly reassessed for acute risk (See Sidebar 2a) and chronic risk (See Sidebar 2b) and care management plan should be adjusted according to level of acute and chronic risk. Mental health treatment should also address co-occurring conditions."
    b. If the answer is "No" to Box 27, then Box 22, in the shape of a rectangle: "Follow local procedures for hospitalization to include the need for involuntary hospitalization"
        i. Box 22 connects to Box 23, in the shape of a rectangle: "During hospitalization target modifiable risk factors (See Sidebar 3); initiate evidence-based treatment to reduce suicide risk and co-occurring conditions (See Sidebar 4)"
        ii. Box 23 connects to Box 24, in the shape of a rectangle: "The inpatient team has determined that the patient's risk may have reduced sufficiently enough to warrant discharge"
        iii. Box 24 connects to Box 25, in the shape of a rounded rectangle: "Return to Algorithm B : Evaluation, to assess appropriate setting of care; if person's level of risk is reduced sufficiently to warrant discharge, discharge and consider interventions in Sidebar 6"
3. Box 28 connects to Box 29. Box 29, in the shape of a hexagon, asks the question: "Has the patient's acute risk for suicide decreased to low?"
    a. If the answer is "Yes" to Box 29, then Box 30, in the shape of an oval: "Continue to Algorithm C: Management, Box 31"
4. If the answer is "No" to Box 29, then return to Box 27. Box 27, in the shape of a hexagon, asks the question: "Is the person able to independently maintain safety AND do the benefits of maintaining outpatient management outweigh the risks of hospitalization?" Proceed through the steps outlined above.

Starting point 3: Person at low acute risk for suicide

1. Box 31, in the shape of a rounded rectangle: “Person at low acute risk for suicide”
2. Box 31 connects to Box 32, in the shape of a rectangle: “Person can be managed in primary care; outpatient mental health treatment may also be indicated, particularly if suicidal ideation and psychiatric symptoms are co-occurring”
3. Box 32 connects to Box 33, in the shape of a rectangle: “Care should focus on assessment and mitigation of chronic risk for suicide through enhancing protective factors and reducing modifiable risk factors (See Sidebar 2b); consider upstream suicide prevention and health promotion interventions (the size of this population makes these actions important); consider interventions outlined in Sidebar 4; routine re-assessment of risk should be conducted”
4. Box 33 connects to Box 34, in the shape of an oval: “Continue Management per Box 32”

Appendix J: Abbreviations

Abbreviation	Definition
AHRQ	Agency for Healthcare Research and Quality
ASIST	Applied Skills in Suicide Training
BIC	Brief Intervention and Contact
BPD	Borderline personality disorder
C-SSRS	Columbia Suicide Severity Rating Scale
CBT	Cognitive behavioral therapy
CDC	Centers for Disease Control and Prevention
CMS	Centers for Medicare and Medicaid Services
CNS	Central nervous system
COI	Conflict of interest
CPG	Clinical practice guideline
CRP	Crisis Response Planning
CT-SP	Cognitive Therapy for Suicide Prevention
CY	Calendar year
DBT	Dialectical Behavioral Therapy
DoD	Department of Defense
DoDSER	Department of Defense Suicide Event Report
EBPWG	Evidence-Based Practice Work Group
ED	Emergency department
HIPAA	Health Insurance Portability and Accountability Act
ICM	Intensive Case Monitoring
IOM	Institute of Medicine
IPV	Intimate partner violence
ITT	Intention-to-treat
KQ	Key question
MDD	Major depressive disorder
MHS	Military Health System
MOA	Memorandum of agreement
MSC	Means safety counseling
NAM	National Academy of Medicine
NVDRS	National Violent Death Reporting System
PCC	Patient-centered care
PHQ-9	Patient Health Questionnaire-9
PICOTS	Population, intervention, comparison, outcome, timing and setting
PST	Problem-Solving Therapy
PTSD	Posttraumatic stress disorder
QPR	Question, Persuade, and Refer
RCT	Randomized controlled trial

Abbreviation	Definition
REMS	Clozapine Risk Evaluation and Mitigation Strategy monitoring program
SAMHSA	Substance Abuse and Mental Health Services Administration
SAVE	Suicide Awareness Voices of Education
SDM	Shared decision making
SDV	Self-directed violence
SPI	Safety Planning Intervention
SSRI	Selective serotonin reuptake inhibitors
STARRS	Army Study to Address Risk and Resilience in Soldiers
STARRS-LS	Army Study to Address Risk and Resilience in Soldiers longitudinal study
SUD	Substance use disorder
TBI	Traumatic brain injury
VA	Department of Veterans Affairs
VHA	Veterans Health Administration
VHB	Virtual Hope Box
WHO	World Health Organization
WtoH	Window to Hope

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