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

Department of Veterans Affairs
Department of Defense

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With support from:

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&

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QUALIFYING STATEMENTS

The Department of Veterans Affairs (VA) and The Department of Defense (DoD) 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.

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

INTRODUCTION

The Clinical Practice Guideline for the Assessment and Management of Suicide Risk was developed under the auspices of the Veterans Health Administration (VHA) and the Department of Defense (DoD). VHA and DoD define clinical practice guidelines as:

> "Recommendations for the performance or exclusion of specific procedures or services derived through a rigorous methodological approach that includes:
> Determination of appropriate criteria such as effectiveness, efficacy, population benefit, or patient satisfaction; and Literature review to determine the strength of the evidence in relation to these criteria."

The intent of the guidelines is to:

- Reduce current unwarranted practice variation and provide facilities with a structured framework to help improve patient outcomes (prevent suicide and other forms of suicidal self-directed violent behavior)
- Provide evidence-based recommendations to assist providers and their patients in the decision-making process
- Identify outcome measures to support the development of practice-based evidence that can ultimately be used to improve clinical guidelines.

Background

US Population

Suicide remains a serious public health problem and reducing suicide is a national imperative (IOM 2002). More than 36,000 people (age-adjusted rate is 11 per 100,000 persons) take their lives every year (CDC - WISQARS 2010). Suicide was the tenth leading cause of death for all ages in 2010 and the third leading cause of death for persons aged 24 and younger. There were 38,364 suicides in 2010 in the United States--an average of 105 each day. Based on data about suicides from National Violent Death Reporting System in 16 states in 2009, 33.3% of suicide decedents tested positive for alcohol, 23% for antidepressants, and 20.8% for opiates, including heroin and prescription pain killers (MMWR Summary 2012).

Veterans

Suicide and other forms of suicidal self-directed violence are a persistent and growing public health problem for America and for its Veterans. According to estimates from the Centers for Disease Control and Prevention (CDC), Veterans account for approximately 20% of the deaths from suicide in the United States. More recent estimates from VA increase the estimate to 22%. Applying these proportions to the 36,900 suicides that occurred in the United States in 2009 and the 38,600 that occurred in 2010, leads to estimates that 18-22 Veterans die from suicide each day.

It is not clear whether suicide rates in the entire population of Veterans are higher than the overall US population after controlling for relevant variables. Whether or not all Veterans are at increased risk, suicide rates are substantially increased among those who use VHA health care services. Information from the Office of Mental Health Operations on causes of death for all Veterans who use VHA health care services since 2000 demonstrates that rates among users are higher than those of the general population. Users of VHA services account for 1600-1900 suicides per year or about 5 per day with rates of approximately 36 per 100,000 patient years, 38 per 100,000 among men, and 15 per 100,000 among women. Among the deaths from suicide, approximately half had a diagnosis of a mental health condition recorded in their medical records in the year prior to their deaths, and approximately three fourths, within the past five years. For those with a mental health diagnosis within the past year, the rate of suicide is 70 per 100,000.

Since 2008, the Office of Suicide Prevention has maintained a registry of VHA suicide attempts and deaths reported by the Suicide Prevention Coordinators (SPCs) in each Medical Center. This active surveillance registry, VA-Suicide Prevention and Application Network (SPAN), was established to coordinate the identification and reporting of suicide-related events within and across facilities, to facilitate the identification of individuals at high risk to allow the targeting of interventions, and to support both program planning and evaluation. Between April 1, 2010 and March 30, 2012, SPCs reported non-fatal suicide attempts in almost 30,000 Veterans utilizing VA services. Of these, approximately half were to individuals who attempted suicide for the first time. Among those who survived, 15% had a fatal or non-fatal reattempt within a year indicating that a history of suicide attempt identifies the individuals with the highest risk of suicide attempt and completion.

DOD

Historically, the suicide rate has been lower in the military than among civilians. This protective effect has been thought to be related to many factors to include a selection bias for healthy recruits, employment, purposefulness, access to healthcare and a strong sense of belonging. A population-based study examined potential risk factors for DoD suicides in 2005 and 2007 across the entire DoD population (2,064,183 in 2005 and 1,981,810 in 2007) by service. In 2007, suicide rates were significantly elevated across all services. History of deployment to combat was associated with increased suicides in the Army in 2005 and in all services in 2007.

In 2008 the suicide rate in the Army exceeded the age-adjusted rate in the civilian population (20.2 out of 100,000 vs. 19.2). While the stresses of the two wars, including long and repeated deployments, and post-traumatic stress and combat-related illnesses are important, a wide range of factors related to, and independent of, military service may have contributed to the rise of suicidal behavior and suicide death among service members of the military.

In 2008, the DoD Suicide Event Report (DoDSER) was established to track 250-300 data points per suicide in a standardized fashion across each military Department, including Active, Reserve and National Guard Component. The annual report is published mid-year for the previous year and is widely available on the Internet (http://t2health.org/programs/dodser).

While many risk factors for suicide in the general population also apply to military populations, military-specific suicide data assists clinicians assessing Service members at potential risk for suicide. Military suicide data is helpful both when it is similar to civilian data and especially when it is considerably different from the civilian population. If unknown, such variance may adversely affect a clinician's judgment of risk for suicide, as underestimating risk in younger male Service members based upon civilian suicide statistics.

While even the most accurate suicide data does not predict suicide in a given individual, thorough clinical assessment informed by demographic and other suicide-related associations may improve risk-appropriate management.

Scope of the Guideline

This guideline recommends a framework for a structured assessment of person suspected to be at risk of suicide, and the immediate and long-term management and treatment that should follow once risk has been determined.

- Topics addressed by the CPG include:
- Definitions, classification of etiology, risk factors, and severity
- Assessment and determination of risk
- Management of urgent/emergent risk - indications for referral to specialty care
- Treatment interventions (modalities) based on risk level
- Safety planning for patient at risk
- Monitoring and re-assessment of patients at risk

The guideline does not address risk in children, universal screening for suicide ideation, population health interventions to reduce the risk of suicide.

Target Population

This guideline applies to adult patients (18 years or older) with Suicidal Self-Directed Violent (SDV) behavior or related suicidal ideation (identified as being at risk for suicide) who are managed in the VA and DoD healthcare clinical settings. The population at risk includes patients who have suicidal ideation with or without an established diagnosis of a Mental or Substance Use Disorder; and patients with any level of risk for suicide ranging from thoughts of about death or suicide to SDV behavior or suicide attempt.

Audience

The guideline is relevant to all health care professionals providing or directing treatment services to patients at risk for suicide in any VA/DoD health care setting, including both primary and specialty care, and both general and mental health care settings. This guideline may also be relevant to any provider or health care system providing care and services to military members or veterans. Many of the recommendations are also relevant to all clinicians caring for patients at risk for suicide.

Goals of the Guideline

- To promote evidence-based management of patients presenting with Suicidal Self-Directed Violence behavior
- To promote efficient and effective assessment of patients' risks
- To indentify efficacious intervention to prevent death in individuals presenting with Suicidal Self-Directed Violence behavior
- To identify the critical decision points in management of patients at risk for Suicidal Self-Directed Violence
- To promote evidence-based management of individuals with (post-deployment) health concerns and behaviors related to Suicidal Self-Directed Violence
- To inform local policies or procedures, such as those regarding referrals to or consultation with specialists
- To motivate administrators at each of the Federal agencies and patient care access sites to develop innovative plans to break down barriers that may prevent patients from having prompt access to appropriate assessment and care.

Seed Documents

The development process of this guideline follows a systematic approach. Appendix A clearly describes the guideline development process.

The Working Group relied heavily on the following publications in the development of the guideline:

- The DoD Task Force on the Prevention of Suicide by Members of the Armed Forces, established by the Fiscal Year 2009 National Defense Authorization Act. The Final Report (August 2010) made several recommendations regarding suicide prevention. A multidisciplinary panel of experts from DOD, VA, Health and Human Services (SAMHSA), and academia agreed upon these recommendations. Recommendation 59 stated:

  > **Recommendation 59: *Develop clinical practice guidelines*** to promote the utilization of evidence-based practices for the assessment, management, and treatment of suicide-related behaviors.

- Ramchand, Rajeev, Joie Acosta, Rachel M. Burns, Lisa H. Jaycox and Christopher G. Pernin. *The War Within*: Preventing Suicide in the U.S. Military. Santa Monica, CA: RAND Corporation, 2011. Available from: http://www.rand.org/pubs/monographs/MG953.html
- NICE (2011) - National Institute for Clinical Excellence. Self-harm: Longer-term Care and Treatment of Self-harm: NICE clinical guideline 133. London (UK): National Health Service; 2011. Available from: www.nice.org.uk/CG133

Evidence-Based Practice of Suicide Risk Assessment and Management

After assessing evidence quality for suicide prevention distilled from surveillance of 16,500 English language post-2005 studies, with a final analysis of 35 relevant randomized controlled studies and 38 systematic reviews, VA researchers concluded, “there is a lack of strong evidence for any interventions in preventing suicide and suicide attempts”. Two core challenges markedly diminish quality of evidence in suicide prevention research: difficulty conducting randomized controlled trials, and low base rates of suicide and suicide attempts, even in groups at higher risk for suicide.

Conducting randomized control trials (RCT) to evaluate the benefit of psychiatric hospitalization is difficult. To randomly assign an imminently suicidal individual to a non-hospitalized control group is not an ethically viable protocol. Comparing cohorts of admitted and non-admitted suicidal populations is unhelpful as the severity of the presenting situations may be very different.

Attempts to explain, predict, and prevent suicide are limited due to its statistical rarity—suicide is exceedingly rare in comparison to its various associated risk factors. There are some variables (such as alcohol and drug abuse, loss of relationship), which clearly do occur at a higher rate among those who commit suicide. There are a great many people who abuse alcohol, the majority of whom do not commit suicide; hence the positive predictive value of these risk factors is low.

In 2013, the US Preventive Services Task Force concluded that the current evidence is insufficient to assess the balance of benefits and harms of screening (the general population) for suicide risk in adolescents, adults, and older adults in a primary care setting (I). Screening for suicide risk is more productive for high-risk individuals with known mental illnesses or substance use disorders.

The number of clinical trials focusing on reduction of suicidal behavior is very low. Exclusion of suicidal individuals from clinical trials has arguably crippled the field of suicide intervention research. Because they are consistently excluded, we cannot confidently confirm that evidence-based practices for a diagnosis will benefit suicidal individuals with that diagnosis. In addition, methodological problems with even the most rigorous trials results in low quality of evidence. For example, the challenge of antidepressant placebo effect in drug trials compromises firmly establishing antidepressant efficacy (Palmer, 2005).

Possible remedies to the dearth of evidence for suicide prevention interventions in post-2005 studies include: adding the suicide prevention evidence base prior to 2005 reviewed by J. Mann et al; including additional countries' research; and adding non-English research. For example, Mann's review (Mann, 2005) included studies demonstrating in some countries (Sweden, Hungary, Japan, and Slovenia) reduced suicides as a result of physician education programs enhancing identification of patients with depression and their treatment.

It could be argued that waiting for a better evidence base for suicide prevention does not abate the necessity of approaching those at higher risk now with the most promising approaches. For example, relative risk for suicide is known to be affected by mental disorders and some quantification of that risk exists for those with mood and psychotic disorders (Bostwick, 200; Palmer, 2005).

For mood disorders, the "lifetime prevalence of suicide in those ever hospitalized for suicidality was 8.6%. For affective disorder patients hospitalized without specification of suicidality, the lifetime risk of suicide was 4.0%. The lifetime suicide prevalence for mixed inpatient/outpatient populations was 2.2%, and for the nonaffectively ill population, it was less than 0.5%" (Bostwick, 2000). The lifetime risk of suicide in those with the less prevalent disorder schizophrenia is 4.9%, and tends to occur near the onset of the disorder (Palmer, 2005).

The higher prevalence of affective disorders (especially depression) in the U.S. population (6.7% 12-month and 16.5% lifetime prevalence) (NIH – MDD ADULT), combined with their established higher rate of suicide, provides a reasonable theoretical target for testing corresponding clinical suicide prevention initiatives. As emphasized by the J. Mann 2005 systematic review of suicide prevention strategies, "Prevention is possible because most suicides have had contact with a primary care physician within a month of death," targeting clinicians for suicide prevention (Mann, 2005).

However, Mann's review also found that physician education regarding identifying and treating those with depression reduced suicide in some countries (see above), but not in others (U.S., Brazil, and U.K.). Thus, honing in upon differences in national prevalence and actual approaches to physician education and specific treatment of depression (especially pharmacology vs. psychotherapy) in these countries is indicated in order to sort out such profound discrepancies. Although intuitive, making blanket recommendations for universal depression screening and specific treatments for all diagnosed at some threshold of "depression" may be premature. (For example, the energizing effect of antidepressants in depressed individuals occurs before mood improves, potentially enabling suicide otherwise not undertaken before increased energy. In addition, those who experience akathisia (psychic and psychomotor restlessness/anxiety) from psychopharmacologic treatment may also be at increased risk for suicide). Therefore, examining the specific clinical modalities contributing to national (and cultural) variance in treatment outcomes on suicide is imperative.

In the face of insufficient and conflicting suicide prevention data, the absolute necessity remains for clinicians and populations to focus specifically on suicidal thoughts and behaviors and their prevention (not at the expense of ignoring clinical conditions, including substance abuse). Thus, risk-based management, risk-based clinical interventions, comprehensive and regularly updated safety planning, and reliable continuity of care remain the essential interventions to reduce the risk of suicide and are the focus of this guideline.

Rating Available Evidence

In order for the clinician to appreciate the evidence base behind the recommendations and the weight that should be given to each recommendation, the recommendations are keyed according to the level of confidence with which each recommendation is made. Each rating of strength of recommendation [SR] considers the quality of the available evidence and net benefit (benefit and harm) estimated by the available data. When evidence is limited, the level of confidence also incorporates clinical consensus with regard to a particular clinical decision.

If evidence exists, the recommendation is followed by a letter code in brackets that indicates the strength of the supporting evidence (i.e. [SR]). The Strength of Recommendation is based on the level of the

evidence and graded using the USPSTF rating system (see Table: Strength of Recommendation Rating). The discussion following the recommendations for each annotation includes an evidence table identifying the studies that have been considered, the quality of the evidence, and the rating of the strength of the recommendation [SR].

Strength of Recommendation Rating [SR]

A	A strong recommendation that the clinicians provide the intervention to eligible patients. *Good evidence was found that the intervention improves important health outcomes and concludes that benefits substantially outweigh harm.*
B	A recommendation that clinicians provide (the service) to eligible patients. *At least fair evidence was found that the intervention improves health outcomes and concludes that benefits outweigh harm.*
C	No recommendation for or against the routine provision of the intervention is made. *At least fair evidence was found that the intervention can improve health outcomes, but concludes that the balance of benefits and harms is too close to justify a general recommendation.*
D	Recommendation is made against routinely providing the intervention to asymptomatic patients. *At least fair evidence was found that the intervention is ineffective or that harms outweigh benefits.*
I	The conclusion is that the evidence is insufficient to recommend for or against routinely providing the intervention. *Evidence that the intervention is effective is lacking, of poor quality, or conflicting, and the balance of benefits and harms cannot be determined.*

Where existing literature was ambiguous or conflicting, or where scientific data was lacking, recommendations are based on the clinical experience and expert consensus of the Working Group. Although several of the recommendations in this guideline are based on weak evidence, some of these recommendations are strongly recommended based on the experience and consensus of the clinical experts and researchers of the Working Group. Recommendations that are based on consensus of the Working Group include a discussion of the expert opinion on the given topic. No [SR] is presented for these recommendations.

The final guideline document represents a synthesis of current scientific knowledge and rational clinical practice on the assessment and treatment of adult patients with risk for suicide. It attempts to be as free as possible of bias toward any theoretical or empirical approach to treatment.

This Guideline is the product of many months of diligent effort and consensus building among knowledgeable individuals from the VA and the DoD. An experienced moderator facilitated the multidisciplinary Working Group. The draft document was discussed in a face-to-face group meeting. The content and validity of each section was thoroughly reviewed in a series of conference calls. The final document is the product of those discussions and has been approved by all members of the Working Group.

Organization of the Guideline

Algorithm:

The clinical algorithm incorporates the information presented in the guideline in a format which maximally facilitates clinical decision-making. The algorithmic format allows the provider to follow a linear approach to critical information needed at the major decision points in the clinical process and includes decisions to be considered and actions to be taken. 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.

The guideline is organized around three clinical Algorithms:

Algorithm A: Assessment and Management of Risk for Suicide in Primary Care.

Algorithm B: Evaluation and Management of Risk for Suicide by Behavioral Health Providers.

Algorithm C: Management of Patient at High Acute Risk for Suicide.

Annotations:

The Annotations are presented in four modules addressing the following components of care:

Module A: **Assessment and Determination of the Risk for Suicide** – Any person who is identified as being at possible suicide risk should be formally assessed for suicidal ideation, plans, intent and behavior, the availability of lethal means, and the presence of risk factors and warning signs. A clinical judgment that is based on all the information should formulate the level of risk for suicide and the setting of care.

Module B: **Initial Management of Patient at Risk for Suicde** – All persons identified as being at risk of suicide should have a collaboratively designed safety plan prior to discharge from acute care. This should include inquiring about access to lethal means and planning, if possible, to restrict access to these means. The person at risk should be placed in the appropriate setting of care that provides the necessary supervision to ensure safety.

Module C: **Treatment of the Patient at Risk for Suicide –** Care of persons with suicide risk should be provided in the least restrictive setting using evidence based treatment. Treatment should include interventions that specifically address the suicidality and management of the underlying condition. Evidence-based management of the underlying and co-occurring mental disorder (e.g., MDD, BD, PTSD, BPD, SUD) for a patient that is at higher risk for suicide should be optimized to address (reduce) the risk of suicide.

Module D: **Follow-up and Monitoring of Patient at Risk for Suicide –** Persons with suicidal risk leaving the acute care settings should be closely followed and frequently monitored in the immediate period after discharge.

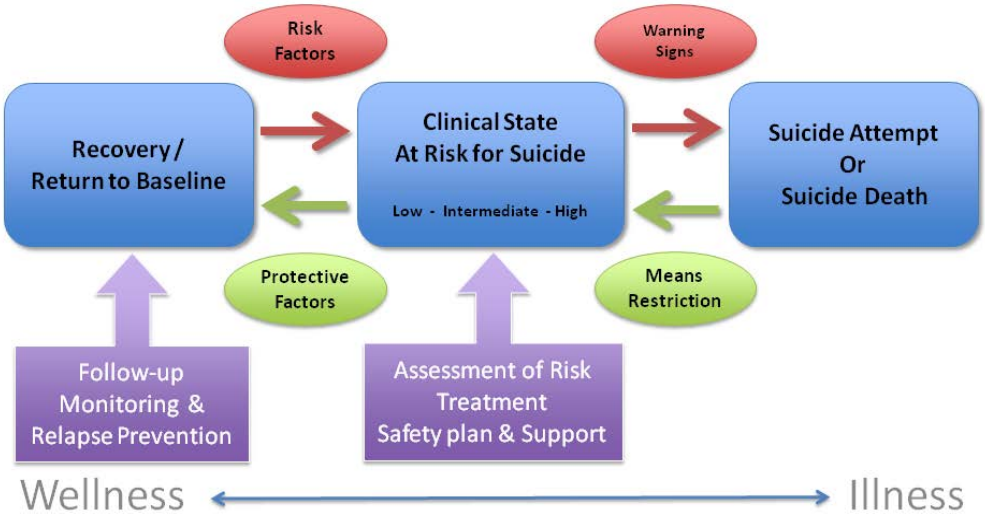
Annotations to the algorithm include background, recommendations, and discussion of the rationale and the evidence that support the recommendations. The annotations match the box numbers and letters (e.g., [A]) in the respective algorithms.

There are a limited number of recommendations that are based on published evidene. Therefore, in annotations for which there is evidence-based research that supports the recommendations, the Strength of Recommendation [SR] based on the level of evidence is presented in brackets for these recommendations. Recommendations that are not based on evidence were derived by consensus of experts. No SR is presented for these recommendations.

Recovery-Oriented Practice

Recovery-orientated practice is essential. Patients may report not being aware that recovery is even an option. Distress is increased and effectiveness of treatment reduced when patient preference is not taken into account. For example, patients may feel disenfranchised when they are not invited to attend their care meetings or do not feel that their needs are being heard.

The Recovery Model for Assessment and Management of Suicidal Behavior



Suicide risk is not static. Many factors influence an individual's risk of suicide at any given point in time. This section offers a paradigm for understanding the continuum of risk in the assessment and management of patients. From a broad bio-psycho-social perspective, suicide risk is influenced by a number of factors. An individual is born with a genetic inheritance that interacts with experience to determine brain structure and predisposes to certain illnesses or health. Onto this substrate, life experience and learning informs adaptiveness to stress and affective regulation. Socio-cultural factors can strongly influence risk. Social support systems and interactions with others in society influence actions and reinforce beliefs. The bio-psycho-social context determines where an individual may fall on the wellness-illness continuum and their vulnerability to suicide. Certain genetic, psychological, or sociocultural protective factors, such as having robust social supports or having strong problem solving skills, diminish the risk of suicide. Illnesses or stressful life events increase vulnerability to suicidal thoughts. A person may cross a threshold and act on suicidal impulses when they experience some "last straw", some unbearable insult or burden that seems to make life unlivable. This may include the loss of sense of belongingness or feeling of being too burdensome to family members or peers. When in this state of thinking, external controls may be needed to prevent a suicidal act. Some intervention may become necessary to interfere with the trajectory toward death, such as restriction of access to the means of completing a suicidal act. This may prevent a fatal act, but does not necessarily resolve the suicidal impulse or crisis.

This model provides opportunities for clinical intervention. The clinical assessment determines the presence of treatable illnesses, coping strengths and vulnerabilities that may be a focus of intervention. The treatment plan can provide education about managing the perpetuating and protective factors to foster wellness. The plan may include strategies to foster development of skills to manage the stressors and cognitive distortions, or make changes to the physical or interpersonal environment to enhance safety. With effective treatment, illnesses and perpetuating factors can be alleviated, protective factors and coping strategies can be fortified, and the patient's suicidality can resolve to a state of clinical recovery, where the acute risk has resolved and the risk of relapse has been minimized. Ongoing care may be warranted to provide early detection of recurrence. In the event that a suicide attempt has occurred,

there are important and meaningful responses and interventions of healthcare providers and family members that can help in managing the effects of this behavior.

Patient Centered Care

Guideline recommendations are patient centered. Regardless of setting, or the availability of professional expertise, any patient in the healthcare system should be provided with the interventions that are recommended in this guideline and found to be appropriate to the patient's specific condition.

Treatment and care should take into account patient's needs and preferences. People who harm themselves should have the opportunity to make informed decisions about their care and treatment, in partnership with health care provider and social care professionals.

Good communication between healthcare professionals and the patient is essential. It should be supported by evidence-based written information tailored to the patient's needs. Treatment and care, and the information patients are given about it, should be culturally appropriate. It should also be accessible to people with additional needs such as physical, sensory or learning disabilities, and to people who do not speak or read English.

If the patient agrees, families, unit members, carers and significant others should have the opportunity to be involved in decisions about treatment and care. Families, carers and significant others should also be given the information and support they need.

Care of Service members in transition between facilities, services, or from DOD health care system to the VHA should be planned and managed according to the best practice guidance. Health care teams should work jointly to provide assessment and services to people who self-harm. Management should be reviewed throughout the transition process, and there should be clarity about who is the lead clinician to ensure continuity of care.

Assessment of Risk for Suicide

Ideally, a patient is identified before any suicidal behavior occurs. Early identification of suicidal ideation presents the greatest opportunity to reduce the risk of suicide attempt and death. We understand the suicide continuum to begin with suicidal thoughts, evolving into a wish to die, consolidated into an intention to act, and resulting in a methodology or plan formulated to end one's life. The evolution of these steps can occur over minutes or years. Each step along the continuum presents an opportunity to intervene and prevent the act of suicidal self-directed violence. All too often, a patient is identified after a suicide attempt is made. Often the first opportunity to assess an individual's suicide risk occurs because of the demonstration of warning signs that are identified by a caregiver, gatekeeper, or loved one. 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: communicating suicidal thought verbally or in writing; seeking access to lethal means such as firearms or medications; and 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.

Suicide risk assessment is not absolute. There are no clear, validated predictive models or risk stratification definitions. For simplicity's sake, this guideline will recommend a three-tier stratification system to define those patients in need of immediate intervention in order to prevent a suicide attempt; those patients at elevated risk of suicidal behavior in the future are in need of a clinical intervention; and those for whom the risk of suicide is not significantly elevated, but may benefit from an intervention. The stratification of assigned level of the acute risk (High, Intermediate, and Low) was developed by consensus, with full recognition that an equally good case could be made for other terms. The importance of determining the level of risk is that it will inform the decision regarding the choice of care setting, management and treatment plan to follow. It is worth remembering that no individual is at "no risk" of suicide, so these strata are an imperfect attempt to rationalize clear distinctions from within a continuum of risk with no absolute cutoffs.

The stakes when managing suicidal patients are high. Underestimation of risk can lead to inadequate treatment planning and a missed opportunity to prevent death. Beyond the tragedy of the loss of life, a completed suicide often results in litigation and recrimination. On the other hand, overestimation of risk leads to unnecessary hospital admissions, with a significant potential for infringement of civil liberties. The seriousness of the risk assessment process often places at odds the goals of safety versus patient autonomy and creates a great deal of tension between the patient, the clinician, the health care system and the law. As such, this important clinical evaluation can easily become adversarial and seriously impact the reliability of information gathering and set a negative tone for future treatment. Hence, it is imperative that the evaluation be guided by objectivity and evidence.

Management, Interventions and Follow-up

Research studies have shown that over 90% of suicide victims have a diagnosable mental health and/or substance use disorder. Although a large proportion of suicides could be avoided with effective treatment, of mental disorders, 50-75% of those in need receive inadequate treatment. The under-recognition of mental conditions seriously limits the potential to identify and appropriately treat individuals at risk for suicide.

Because of the strong association between mental illness and suicide risk, some research suggests that the effective treatment of mental health conditions (particularly major depression) reduces the risk of suicide and may decrease suicide rates. This includes both pharmaceutical treatments for mental illness and other forms of treatment, such as cognitive behavioral therapy, dialectical behavior therapy and family therapy, which have been shown to be effective in both reducing the symptoms of mental illness and the risk of suicidality.

Other empirical research has shown that targeting and treating suicidal ideation and behaviors, independent of diagnosis, may have benefit for care of suicidal risk. It is important that intervention and treatment be provided to address directly and specifically the potential suicidality.

Implementation

While these clinical practice guidelines propose potentially universal approaches for enhancing accurate assessment of risk for suicide and effective prevention of deaths by suicide, their implementation is intended for the unique government environments of Military and Veteran medical systems. Such uniqueness includes the evolution over the past several years of considerable investments to prevent suicide at multiple levels of each Department. Veterans Affairs and Department of Defense suicide preventionists have co-presented academic research on suicide prevention at each Department's mental health/suicide prevention conferences. VA/DoD subject matter experts attend the monthly DoD Suicide Prevention and Risk Reduction Committee (SPARRC) meetings to coordinate and share initiatives. A common VA/DoD suicide prevention website was developed and hosted (http://www.suicideoutreach.org/sparrc). In addition, VA clinicians increasingly provided both preventive and medical care to Reserve Component Service members. For example, VA providers address suicide prevention while conducting post-deployment health assessments (including mental health) for Reserve Component Service members returning from combat deployments. Additionally, Congress extended the eligibility for health care in the VHA to five years from discharge or separation date from active duty and activated members of the National Guard and Reserve who served in Operations Iraqi or Enduring Freedom, (OEF/OIF/OND) leading to many Service members receiving their routine and behavioral health care in VHA facilities.

Training

The Institute of Medicine (IOM) report, *Improving the Quality of Health Care for Mental and Substance Use Conditions*, documents the wide variations and problems in training all categories of mental health professionals. This IOM report describes the remarkable inadequacies of curricula, course design, and continuing education.

Unfortunately, there is a shortage of clinicians trained to provide evidence-based psychotherapies. Some experts believe that until clinical training programs for the major mental health disciplines include training in these evidence-based therapies, the gap between research and clinical practice will remain (SPRC REPORT 2010).

- Training in suicide risk assessment and management of patients who self-harm should be a core competency for all providers. It should be an essential component of prequalification training
- Providers who are exposed to people who harm themselves should have access to experienced colleagues for consultation and assistance in management of difficult cases
- Primary Care and General Medical Care providers should have access to Behavioral Health experts in evaluation and managing patient at risk for suicide.

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Definitions

Suicidal Self-Directed Violence	Behavior that is self-directed and deliberately results in injury or the potential for injury to oneself with evidence, whether implicit or explicit, of suicidal intent.
Suicide	Death caused by self-inflicted injurious behavior with any intent to die as a result of the behavior.
Suicide Attempt	A non-fatal self-inflicted potentially injurious behavior with any intent to die as a result of the behavior.
Preparatory Behavior	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).
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 inferred in the absence of suicidal behavior.
Suicidal Ideation	Thoughts of engaging in suicide-related behavior. (Various degrees of frequency, intensity, and duration.)
Interrupted By Self or Other	A person takes steps to injure self but is stopped by self or another person prior to fatal injury. The interruption may occur at any point.
Physical Injury	A bodily injury resulting from the physical or toxic effects of a self-directed violent act interacting with the body.

Developed in collaboration with the Centers for Disease Control and Prevention

Factors Contributing to Risk for Suicide

Warning Signs for Suicide	Warning signs are those observations that signal an increase in the probability that person intends to engage in suicidal behavior in the immediate future (i.e., minutes and days). Warning signs present tangible evidence to the clinician that a person is at heightened risk for suicide in the short term; and may be experienced in the absence of risk factors.
Acute Risk Factors	Acute (of brief duration) and stressful episodes, illnesses, or life events. While not usually internally derived, these events can build upon and challenge a person's coping skills.
Chronic Risk Factors (Pre-Existing)	Relatively enduring or stable factors that may increase a person's susceptibility to suicidal behaviors, such as genetic and neurobiological factors, gender, personality, culture, socio-economic background and level of isolation
Protective Factors	Capacities, qualities, environmental and personal resources that increase resilience; drive an individual toward growth, stability, and/or health and/or to increase coping with different life events.

The terms *suicidality* and *Risk for Suicide* are sometimes used interchangeably. The use of the term *Risk for Suicide is* preferred when communicating with the patient and documenting clinical care. The terms self-directed violence, risk for suicide, suicide ideation, intent, and behavior will be used throughout this document as a convention.

DISCUSSION

The distinction between non-suicidal self-directed violence and suicidal self-directed violence is important, as there are appropriate and different treatment options for both. Although the distinction between non-suicidal SDV behavior and suicidal SDV behavior is important and relevant to treatment planning, in some cases the distinction may be unclear.

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****.*

Non-Suicidal Self-Directed Violence behavior:

> *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 intent to die****.*

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.***

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****.*

It may be difficult to distinguish between *suicidal* self-directed violent behavior and *non-suicidal* self-directed violent behavior, as both are self-directed and dangerous. The term **Deliberate Self-harm (DSH)** has been used by some research and other guidelines (e.g., NICE 2011) to refer to both, suicidal SDV and non-suicidal SDV. The difficulty in distinguishing suicidal behaviors (i.e., suicide and suicide attempts) from non-suicidal self-directed violent behaviors is determining the person's intent for the behavior to result in death. For example, was the intention of the behavior to end the person's life, a call for help, or a means of temporary escape? Suicidal behaviors that do not result in death are considered "non-fatal," or more commonly, "suicide attempts".

Non-Suicidal SDV is often repetitive, and involves the infliction of harm to one's body for purposes other than ending one's life. These behaviors are not socially condoned (i.e. they exclude culturally accepted aesthetic modifications such as piercing) and are therefore reluctantly revealed and poorly understood.

However, many individuals who engage in self-directed violent behavior do not wish to die. Rather, they use SDV behavior as a coping mechanism that provides temporary relief from psychological distress. Though most people will know when to cease an episode of SDV behavior (i.e., when their need is satisfied), accidental death may also result. For example, a person may cut into a blood vessel without the intention or expectation of death but cannot stop the bleeding.

Health care professionals may mistakenly label cases of non-suicidal SDV behavior (as in inadvertent death by cutting without intent to die) as a suicide or suicide attempt. Likewise, professionals may mistakenly label a deliberate, self-inflicted act with the intent to die, as non-suicidal SDV behavior. The risk of error in mistaking suicidal intent for non-suicidal SDV behavior arguably carries greater risk of serious consequences in terms of serious medical injury or lethality, Thus, a conservative assessment of an act of ambiguous intent, or an act that is yet the focus of an early stage of fact-finding should have a low threshold for determination of suicidal intent (i.e. would err in the direction of presuming suicidal intent until determined to be non-lethal SDV behavior).

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Algorithm A: Assessment and management of Risk for Suicide in Primary Care

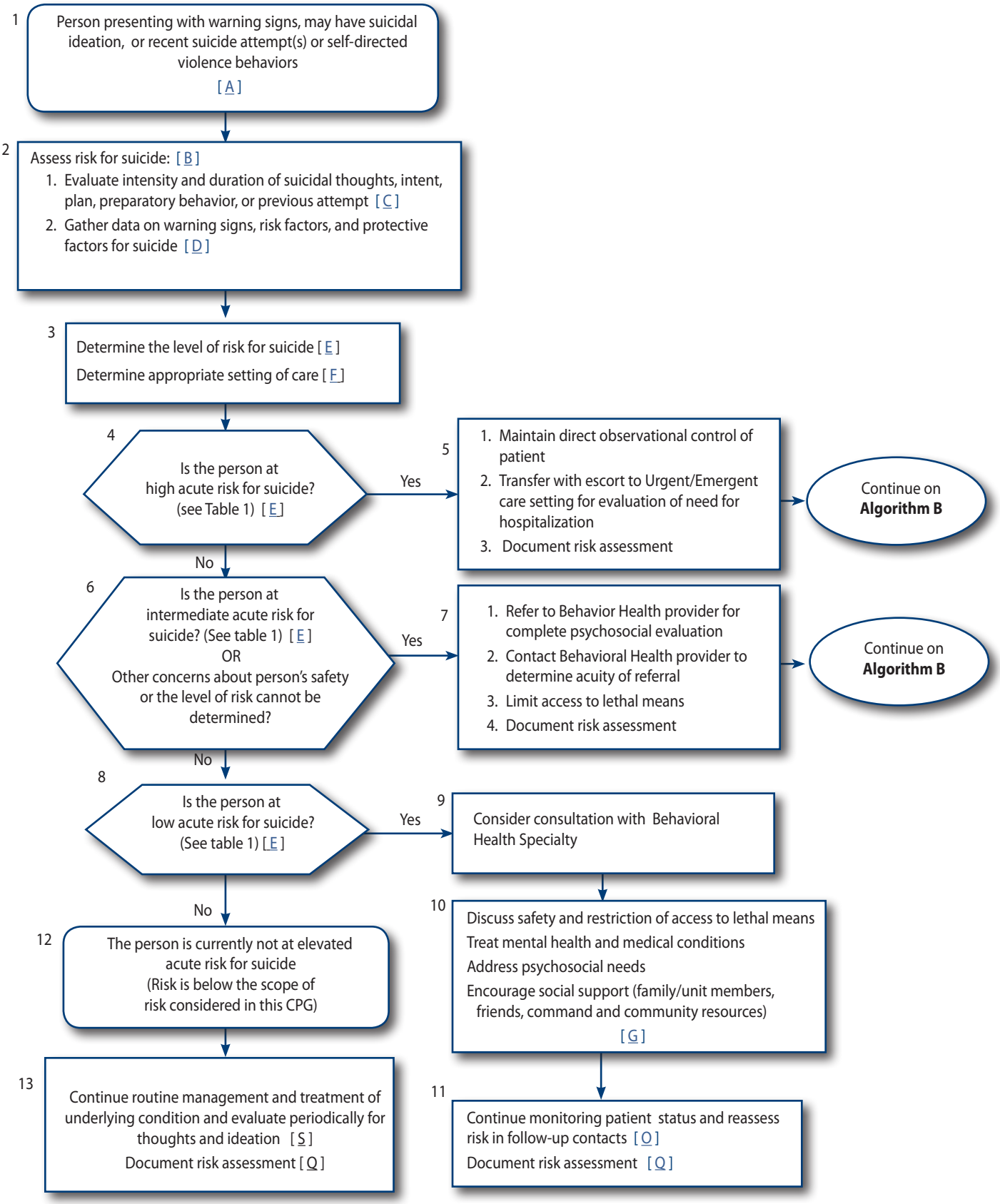


Table 1. Determine Level of Risk For Suicide and Appropriate Action in Primary Care

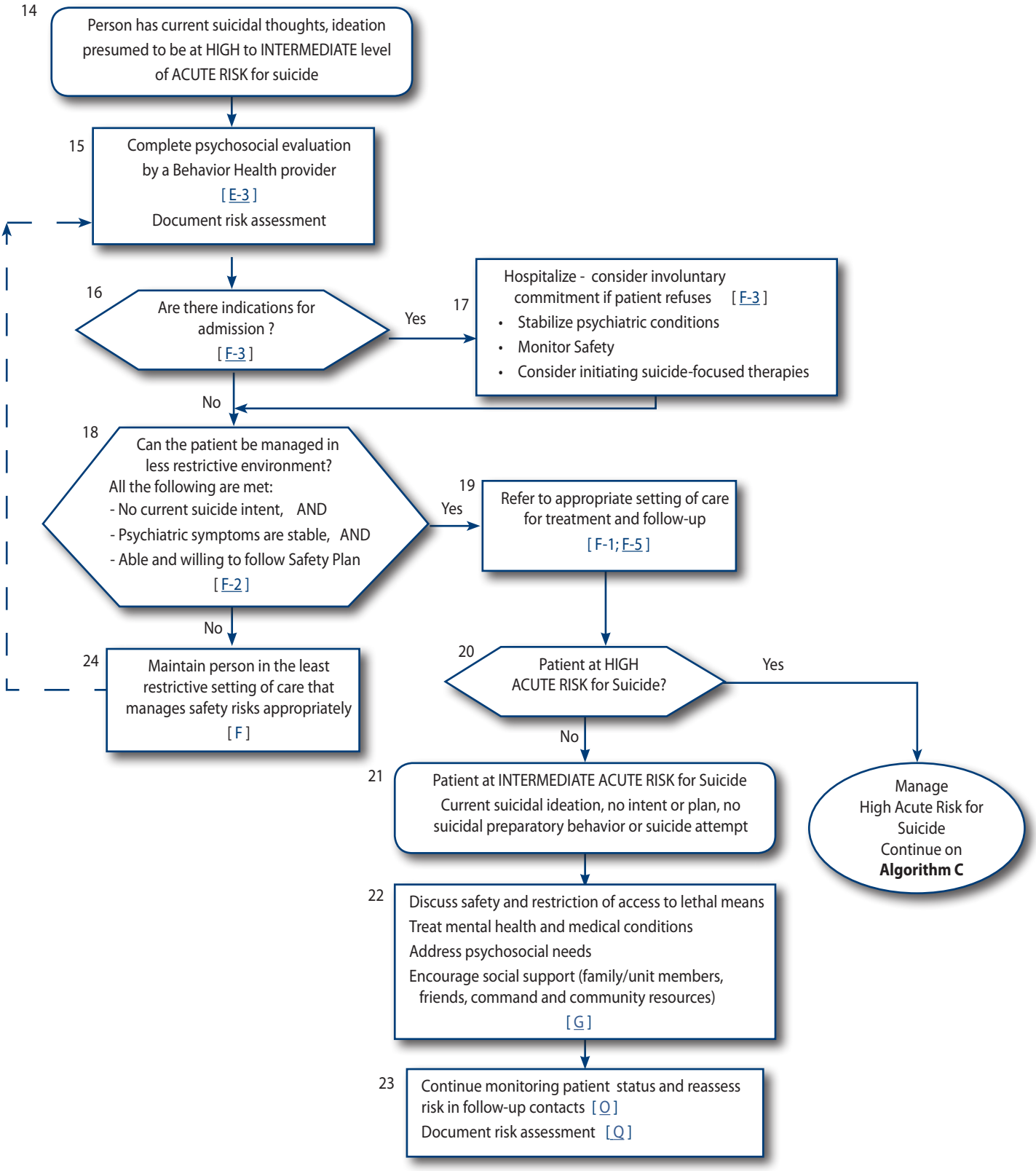
Risk of Suicide Attempt	Indicators of Suicide Risk	Contributing Factors †	Initial Action Based on Level of Risk
High Acute Risk	• Persistent suicidal **ideation** or thoughts • Strong **intention** to act or plan • Not able to control **impulse** OR • **Recent suicide attempt** or **preparatory behavior** ††	• Acute state of mental disorder or acute psychiatric symptoms • Acute **precipitating** event(s) • Inadequate **protective factors**	• Maintain direct observational control of the patient. • Limit access to lethal means • Immediate transfer with escort to Urgent/ Emergency Care setting for Hospitalization
Intermediate Acute Risk	• Current suicidal **ideation** or thoughts • **No intention** to act • Able to control the **impulse** • **No recent attempt** or **preparatory behavior** or rehearsal of act	• Existence of **warning signs** or **risk factors** †† AND • Limited **protective factor**	• Refer to Behavioral Health provider for complete evaluation and interventions • Contact Behavioral Health provider to determine acuity of referral • Limit access to lethal means
Low Acute Risk	• Recent suicidal **ideation** or thoughts • No **intention** to act or plan • Able to control the **impulse** • No planning or rehearsing a suicide act • No previous attempt	• Existence of **protective factors** AND • Limited **risk factors**	• Consider consultation with Behavioral Health to determine: - Need for referral - Treatment • Treat presenting problems • Address safety issues • Document care and rational for action

† Modifiers that increase the level of risk for suicide of any defined level :

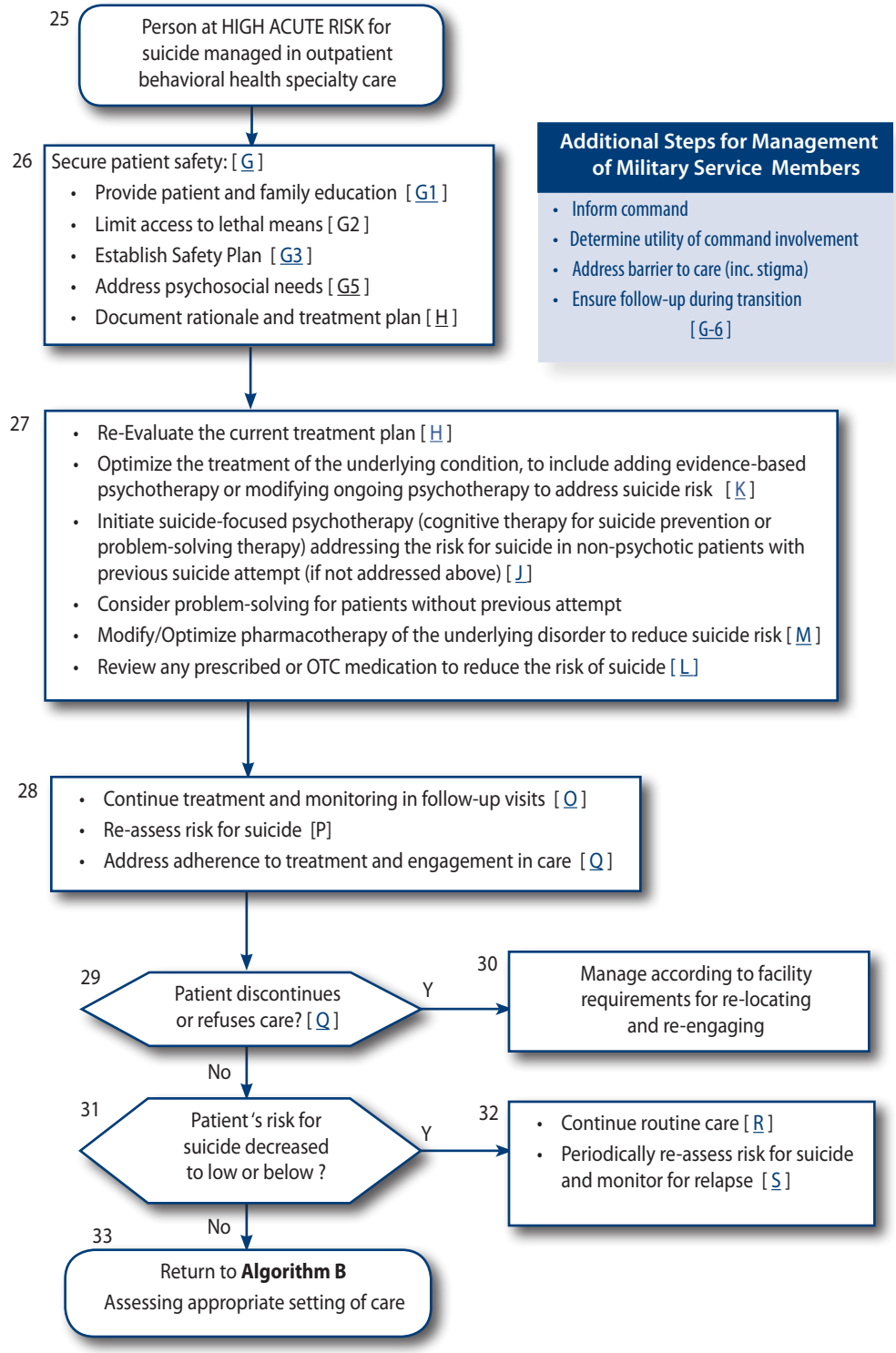
- **Acute state of Substance Use**: Alcohol or substance abuse history is associated with impaired judgment and may increase the severity of the suicidality and risk for suicide act
- **Access to means** :(firearms, medications) may increase the risk for suicide act
- **Existence of multiple risk factors or warning signs** or lack of protective factors

†† Evidence of suicidal behavior warning signs in the context of denial of ideation should call for concern (e.g., contemplation of plan with denial of thoughts or ideation)

Algorithm B: Assessment and Management by Behavioral Health Care Provider



Algorithm C: Management of Patient at High Acute Risk for Suicide



Additional Steps for Management of Military Service Members

- Inform command
- Determine utility of command involvement
- Address barrier to care (inc. stigma)
- Ensure follow-up during transition [G-6]

Evidence-Based Treatment to Reduce Repetition of Suicide Behavior

Psychotherapy

Treating the Suicide Risk: [J]

- *CT for suicide prevention*
- *PST*

Treating Underlying Disorder:

Borderline Personality Disorder: [K-1]

- DBT
- CBT
- IPT

Substance Use Disorder [K-3]

Pharmacotherapy

- Reduce the risk for suicide [L]

Treating Underlying Disorder:

- Antidepressants [M-1]
- Antypsychotics [M-2]
- Lithium [M-3, 4]
- Clozapine [M-5]
- Antiepileptics [M-6]
- Opioid overdose [M-8]

Other

- ECT [N]

Interventions to Improve Adherence

- Case- Care Management [Q-1]
- Facilitating access to care [Q-2]
- Mailing caring letters/postcards [Q-3]
- Telephone contact [Q-4]
- Outreach (home visit) [Q-5]
- Assertive outreach [Q-6]
- Counseling and other psychosocial interventions [Q-7]

BD - Bipolar Disorder; BPD - Borderline Personality Disorder; CT-Cognitive Therapy; CBT - Cognitive Behavior Therapy; DBT- Dialectical Behavior Therapy; IPT- Brief psychodynamic Interpersonal Therapy; MDD - Major Depressive Disorder; OTC-Over the Counter; PST-Problem Solving Therapy; SUD - Substance Use Disorder

Module A: Assessment and Determination of Risk for Suicide

Ideally, an individual at risk for suicide is identified before any suicidal behavior occurs. Early identification of suicidal ideation presents the greatest opportunity to reduce the risk of suicidal behavior including death. Suicidal events begin with suicidal thoughts and progress towards behaviors that can be potentially injurious behavior with intent to die as a result of the behavior. The progression from thoughts to behaviors can occur over minutes or years. Each step along the continuum presents an opportunity to intervene to prevent an act of self-directed violence (SDV). In some cases, a person at risk for death by suicide is identified only after a suicide attempt is made.

This Module describes a recommended framework for a structured assessment of a person suspected to be at some degree of risk for suicide. Suicide risk assessment remains an imperfect science, and much of what constitutes best practice is a product of expert opinion, with a limited evidence base. That said, the objective of risk assessment is to stratify individuals into levels of risk, denoted in this guideline as low, intermediate, and high acute risk. The identified level of risk dictates, to a large extent, the appropriate precautions for maintaining safety (preventing SDV behavior) and informs decisions regarding choice of care setting, management, and treatment plans to follow.

The term "risk" is used in this guideline both to convey information regarding known long-term risk factors for suicide and in developing a conceptual framework for the assessment of acute risk to help with identifying appropriate interventions or levels of care for individuals who have been identified as potentially experiencing suicidal ideation or intent. For example, it is well known that underlying mental disorders significantly increase the lifetime risk of suicide. However, in the initial evaluation of a potentially suicidal individual, the level of ideation, intent, or preparatory behavior will largely guide the initial risk stratification in terms of determining what level of care will be immediately required. The risk assessment framework used to guide clinical recommendations in this guideline applies largely to the level of intervention required over the short-term rather than the relative strength of known risk or protective factors in predicting suicide long-term.

Annotations

A. Person Suspected to Have Suicidal Thoughts (Ideation), a Recent Previous Suicide Attempt, or Self-directed Violence Episodes

BACKGROUND

Suicidal thoughts or behaviors may be identified in many different clinical settings and at various levels of progress toward a suicidal act. Most of the time suicidal thoughts do not result in suicidal acts. Suicidal ideation has a much higher incidence than suicide attempts. This guideline will assist providers to assess a patient identified with suicidal thinking, estimate the patient's level of risk, determine the appropriate setting for care, and develop a treatment plan.

Within the Veterans Health Administration and the Department of Defense, policies and procedures have been developed to identify persons at risk for suicide among selected high-risk for suicide populations. These efforts are important in their goal to identify "at-risk" individuals in order to facilitate early intervention. However, there is insufficient evidence to recommend for or against such screening measures for the general population (Pignone, 2002).

Patients identified through screening efforts or through routine clinical evaluations as having suicidal thoughts or ideation become subject to this guideline for further assessment and management of risk for suicide. Whether a suicidal person is identified by a screening tool as part of their military readiness; as part of routine healthcare; within specialized care for depression, post-traumatic stress disorder, or traumatic brain injury; or by a supervisor, colleague, loved one, or him/herself; the evaluation begins with the suicide risk assessment. Patients with mental disorders who are managed according to evidence-based CPGs and are stable have some risk for suicide as a result of their mental disorders – a known risk factor for suicide. However, if these patients do not report any suicidal thoughts (screen negative for suicide ideation) or other warning signs they should not be managed by this guideline.

RECOMMENDATIONS

1. 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.

DISCUSSION

Indication for Assessment of Risk for Suicide:

Population-Based Screening: Because of the inherent health risks of military service, the Department of Defense has developed population-based screening to facilitate early detection of health concerns that may impact military operational readiness. This routine screening occurs on a regular basis in the Periodic Health Assessment, in Pre-Deployment Health Assessments, in Post-Deployment Health Assessment immediately upon return from deployment, and again three months later during the Post-Deployment Health Re-Assessment. These screening instruments incorporate assessment tools for depression (PHQ-2), post-traumatic stress disorder (PHQ-4), and alcohol abuse (AUDIT-C).

Universal Screening: Recognizing the risk of depression in the general population, many healthcare systems have begun routine screening as part of regular health maintenance. Instruments like the PHQ-9 (which includes a question regarding presence of suicidal ideation) are widely accepted and administered to patients in primary care settings.

Mental Disorders (Psychiatric Disorders): Certain mental illnesses are considered to be risk factors for suicide and are characterized by a high rate of suicidal ideation (e.g., depression). Identification of suicidal ideation in the management of these illnesses should prompt formal comprehensive assessment and management of the risk for suicide.

Medical Conditions (Chronic pain): In many cases chronic pain and physical discomfort is associated with functional difficulties and disabilities that may increase of suicidal thoughts and ideation. Psychiatric comorbidity is common among individuals with a pain condition. Pain, depression, and disability are known to be mutually reinforcing. Back, neck and joint pain can be accounted for by co-morbid mental health disorders. There may be additional risk accompanying frequent headaches and 'other' chronic pain that is secondary to psychosocial processes not captured by mental disorders.

Medical Conditions (Sleep disorder): Sleep disturbance is prevalent in and strongly associated with a variety of psychiatric and medical conditions. Both subjective and objective sleep disturbances appear to predict elevated risk for suicide. Multiple investigations, diverse in design, methodology, and the assessment of suicidal behaviors identify insomnia and poor sleep quality symptoms as significant suicide risk factors. Nightmares also appear more common among suicidal versus nonsuicidal individuals with major depression.

Indicated Screening: Certain groups of patients are considered to be at elevated risk for specific health conditions by the nature of a demographic characteristic, exposure to a threat, biological, physical characteristic, or occurrence of a related illness or symptom. For example, myocardial infarction patients are at risk for depression, women during pregnancy or in postpartum period are at risk for depression. As such, high-risk groups may be subject to focused screening. Any positive screen in these high-risk groups should be followed with a focused assessment.

Clinical Assessment: When patients present to a health care provider with complaints regarding symptoms of depression or suicidal thoughts, the focus is on conducting an evaluation to assess the nature, extent and other characteristics of suicidal behavior or risk for suicidal behavior with the goal of formulating a treatment plan. The patient has, in essence, self-screened for evaluation, and formal assessment is conducted to establish a diagnostic or other clinical formulation of the presenting problem. The therapeutic interventions that follow will first address the suicidal thoughts and behaviors regardless of the psychiatric diagnosis.

Referral from Non-Clinical Sources: Military members and Veterans interact with many helping agencies as well as commands, leaders, Chaplains, family members and unit peers. Many of these agencies and all Service members have suicide prevention training to identify persons at risk for suicide. Programs such as Applied Suicide Intervention Skills Training (ASIST) or "Ask, Care, Escort" (ACE) are conducted by helping professionals and lay persons ("gatekeepers") to prepare Service members to identify those at risk and facilitate their referral to qualified professional help.

B. Assess Risk for Suicide

Suicide risk assessment is a process in which the healthcare provider gathers clinical information in order to determine the patient's risk for suicide. The risk for suicide is estimated based on the patient's suicidal thoughts and intent, suicide related behavior, warning signs, risk and protective factors.

BACKGROUND

Suicide risk assessment is the process by which clinicians collect evidence and use their training to try to determine who is at high risk for suicide behavior. The ultimate goal of suicide risk assessment is to: Identify patients who are in need of immediate intervention to prevent a suicidal act; determine the appropriate treatment setting to optimize safety; deliver clinical interventions; and formulate a treatment plan that reduces the risk for future suicidal thoughts or behaviors.

A person's risk for suicide is dynamic: changing over time based on affective states, life events, and the complex interplay of risk and protective factors. Evaluation of these factors plays an important role in the overall assessment. A suicide risk assessment must include the evaluation of the patient's internal experience, thoughts, beliefs, and attitudes; their external world of relationships and stressors; as well as the myriad of factors that increase the likelihood of suicide and those that prevent them from action. All of these data must then be integrated by the clinician who must ultimately use clinical judgment to formulate a risk assessment and treatment plan.

Suicidal Ideation	Thoughts of engaging in suicide-related behavior. Various degrees of frequency, intensity, and duration
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 inferred in the absence of suicidal behavior. Extent of expectation to carry out the plan and the belief that the plan/act to will be lethal
Preparatory Behavior	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)

Suicide Surveillance: Uniform Definitions and Recommended Data, *Centers for Disease Control and Prevention (CDC, 2011).*

Estimating the Risk for Suicide

Determination of suicide risk should include three tasks:

1. Gathering information related to the patient's intent to engage in suicide-related behavior.
2. Evaluating factors that elevate or reduce the risk of acting on that intent.
3. Integrating all available information to determine the level of risk and appropriate setting for care.

Assessing for current intent and the degree of intent for suicide is a key component of the assessment process. The first aspect of the clinical assessment of suicide risk is the evaluation of the patient's **thoughts** of suicide, the **intention** to act on those thoughts, and the desire or the ability of the patient to not engage in suicidal behaviors. Any evidence of action toward a suicide attempt suggests a higher level of risk. Suicidal **preparatory behaviors** include the development of a plan to end one's life, rehearsing a plan, or taking steps to prepare for an attempt (e.g., stockpiling medications, buying a gun, tying a rope into a noose). Assessing the lethality of the plan is important, but also important is the patient's estimation of the lethality and understanding of the probable consequences of his/her actions or potential actions. Many suicidal individuals may reveal **warning signs** or signals of their intention to engage suicidal behaviors. These warning signs are observations of precipitating emotions, thoughts, or behaviors that are most proximally associated with a suicidal act and reflect imminent risk.

Three direct warning signs portend the highest likelihood of suicidal behaviors occurring in the near future. Observing these warning signs warrants immediate attention, mental health evaluation, referral, or consideration of hospitalization to ensure the safety, stability and security of the individual:

- **Suicidal communication** - writing or talking about suicide, wish to die, or death (threatening to hurt or kill self) or intention to act on those ideas.
- **Preparations for suicide** - evidence or expression of suicide intent, and/or taking steps towards implementation of a plan. Makes arrangements to divest responsibility for dependent others (children, pets, elders), or making other preparations such as updating wills, making financial arrangements for paying bills, saying goodbye to loved ones, etc.
- **Seeking access or recent use of lethal means** - such as weapons, medications, toxins or other lethal means.

These signals are likely to be even more dangerous if the person has previously attempted suicide, has a family history of suicide and/or intends to use a method that is lethal and to which he/she has access.

Once the patient's suicidal ideation, intent and behaviors are assessed then other factors that influence risk should be considered in a systematic way to finalize the determination of risk level. These factors may include risk as well as protective factors that, if modifiable, could become the focus of clinical intervention to reduce the risk for suicide:

- **Risk Factors -** increase the likelihood of suicidal behavior and include modifiable and non-modifiable indicators.
- **Protective Factors -** are capacities, qualities, environmental and personal resources that increase resilience drive individuals towards growth, stability, and health and increase coping with different life events and decrease the likelihood of suicidal behavior.

Basing the assessment of risk on an accumulation of risk factors alone is not realistic. Many risk factors are not modifiable. Awareness of the risk factors may alert the clinician to general levels of risk, but it is the key contextual triggering factors and the person's current mental state, suicidal intent and behavior that are most immediately important.

Finally, the formulation of the level of risk for suicide should also determine the most appropriate care environment in which to address the risk and provide the care needs. The first priority in determining the care setting is safety. Patients assessed as having a clear intention of taking their lives will require higher levels of safety protection than those who are able to maintain their own safety. Patients who are at high-risk for suicide require evaluation by mental health professions, and possible inpatient care to provide for

increased level of supervision and higher intensity of care. Those at intermediate and low risk may be referred to an outpatient care setting and with appropriate supports and safety plans, may be able to be followed-up in the community.

RECOMMENDATIONS

1. 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)
2. 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)
3. 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)
4. 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.
5. The clinician should observe the patient's behavior during the clinical interview. Disconnectedness or a lack of rapport may indicate increased risk for suicide.
6. 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.

How to Approach the Assessment of Risk for Suicide?

The evaluation of a patient's risk for suicide is often performed during a time of crisis during which the person may feel threatened that his/her sharing of suicidal thoughts and behaviors will result in the loss of autonomy through hospitalization, behavioral restriction, or the loss of esteem through recognition of psychiatric illness and the associated stigma. This crisis may confound the risk assessment if the identified patient seeks to minimize her/his symptoms in order to be released, or to reassure loved ones or the clinician.

Stigma may play a role in discouraging help-seeking behavior for those at risk for suicide and self-directed violence. It is therefore important for clinicians to be aware of the potential for patients to minimize their suicidal risks and try to reassure and convince the clinician they can be released from care.

Patients in a suicidal crisis often feel a great degree of shame and tend to be exquisitely sensitive to being judged. Therefore, a neutral, non-judgmental assessment is more likely to elicit reliable data and foster an alliance with the patient. The assessment should be stepwise, from general to specific questions. More detailed exploration is indicated if risk factors for suicide become apparent. It is important to recognize that risk may still be high in persons who are not explicitly expressing ideation or plans, searching for means, or threatening suicidal behavior. Persons who may truly intend to end their lives may conceal warning signs. If the patient is not willing or able to provide accurate information, then the clinician may need to relay on objective observations and demonstrated behaviors. Consultation with mental health professionals is advisable in such instances.

Some providers fear that by asking about suicide they may prompt the patient to feel suicidal. However, evidence shows that direct assessment of suicidal ideation and intent does not increase the risk for suicide. There is no risk of causing suicidality by talking about it; there is a risk of ignoring or missing

suicidality if the topic is avoided. Questions should be framed in a non-judgmental way to enhance the probability of eliciting a truthful response.

Examples of questions to be asked when assessing suicidality are included in the following recommendations. The examples are provided here to assist clinicians in the choice of words and phrases and in illustrating alternative approaches for eliciting information. In some cases other suicide risk assessment tools can assist in detecting incongruity between a person's level of distress and his or her stated level of intent regarding suicide. Additional useful information on how to approach the questioning and the assessment can be found on several websites [e.g., SPRC, SAMHSA].

C. Assessment of Suicidal Ideation, Intent and Behavior

Assess the patient's thoughts of suicide, the intention to act on those thoughts, and behaviors that demonstrate warning signs.

Suicidal self-directed violence can be conceptualized as a continuum with thoughts about death at one end and lethal suicidal acts at the other. Suicide risk often develops in a stepwise fashion with increasing and more specific ideation and planning overcoming ambivalence and the individual becoming more and more determined (Van Orden, 2010).

The first step in assessing suicide risk involves asking the patient direct questions to determine where the individual falls on this continuum. Has the patient advanced beyond thoughts of death, are the necessary components of suicidal intent present (wishes to die, means to kill oneself and understanding of the consequences of actions). In some cases suicide has already been attempted or acts or preparation towards engaging in Self-Directed Violence can be observed. The circumstances of the individual patient in regards to the continuum are the first clue in formulation of the level of risk for suicide.

C1. Suicidal Ideation/Thoughts

Ask the patient if he/she has thoughts about wishing to die by suicide, or thoughts of engaging in suicide-related behavior. The distinction between non-suicidal self-directed violence and suicidal behavior is important.

BACKGROUND

The assessment of risk for suicide begins with query regarding ideation and gaining an understanding of the patient's suicidal thoughts with the goal of identifying suicidal intent. Suicidal thoughts can lead to suicidal behavior. Thoughts may be persistent or fleeting, with the former being more likely to compel action than the latter. Therefore it is important to understand the nature, intensity, frequency and duration of any suicidal thoughts a person is experiencing as part of any suicide risk assessment. Inquire about recent ideation (preceding 2 weeks) and past events. In addition, explore if the suicidal thoughts are current, being experienced by the patient during the interview itself.

The nature and frequency may or may not be related to suicidal intent. Suicidal ideation is assumed to be present in the majority of suicide attempts and completed suicides; however many who attempt suicide deny suicidal ideation prior to attempt, and many individuals have suicidal thoughts without making attempts.

Remember, asking directly does not increase patient's ideation, but rather indicates that you are ready to listen and help.

RECOMMENDATIONS

1. 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

Example of Questions on Ideation:

"With everything that has been going on, have you been experiencing any thoughts of killing yourself?"

- *When did you begin having suicidal thoughts?*
- *Did any event (stressor) precipitate the thoughts?*
- *How often do you have thoughts of suicide?*
- *How long do they last?*
- *How strong are the thoughts of suicide?*
- *What is the worst they have ever been?*
- *What do you do when you have these (suicidal) thoughts?*
- *What did you do when they were the strongest ever?*
- *Do thoughts occur or intensify when you drink or use drugs?*

C2. Suicidal Intent

Assess for past or present evidence (implicit or explicit) that the individual wishes to die, means to kill him/herself, and understands the probable consequences of his/her actions or potential actions.

BACKGROUND

Assessing for current intent and the degree of intent for suicide is a key component of the assessment process. The presence of intent to act upon suicidal thoughts is generally indicative of high risk for suicide. Therefore it is important to understand the extent to which the patient: 1) wishes to die; 2) means to kill him/herself; 3) and understands the probable consequences of his/her actions or potential actions.

Patients with active suicidal ideation may have the intent to act, a plan to act, both, or neither. The evolution of intent can occur over minutes or years. In some cases the intent stage may be very brief and the suicidal ideation may propel to a behavior or suicide act.

The assessment for suicidal intent can be challenging:

- Although many patients find it a relief to finally be able to discuss their thoughts and plans, patients who have the most serious suicidal intent may be the most likely to withhold their intent. The determination of suicide intent may be based upon a blend of what the patient tells the clinician (the stated intent), how plans and action may indicate the actual intent, and what the patient consciously or unconsciously withholds. Explicit evidence is generally objective behaviors that may include things like a note or statement related to the wish to die, or making preparations for death (giving away items, completing a will). To understand the strength and desire of the patients who state they "wish to die" it is also useful to identify what are their reasons for living. Do they state that, although they think about suicide, they don't think they "could ever bring themselves to leave their family" or "they would never do it because it would leave their children without a parent". On the other hand, it is also helpful when the answer is "Very likely," "Why not?" or "No one cares…"
- The existence of suicidal intent can also be reflected in the level of the patient's expectation to carry out a plan and the belief that the plan/act will be lethal. Therefore, patients should be asked if they have developed a plan to end their life. A well-formulated plan to attempt suicide indicates greater thought and intent about the possibility of action. The lethality of the plan is indicative of risk in that death is more likely with a firearm than a drug overdose. The feasibility of the plan should also be considered. How accessible/realistic is the stated plan for suicide is important in determining the level of the risk.
- Also critically important are the patient's thoughts about "how" they would make an attempt. Will they isolate themselves in a remote location to avoid detection? Have they considered the consequences of their action? Planning to make the intent known to others may reveal insight in a hope to be interrupted and rescued.
- The extent, thoroughness, and time spent by the patient on suicidal planning may be a better reflection of the seriousness of the intent and the proximity of the patient's desire to act on that intent. It is important to bear in mind that medical and/or psychiatric conditions (e.g., delirium, intoxication, psychosis) can impair an individual's ability to understand the probable consequences of their actions or potential actions.
- There is often a great deal of contingency planning around controlling suicidal behavior, whereby the patient believes suicide would not be attempted if certain conditions existed, but would be acted upon under other circumstances. It is important to understand these contingencies to better assess an individual's actual intent at a given point in time. For example, and individual might state that they would only kill themselves if a medical condition took a turn for the worse.

RECOMMENDATIONS

1. 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
2. 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
3. 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

Example of Questions on Intent:
- *Do you wish you were dead?*
- *Do you intend to try to kill yourself?*
- *Do you have a plan regarding how you might kill yourself?*
- *Have you taken any actions towards putting that plan in place?*
- *How likely do you think it is that you will carry out your plans?*

C3. Preparatory Behavior

Assess if the patient has begun to show actual behavior of preparation for engaging in Self-Directed Violence (e.g., assembling a method, preparing for one's death).

BACKGROUND

Assessment of risk for suicide may find that the patient has already begun to take specific action in implementing their plan to kill themselves (e.g., buying a gun, collecting pills, assembling methods), or started to make preparation for the aftermath of their death (e.g., giving away their belonging, changing a will, or sending notes to loved ones). These acts and behaviors are defined as preparatory behaviors and put the patient at the high risk for suicide. Research has shown that resolved plans and preparatory behavior predicted death by suicide and history of suicide attempts.

Gathering information regarding preparatory behaviors may require exploring other sources of information about the patient. This may require a careful discussion with the patient and obtaining the patient's consent. Peers, unit members, and command elements may play a critical role in corroborating information regarding psychosocial functioning and preparatory behavior.

RECOMMENDATIONS

1. 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
    b. Action taken or other steps in preparing to end one's life:
        - Writing a will, suicide note

- Giving away possessing
- Reviewing life insurance policy

2. Obtain collateral information from sources such as family members, medical records, and therapists.

> *Examples of Questions on Preparation:*
> • *Do you have a plan or have you been planning to kill yourself?*
> *If so, how would you do it? Where would you do it?*
> • *Do you have the (drugs, gun, rope) that you would use? Where is it right now?*
> • *Do you have a timeline in mind for killing yourself?*
> • *Is there something (an event) that would trigger acting on the plan?*
> • *How confident are you that your plan will end your life?*
> • *What have you done to begin to carry out the plan?*
> • *Have you made other preparations (e.g., updated life insurance, made arrangements for pets)?*

C4. Previous Suicide Attempt

Obtain information from the patient and other sources about previous suicide attempts. Historical suicide attempts may or may not have resulted in injury, and may have been interrupted by the patient or by another person prior to fatal injury.

BACKGROUND

The suicidal behavior may have intensified even further to include a non-fatal suicide attempt, interrupted by self or other [e.g., overdosing on drugs but calling for help (911) or vomiting immediately; or being found by someone (family/first responders and being saved)]. A suicide attempt may or may not have resulted in injury. History of a past suicide attempt is one of the strongest and most reliable predictors of future suicidal behavior.

While the literature regarding the impact of a recent suicide attempt on future behavior varies in regard to the time frame for the definition of recent, the general level of concern relating to a past attempt is increased with high lethality events, and decreased when past events are more temporally remote. Individuals with a history of multiple attempts often present a more complicated clinical picture. Consultation with a mental health professional is indicated.

RECOMMENDATIONS

1. 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.

DISCUSSION

According to the framework of Joiner's Interpersonal Theory, three constructs are necessary, sufficient, and proximal causes of lethal suicidal behavior. Two of these are primarily related to suicidal desire—thwarted belongingness and perceived burdensomeness—and one primarily related to capability—learned fearlessness of physical pain, physical injury, and death itself (i.e., the acquired capability for suicide).

This latter factor provides a framework for understanding the complex relations between a history of past attempts and risk for future suicidal behavior. According to the theory, the most direct route (but not the only route) to acquiring the capability for suicide is by engaging in suicidal behavior, either through suicide attempts, aborted suicide attempts (preparing for the attempt and nearly carrying it out), or practicing and/or preparing for suicidal behavior (e.g., hoarding medications; buying a gun with intent to engage in suicidal behavior; and imagining one's death by suicide). Although Joiner and his colleagues (e.g., Van Orden et al., 2010) have been clear that they invite ongoing empirical scrutiny of the theory, there is considerable empirical support to date (summarized in Van Orden et al., 2010).

Previous Attempt

Several studies indicate that one of the most reliable and potent predictor(s) of future suicidal ideation, attempts, and death by suicide is having a prior history of this type of behavior.

The risk for completed suicide is considerably increased in individuals with a previous suicide attempt: 0.5% to 2% at one year, above 5% at nine years (Owens, 2002). Repetition rates are high (e.g., 16% at 1 year, 21% at 1 to 4 years and 23% at over 4 years) Owens, 2002).

Review of risk factors for suicide indicates that a history of a past suicide attempt is one of the strongest and most reliable predictors of suicidal behavior; however, the literature also indicates that the majority of individuals who attempt suicide will not eventually die by suicide and that many people who die by suicide have not previously attempted (Rudd, Joiner, & Rajab, 1996). One important risk may be regretting having survived a suicide attempt. It was found to be associated with later death from suicide (Henriques et al., 2005).

Multiple attempts

The presence of multiple past attempts is an especially strong predictor of lethal suicidal behavior in adults (Christiansen et al., 2007; Haw et al., 2007; Suominen et al., 2004; Zonda, 2006), as is a previous attempt with high medical lethality (Gibb, et al., 2005). A 37-year longitudinal study indicated that the elevation in risk for lethal suicidal behavior conferred by a history of a previous attempt persists over the lifetime (Suominen et al., 2004).

Previous researchers have subsumed multiple attempters under the general category of attempters. The relationships among suicide ideators, attempters, and multiple attempters were explored in 332 psychiatric patients referred specifically for suicidal ideation or behavior (Rudd et al., 1996). Comparisons across a range of variables, including Axis I DSM diagnoses of depressive and anxiety symptoms, suicidal ideation, hopelessness, problem solving, and a range of personality features revealed that multiple attempters presented a more severe clinical picture and, accordingly, elevated suicide risk compared with single attempters and ideators. Observed differences between groups were maintained when attempters with "questionable intent" (i.e., those making equivocal attempts) were excluded from the analyses.

Some research on effectiveness of treatment intervention has shown difference in outcome between single and multiple attempters (Hatcher 2011).

C5. Warning Signs – Indications for Urgent/Immediate Action

Recognize precipitating emotions, thoughts, or behaviors that are most proximally associated with a suicidal act and reflect high risk

Many suicidal individuals reveal warning signs or signals of their intention to engage suicidal behaviors, thereby providing clinicians or other supportive persons the opportunity to recognize an impending suicidal crisis and intervene.

Three **direct** warning signs portend the highest likelihood of suicidal behaviors occurring in the near future. Observing these warning signs warrants immediate attention, mental health evaluation, referral, or consideration of hospitalization to ensure the safety, stability and security of the individual:

- **Suicidal communication** - **writing** or talking about suicide, wish to die, or death (threatening to hurt or kill self))
- **Seeking access or recent use of lethal means**: such as weapons, medications, or other lethal means
- **Preparations for suicide** - evidence or expression of suicide intent, and/or taking steps towards implementation of a plan. Makes arrangements to divest responsibility for dependent others (children, pets, elders), or making other preparations such as updating wills, making financial arrangements for paying bills, saying goodbye to loved ones, etc.

These signals are likely to be even more dangerous if the person has previously attempted suicide, has a family history of suicide and/or intends to use a method that is lethal and to which he/she has access.

Other **indirect** warning sign presentation(s) or behavioral expressions that may indicate increased suicide risk and urgency in a patient at risk for suicide

RECOMMENDATIONS

1. 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

DISCUSSION

These warning signs are based on an expert panel's recommendations (Rudd et al., 2006). And have very limited empirical basis generally. Moreover, there is a true paucity of controlled data on warning signs in Veterans or Military Service members.

As thoughts of death become more specific regarding suicide, the following may be observed and indicate an increased risk:

- Feelings of hopelessness,
- Sense of isolation or alienation (being alone and misunderstood)
- Negative ruminations, self-pity
- Inactivity and social withdrawal
- Inhibited aggression turned toward the self (auto-aggression)
- Suicidal fantasies and planning
- Dysphoria
- Somatic symptoms such as sleep problems, fatigue, and loss of appetite.

Once the decision to die by suicide is made, the suicidal person may be less agitated and appears more stable, leading clinicians to underestimate the suicide risk. Presence of the above behavioral characteristics should be considered a warning sign.

D. Assessment of Factors that Contribute to the Risk for Suicide

Assess factors that are known to be associated with suicide (i.e., risk factors, precipitants) and those that may decrease the risk (i.e., protective factors).

BACKGROUND

Suicide usually occurs in a crisis and rarely happens in the absence of other important factors. For a suicide act to take place it usually requires a predisposition, a precipitating event or trigger, and the capability (method and access to means) to carry it through. Being aware of these allows possible interventions to decrease the risk at various stages of the crisis.

Risk factors help distinguish a higher risk group from a lower risk group. Risk factors may be modifiable and non-modifiable. Both modifiable and non-modifiable risk factors inform risk formulation and modifiable risk factors may also be targets of intervention. The goal of risk factor assessment will vary depending on the clinical setting and level of care.

The presence of risk factors may increase risk for suicide, but the acuity of risk is further established by the presence of warning signs. For example, not all persons who are unemployed are at risk for suicide. However, if an unemployed person becomes increasingly hopeless about his or her future, possibly due to extreme financial difficulties or inability to support family, and begins to express purposelessness (decrease of self-esteem), then that person may be at high risk for suicide.

Predicting with certainty whether any given individual will actually attempt suicide is difficult, if not impossible. However, it is important to know that in many cases, people who die by suicide have communicated suicidal thoughts and feelings and their intent to kill themselves to someone prior to the suicidal act (Average 29% of suicides in DoDSER 2009-2011), and suggested missed opportunities for life-saving interventions. It is possible to recognize changes in behavior and the existence of crises that place people at high risk and may precipitate suicidal behavior. Friends, family members, commanders, and relatives who come into contact with the person can help.

Knowledge of risk factors may help to target intervention that will prevent the potentially destructive process in which a person is involved. Action may then be taken to reduce the risks. For example, experiences such as history of traumatic events, chronic illness and disability, lack of social support and extreme loss (i.e., financial, personal, social), and substance abuse are important for understanding the origins of risk. These risk factors in the absence of warning signs may represent a less immediate risk for suicide. Focusing intervention to mitigate these stressors can reduce the risk and avoid the progression into warning signs of suicidal behavior.

Once the decision to die by suicide is made, the suicidal person may paradoxically appear less agitated and more stable, leading clinicians to underestimate suicide risk. Therefore, a sudden apparent decrease in distress in an individual recently deemed to be at high risk of suicide warrants caution and reassessment or risk.

RECOMMENDATIONS

1. Providers should obtain information about risk factors during a baseline evaluation – recognizing that risk factors have limited utility in predicting future behavior.
2. 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.

3. 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.
4. 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.
5. 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).
6. Risk factors should be solicited and considered in the formulation of a patient's care.
7. 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.
8. 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
9. 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.

DISCUSSION

For discussion of the evidence regarding factors contributing to the risk for suicide see Appendices B1-B4

D1. Risk Factors / Precipitants

Risk factors distinguish a higher risk group from a lower risk group. Risk factors may be modifiable or non-modifiable and both inform the formulation of risk for suicide. Modifiable risk factors may also be targets of intervention.

BACKGROUND

Factors that may increase risk or factors that may decrease risk are those that have been found to be statistically related to the presence or absence of suicidal behaviors. They do not necessarily impart a causal relationship. Rather they serve as guidelines for the clinician to weigh the relative risk of an individual engaging in suicidal behaviors within the context of the current clinical presentation and psychosocial setting. Individuals differ in the degree to which risk and protective factors affect their propensity for engaging in suicidal behaviors. Within an individual, the contribution of each risk and protective factor to their suicidality will vary over the course of their lives.

No one risk factor, or set of risk factors, necessarily conveys increased suicide risk. Nor does one protective factor, or set of protective factors, insures protection against engagement in suicidal behaviors. Furthermore, because of their different statistical correlations with suicidal behaviors, these factors are not equal and one cannot "balance" one set of factors against another in order to derive a sum total score of relative suicide risk. Some risk factors are immutable (e.g., age, gender, race/ethnicity), while others are more situation-specific (e.g., loss of housing, exacerbation of pain in a chronic condition, and onset or exacerbation of psychiatric symptoms).

PSYCHOLOGICAL FACTORS

- Suicide of relative, someone famous, or a peer
- Suicide bereavement
- Loss of loved one (grief)
- Loss of relationship (divorce, separation)
- Loss of status/respect/rank (public humiliation, being bullied or abused, failure work/task)

SOCIAL FACTORS

Stressful Life Events (acute experiences)

- Breakups and other threats to prized relationships
- Other events (e.g., fired, arrested, evicted, assaulted)

Chronic Stressors (ongoing difficulties)

- Financial Problems
  - Unemployment, underemployment
  - Unstable housing, homeless
  - Excessive debt, poor finances (foreclosure, alimony, child support)
- Legal Problems (difficulties)
  - DUI/DWI
  - Lawsuit
  - Criminal offence and incarceration
- Social Support
  - Poor interpersonal relationship (partner, parents, children)
  - Geographic isolation from support
  - Barriers to accessing mental health care
  - Recent change in level of care (discharge from inpatient psychiatry)

MENTAL DISORDERS

- Mood or affective disorder (major depression, bipolar, post-partum)
- Personality disorder (especially borderline and antisocial)
- Schizophrenia
- Anxiety (PTSD, Panic)
- Substance Use Disorder (alcohol, illicit drugs, nicotine)
- Eating disorder
- Sleep disturbance or disorder (See Appendix B-4)
- Trauma (psychological)

MEDICAL CONDITIONS

- History of Traumatic Brain Injury (TBI)
- Terminal disease
- HIV/AIDS
- New diagnosis of major illness
- Having a medical condition
- Worsening of chronic illness
- Intoxication
- Substance withdrawal (alcohol, opiates, cocaine, amphetamines)
- Use of prescribed medication w/ warning for increased risk of suicide (See Appendix B-3)

Physical Symptoms

- Chronic pain
- Insomnia
- Function limitation

MILITARY-SPECIFIC

- Disciplinary actions (UCMJ, NJP)
- Reduction in rank
- Career threatening change in fitness for duty
- Perceived sense of injustice or betrayal (unit/command)
- Command/leadership stress, isolation from unit
- Transferring duty station (PCS)
- Administrative separation from service/unit
- Adverse deployment experience
- Deployment to a combat theater

PRE-EXISTING & NON-MODIFIABLE

- Age (young & elderly)
- Gender (male)
- Race (white)
- Marital status (divorce, separate, widowed)
- Family history of:
  - Suicide/ attempt
  - Mental illness (including SUD)
  - Child maltreatment trauma-physical/psychological/sexual
  - Sexual trauma
- Lower education level
- Same sex orientation (LGBT)
- Cultural or religious beliefs

D2. Impulsivity

BACKGROUJND

Impulsivity is considered a risk factor for suicide and usually refers to the "the inability to resist a drive or stimulus, or a behavior that occurs without reflection or consideration for [its] consequences" (Zouk, 2006). Assessment of risk for suicide should focus on both, as a distinct component of the suicidal act itself (e.g., loss of control, acting on a whim), and impulsivity as a trait of the individual (e.g., demonstrating inappropriate behaviors such as temper outbursts or sexual indiscretions, using substances exacerbating adverse impulsive behaviors).

RECOMMENDATIONS

1. 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
2. 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.

DISCUSSION

Impulsivity has been correlated with higher rates and greater lethality of suicide attempts (**Javdani et al., 2011**)**,** and is commonly associated with borderline personality (**LeGris J., 2006**), bipolar disorder **(Swann et al., 2005**), alcohol dependence, and executive dysfunction secondary to major depression (Keilp et al., 2001). Mild to severe traumatic brain injuries are also associated with increased disinhibition/impulsivity and correlated with increased suicidal behavior (Yurgelun-Todd et al., 2011). Increased social support may mitigate impulsiveness (Kleiman et al., 2012).

Paradoxically, while commonly held lay and even professional perceptions of suicide include the notion that most involve impulsivity; current research demonstrates that most suicides actually follow a plan, and thus are potentially foreseeable. This important distinction is based upon the critical difference between "state impulsivity" (traditional notion of suicide resulting from impulsive act) and impulsivity as a "trait or personality variable" exhibited throughout one's life. This corresponds to recent understandings based on research (Thomas Joiner) indicating suicides involve 3 critical factors: 1. A sense of perceiving oneself as burdensome to others; 2. A lack of belongingness; and 3. A learned capability for self-injury based upon experiencing activities that "foster fearlessness of and competence for suicide." Subsequent research has demonstrated that impulsive traits do not predict suicide attempt impulsivity, and that non-impulsive attempts were more lethal (Smith et al., 2008).

An individual's degree of impulsivity should be one component of the assessment of risk for suicide, as "impulsivity increases the likelihood that an individual will acquire the capability for suicide." (Smith et al., 2008 p.12). Furthermore, clinicians "should not be overly focused on an individual's level of impulsivity per se; rather, more time should be spent determining whether the individual's level of impulsivity has in fact led to a lifestyle fraught with painful and provocative experiences, which should be included in the risk assessment as well" (Smith et al., 2008 p.12).

D3. Protective Factors

Protective factors are capacities, qualities, environmental and personal resources that drive individuals towards growth, stability, and health and may reduce the risk for suicide.

The assessment for protective factors can identify potential strengths and resiliency that may be used to buffer suicide risk. Recognizing protective factors can be a means to encourage hope among persons at risk. These factors should be capitalized upon to mitigate risk in both the short and long-term.

RECOMMENDATIONS

1. Assessment should include evaluation of protective factors, patient's reason to for living, or other factors that mitigate the risk for suicide.

Social Context Support System

- Strong interpersonal bonds to family/unit members and community support
- Employed
- Intact marriage
- Child rearing responsibilities
- Responsibilities/duties to others
- A reasonably safe and stable environment

Positive Personal Traits

- Help seeking
- Good impulse control
- Good skills in problem solving, coping and conflict resolution
- Sense of belonging, sense of identity, and good self-esteem
- Cultural, spiritual, and religious beliefs about the meaning and value of life
- Optimistic outlook -Identification of future goals
- Constructive use of leisure time (enjoyable activities)
- Resilience

Access to Health Care

- Support through ongoing medical and mental health care relationships
- Effective clinical care for mental, physical and substance use disorders
- Good treatment engagement and a sense of the importance of health and wellness

DISCUSSION

Research on protective factors has lagged behind research on risk factors and, therefore, the listing represents a preliminary starting point that is based on available data, clinical experience, and theory. Although clinicians are encouraged to use this list of protective factors in their risk formulations, they should recognize that it is based on limited evidence and is no doubt incomplete. It may be more useful for clinicians to think about ways in which existing protective factors can be strengthened in the context of treatment planning, rather than attempting to weigh them as mitigating overall risk.

D4. Substance Abuse and Disorder

BACKGROUND

Substance use disorders are a prevalent and strong risk factor for suicide attempts and suicide. The recommendations for assessment of risk for suicide in this (Module) guideline generally apply to individuals with substance use disorders and should be followed.

Three key additional issues to bear in mind in working with this population refer to assessing intoxicated patients, differentiating unintentional and intentional overdose events, and special assessment considerations.

Individuals at acute risk for suicidal behavior who appear to be under the influence of alcohol or other drugs, either based on clinical presentation or objective data (e.g., breath or laboratory tests), should be maintained in a secure setting until intoxication has resolved. Risk assessment needs to be repeated once the patient is sober in order to determine appropriate next steps. Risk management options include, but are not limited to, admitting the patient for inpatient hospital care, making a referral for residential care, detoxification, or ambulatory care, or scheduling outpatient follow-up in the near future.

Intentional overdose is the most common method of attempted suicide. Therefore, the possibility that an overdose event was an intentional act of self-directed violence should always be considered. 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.

The same factors that confer risk for suicidal behavior in non-substance abusers generally also confer risk among individuals with substance use disorders. For example, depression is a potent risk factor in both substance abusers and non-substance abusers. The presence of comorbidities (e.g., substance use disorder plus mood disorder) is the rule rather than the exception in high-risk clinical populations.

RECOMMENDATIONS

1. 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.
2. 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.
3. Assess the presence of psychiatric and behavioral comorbidities (e.g., mood, anxiety disorder, aggression) in patients with substance use disorder at risk for suicide.
4. 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.

DISCUSSION

Assessment of Intoxicated suicidal patient

In some individuals, SUD and suicidality may be temporarily related. Alcohol intoxication significantly increases suicide risk. The acute effects of intoxication may heighten psychological distress, increase aggressiveness, enhance suicide-specific expectancies, encourage making a suicide attempt, and inhibiting the generation and implementation of adaptive coping strategies. Among individuals contemplating suicide, these events may be sufficient to propel suicidal thoughts into action (Hufford, 2001). Intoxicated people are more likely to attempt suicide by using means that have a very low probability of survival. There is evidence that alcohol intoxication predicts the use of more lethal means (e.g. a firearm) in the suicide (Brent et al., 1987; Hufford, 2001). The disinhibition produced by intoxication probably facilitates suicidal ideas and increases the likelihood of suicidal thoughts being put into action, often impulsively (Sher 2006).

In managing intoxicated patients, some guidelines should be kept in mind. First, suicidal thoughts or behavior are not typical consequences of acute substance use and suggest the individual is at increased risk. Accordingly, detoxification alone is never sufficient in the presence of suicidal thoughts or behavior.

Second, there is high potential for minimization in individuals who deny suicidal thoughts once intoxication has resolved. Therefore, consulting other sources of information (e.g., medical record, collateral reports) is invaluable in making a risk formulation. Third, mood disorders confer risk for suicidal behavior whether they are induced by substances or occur independently of substance use (Aharonovic et al., 2002; Preuss et al., 2002). Therefore, risk for suicidal behavior must be addressed regardless of the etiology of a mood disturbance. Moreover, substance-induced vs. independent mood disorders (and other mental disorders) are difficult to disentangle in acute care settings and, as a result, such diagnoses should be made with appropriate caution (e.g., through use of provisional diagnoses). Fourth, more than a third of suicide deaths occur among individuals who had been drinking (Cherpitel et al., 2004), typically at high levels of alcohol consumption (Kaplan et al., 2012), and controlled reports confirm that acute alcohol use is a potent risk factor for suicidal behavior (Borges et al., 2000; Branas et al., 2011, Powell et al., 2001). Such data forcefully show that individuals who are under the acute influence of alcohol are at more (not less) risk for suicidal behavior, with potentially deadly consequences.

Risk assessment in Individuals with substance use disorders

SUDs and suicidality may also have a more distal relationship. For example, SUDs may lead to substance-related social, academic, and/or legal problems, which in turn may cause and/or worsen co-occurring psychiatric symptoms, and eventually lead to the development of suicidal thoughts or behavior (Hufford, 2001). Several risk factors are more likely to be observed among individuals with substance use disorders including aggression and impulsivity, disruptions in relationship, and legal and financial difficulties (Conner & Ilgen, 2011).

A substantial body of knowledge suggests that substance use – both drugs and alcohol – is associated with mental disorders. Co-occurring mental and substance use disorders are a common and potent combination among those who die by suicide. Psychological autopsy studies conducted internationally showed that mood disorders (particularly major depression) and substance use disorders were the most common disorders in people who died by suicide, and that 38 percent had a substance use disorder(s) plus one or more other psychiatric disorder(s) (Cavanagh et al., 2003).

Ilgen, Downing et al., (2009) identified subgroups of patients with depression treated in the Veterans Affairs health system with significantly high or low rates of suicide during a 7-year follow-up period, during which 7,684 veterans committed suicide. Patients with SUDs who were admitted as inpatients for treatment of mental health disorders and were non-African American were at highest risk for suicide. Male patients with bipolar disorder and female patients with SUDs were especially at risk. The authors concluded, “The examination of higher-order interactions among potential risk factors improves the reliability of identifying increased suicide risk among patients who are depressed.” (Ilgen 2009). Substance-induced depression and other substance-induced psychiatric symptoms are likely to be observed among individuals with substance use disorders (Conner & Ilgen, 2011).

There is little data on substance-specific risk factors after taking into account inherent differences between users of one substance (e.g., opiates) vs. another (e.g., alcohol). Research on suicidal thoughts and behaviors associated with different substances including acute drug effects and withdrawal states are needed. For example, depressed mood associated with cocaine withdrawal is very likely one explanation (among several) for the link between cocaine and suicidal thoughts and behavior (Marzuk et al., 1992), and clinically it is important to attend to potential risk during cocaine withdrawal.

Disentangling Unintentional vs. Intentional Overdose

Intentional overdose is the most common method of attempted suicide. Therefore, the possibility that an overdose event was an intentional act of suicide should always be considered. The differentiation between unintentional and intentional overdose is generally straightforward in patients who are forthcoming. However, many patients will attempt to mask a suicide attempt as unintentional, and the

differentiation is especially challenging in patients with a history of substance abuse (Bohnert et al., 2010). Unfortunately, there is limited data on the differentiation between unintentional overdose and suicidal behavior (i.e., intentional overdose) in substance abusers (Bohnert et al., 2010). Available data indicate that risk factors for suicide attempt (compared to unintentional overdose) include female sex, comorbid depression, interpersonal distress or disruption, and use of substances other than one's drug of choice (Bohnert et al., 2010; Bohnert et al., 2011; Conner et al., 2007). Prior suicide attempt(s) also increases the likelihood that a recent overdose event was intentional. A telltale risk factor for unintentional overdose (compared to suicide attempt) is a recent loss of tolerance, for example due to incarceration or detoxification (Bohnert et al., 2010). It may also be presumed that individuals using recreational drugs with high potential for miscalculation, for example intoxicants sold in head shops as "bath salts", were more likely to experience unintentional overdose. Complicating the differentiation between intentional and unintentional overdose, there are some common risk factors for both including severe substance use history, and some substance abusers will have a history of both events (Bohnert et al., 2010) Although not typical, there are instances when intentionality is equivocal even among substance abusers who are forthcoming, for example a case where the individual was experiencing suicidal ideation when he or she overdosed but appears not to have resolved to make an attempt, or when a distressed individual knowingly pushed the limits of dosage and stated to the effect "I didn't care if I lived or died" but seemed to have no clear agenda for suicide.

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. Use of reliable, standard interview items may also be of assistance (Britton, Wines, & Conner, 2012).

D5. Assess Access to Lethal Means

Assess the availability or intent to acquire lethal means including firearms and ammunition, drugs, poisons and other means in the patient's home. For Service members, this includes assessing privately owned firearms.

BACKGROUND

Military Service members and Veterans are at risk for lethal suicidal behavior and are more likely to use firearms as the suicide method; the increased risk for use of firearms is notable, given that this population has extensive exposure to firearms, and ample opportunities to have access to them. Certain military occupations have daily access to firearms; and the majority of military personnel have at least some weapons training.

Providers should assess the presence and the access to lethal means including firearms and ammunition, as well as prescribed and over the counter drugs, poisons and other means in the patient's home.

RECOMMENDATIONS

1. 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.

DISCUSSION

There is a significant positive association between accessibility to lethal means and suicide events (Humeau et al., 2007). Limited evidence based on observational studies and available population data for event methods used in suicide and non-fatal attempts were identified in general population, Veterans and DOD Service members.

General Population

Several studies have addressed the issue of different patterns of methods used in male and female suicide populations as the primary reason for gender differences in suicide mortality. Traditionally, women have selected suicide methods that are less lethal and men have chosen techniques that are more violent and whose consequences are irreversible. Hanging was the most predominant method of suicide in all European countries combined. In fact, 54.3% of males and 35.6% of females died from hanging (**Varnik, 2008**).

A study of suicide methods in a large number of cases in Japan and the United States revealed that Japan had a very high proportion of hanging (70.4% for males and 60% for females); this proportion was much lower (18.2% for males and 16.2% for females) in the United States. Similarly, an Australian study reported hanging in 32% of its cases. Firearms, a highly lethal method, ranked the third among males (9.7%) and were rarely used among females (1.3%) in European countries combined. In the United States, respective proportions were much higher—63.1% and 37.2% (**Ojima 2004**). An Australian study reported the use of firearms in 22% of total suicides. Limiting access to firearms has been found to be an effective means of reducing suicide mortality **(Leenaars, 2004; Shenassa 2003).**

In the U.S. between 1999 and 2004, 54.6% of suicide deaths were attributed to firearms, 20.4% to suffocation, and 17.2% to poisoning (CDC). Two studies from the United States did indicate that firearm accessibility, especially handguns, was associated with a higher risk of suicide in older adult men (Birckmayer et al., 2001; Conwell et al., 2002).

Among drug-related suicide attempts by persons aged 18 or older who visited Emergency Departments, 33.2% involve alcohol, 28.4% illicit drugs like cocaine or marijuana, 59% psychotropic medications, and 36% pain medications, such as opioids, nonsteroidal anti-inflammatory agents, and acetaminophen (SAMHSA, 2006).

Veterans

People who use firearms in a suicide attempt have a higher rate of suicide deaths than people who use other means, simply because firearms are more lethal than other means (Brent et al., 1991; Shenassa et al., 2003; Miller, 2008).

Suicidal Veterans are more likely to own a firearm than their nonsuicidal counterparts (**Lambert et al., 1997; Thompson et al., 2006**). Veterans are also more likely to use a firearm to complete suicide than members of the general population (**Kaplan et al., 2007; Desai et al., 2005**). A survey of combat Veterans in a posttraumatic stress disorder rehabilitation program found that 75% of Veterans reported owning firearms, 59% had considered using a firearm to complete suicide, and 38% had loaded a firearm with suicide in mind while intoxicated. Although some research has shown that firearm access or ownership is associated with an increased risk of suicide among Veterans, most of the studies focused exclusively on VA male patients (**Kaplan 2007; Lambert 1997; Desai 2005; Freeman 1994**).

The rate, prevalence, and relative odds of firearm use among Veteran suicide decedents were studied by **Kaplan (2009).** Data from the National Violent Death Reporting System (NVDRS) from 2003 to 2006 was used to estimate the rates of firearm suicide among Veterans and non-Veterans. The firearm suicide rate among male Veterans (all ages) was 81% higher compared with their non-Veteran counterparts. Female Veteran suicide rate was nearly three times higher than among nonveterans (9.8 versus 3.4 per 100,000). With the exception of older women (age older than 65years), female Veterans had higher suicide rates than their non-Veteran counterparts. At all ages, Veterans had higher proportions of suicide involving firearms than non-Veterans. Veterans aged 18 to 34 and >65 years had the highest firearm suicide rates.

Strikingly, firearm suicide rate among male Veterans aged 18 to 34 years was 150% higher than that of their non-Veteran counterparts (**Kaplan, 2009**).

VHA – Event Method of Suicide (%)		
Year Total number of Suicides	2001-2009 (16,088)	2009 (1,788)
Mean	Frequency (%)	
Firearm	67	66.7
Drugs /Substances	14.4	14.2
Hanging, strangulation	11.7	12.1
Other	6.8	7

VHA - Event Method of Non Fatal Attempt **	
Year Total number of Attempters	2009-2011 (28,087)
Mean	Frequency (%)
Poisoning	49
Other/Not provided	14
Multiple methods indicated	10
Sharp object	9
Hanging, strangulation, suffocation	7
Firearms	5
Jumping	4
Other (Automobile, drowning, Fire)	2

** Based on SPAN and Most Recent VHA utilization (FY09-FY11) (Missing Data = 7586)

According to the most recent available data (VHA National Serious Mental Illness Treatment Resource and Evaluation Center (SMITREC), between FY 2001 and 2009, the means of suicide death among 16,088 Veterans 18 and older who utilized VHA services were: firearms, 67.0%; poisoning, 14.8%; strangulation, 11.7%; and other, 6.5. Firearms are, by far, the most common means for suicide among Veterans. In 2009, 66.7% of suicides among Veterans utilizing VHA health care services used firearms as a means. This proportion was comparable to the 69.2% among all Veterans included in the 2009 National Violent Death Reporting System. However, only 48.3% of non-Veterans included in the National Violent Death Reporting System utilized firearms.

DoD Service Members

Increasing numbers and rates of military member suicides have been by firearms. More than half of military suicide decedents had a firearm in the home or immediate living environment (Kinn, 2011).

According to the most recent available data (DODSER 2011) Service Members most frequently used firearms to end their lives (59.93% for all firearms, 49.13% for non-military issue firearms), or hanging (20.56%). Drug overdose was the most frequent method for suicide attempt (59.79%), followed by injury with a sharp or blunt object (11.98%). Firearms were present in the home or immediate environment of 50% of suicide decedents and of 11% Service members who attempted suicide.

Although the use of firearms is generally associated with men, the data reported suggest that firearms among female Veterans deserve particular attention among health professionals within and outside the Veterans' Affairs system. Suicides among female Service members are relatively uncommon, and suicide

methods likely vary by service. Still, it is noteworthy that, in contrast to the experience of civilian females, firearms – not poisoning – was the leading method of suicide among female Military members (DODSER 2010).

In addition, the focus should not be exclusively on the Operation Enduring Freedom/Operation Iraqi Freedom military cohort but also on men and women who served in earlier combat theaters, including the Gulf war, Vietnam Era, Korean Conflict, and World War II (**Kaplan, 2009**).

DODSER data for lethal means used in suicide death illustrates the significantly higher likelihood of death using a firearm versus other methods:

DOD – Event Method of Suicide (%)			
Year Total number of Suicides	2011 (287)	2010 (281)	2009 (291)
Mean	Frequency (%)		
Non-Military Firearm Military Issue Firearm	41 11 } 52	48 14 } 62	49 18 } 67
Hanging	21	25	23
Drugs	4	5	3
Jumping	1	<1	2
Drowning	<1	1	0
Unknown	8	2	2

The distribution and rank order for deaths are very different from those for non –fatal attempts.

DOD – Event Method of non fatal Attempt		
Mean	2011	2010
Drugs	60	58
Non-Military Firearm	5	3
Military Issue Firearm	2	2
Hanging	9	8
Sharp or blunt object	12	14
Jumping	1	3
Drowning	<1	1
Other causes	<1	<1

E. Determine the Level of Risk (Severity of Suicidality)

Determine the level of the risk for suicidal self–directed violence to establish the appropriate setting of care and to implement treatment interventions targeting the specific level of risk.

BACKGROUND

The formulation of the level of risk for suicide guides the most appropriate care environment in which to address the risk and provide safety and care needs. The first priority is safety. Patients assessed as having a clear intention of taking their lives will require higher levels of safety protection than those with less inclination toward dying. Patients who are at high-risk for suicide may require inpatient care to provide for increased level of supervision and higher intensity of care. Those at intermediate and low acute risk may be referred to an outpatient care setting and with appropriate supports and safety plans, may be able to be followed-up in the community.

Considering all the information gathered in the assessment, the clinician will formulate the level of risk in one of the following categories: (See Table 1 on Page 48, for indications of risk level)

HIGH ACUTE RISK FOR SUICIDE

High-acute risk patients include those with warning signs, serious thoughts of suicide, a plan and/or intent to engage in lethal self-directed violence, a recent suicide attempt, and/or those with prominent agitation, impulsivity, psychosis. In such cases, clinicians should ensure constant observation and monitoring before arranging for immediate transfer for psychiatric evaluation or hospitalization.

INTERMEDIATE ACUTE RISK FOR SUICIDE

Intermediate acute risk patients include those patients with suicidal ideation and a plan but with no intent or preparatory behavior. Combination of warning signs and risk factors to include history of self-directed violence (suicide attempt) increases a person's risk for suicide. Patients at intermediate risk should be evaluated by a Behavioral Health provider. The decision whether to urgently refer a patient to a mental health professional or emergency department depends on that patient's presentation. Patient who is referred may be hospitalized if further evaluation reveals that the level of illness or other clinical findings warrant it. The patient may be managed in outpatient care if patient and provider collectively determine that the individual is capable of maintaining safety by utilizing non-injurious coping methods and utilize a safety plan.

LOW ACUTE RISK FOR SUICIDE

Low acute risk patients include those with recent suicidal ideation who have no specific plans or intent to engage in lethal self-directed violence and have no history of active suicidal behavior. Consider consultation with Behavioral Health to determine need for referral to treatment addressing symptoms, and safety issues. These patients should be followed up for reassessment.

NOT AT ELEVATED ACUTE RISK FOR SUICIDE (Risk outside the scope of risk classification considered in this CPG for the purpose of determining action)

Persons with mental disorder who are managed appropriately according to evidence-based guidelines and do not report suicidal thoughts are outside the scope of the classification of risk for suicide in this CPG. Patients that at some point in the past had reported thoughts about death or suicide, but currently don't have any of these symptoms are not considered to be at acute risk of suicide. There is no indication to consult with behavioral health specialty in these cases, and the patients should be followed in routine care, continue to receive treatment for their disorder and be re-evaluated periodically for thoughts and ideation.

RECOMMENDATIONS

1. 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.
2. Patients at INTERMEDIATE ACUTE RISK should be evaluated by Behavioral Health specialty.
3. Patients at LOW ACUTE RISK should be considered for consultation with or referral to a Behavioral Health Practitioner.
4. 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.
5. 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.

Table 1. Determine Level of Risk for Suicide and Appropriate Action in Primary Care

Risk of Suicide	Indicators of Suicide Risk	Contributing Factors †	Initial Action Based on Level of Risk
High Acute Risk	☑ Persistent suicidal **ideation** or thoughts ☑ Strong **intention** to act or plan ☑ **Not** able to control **impulse** OR ☑ Recent **suicide attempt** or preparatory behavior ††	☑ Acute state of mental disorder or acute psychiatric symptoms ☑ Acute **precipitating** event(s) ☑ Inadequate **protective** factors	Maintain direct observational control of the patient. Limit access to lethal means Immediate transfer with escort to Urgent/ Emergency Care setting for Hospitalization
Intermediate Acute Risk	☑ Current suicidal **ideation** or thoughts ☑ **No intention** to act ☑ Able to control the **impulse** ☑ **No recent suicide attempt** or **preparatory behavior** or rehearsal of act	☑ Existence of **warning signs** or **risk factors** †† AND ☑ Limited **protective** factor	Refer to Behavioral Health provider for complete evaluation and interventions Contact Behavioral Health provider to determine acuity of the referral Limit access to lethal means
Low Acute Risk	☑ Recent suicidal **ideation** or thoughts ☑ **No intention** to act or plan ☑ Able to control the **impulse** ☑ **No** planning or rehearsing a suicide act ☑ **No** previous attempt	☑ Existence of **protective factors** AND ☑ Limited **risk factors**	Consider consultation with Behavioral Health to determine: - Need for referral - Treatment Treat presenting problems Address safety issues Document care and rational for action

† Modifiers that increase the level of risk for suicide of any defined level:
- **Acute state of Substance Use**: Alcohol or substance abuse history is associated with impaired judgment and may increase the severity of the suicidality and risk for suicide act
- **Access to means** :(firearms, medications) may increase the risk for suicide act
- **Existence of multiple risk factors** or **warning signs** or lack of protective factors

†† Evidence of suicidal behavior warning signs in the context of denial of ideation should call for concern (e.g., contemplation of plan with denial of thoughts or ideation)

E1. Suicide Risk Assessment Instruments

Risk factors can inform the assessment for any given individual, but are not predictive by themselves. While suicide risk assessment scales are no substitute for comprehensive evaluation and clinical judgment based on the history of the person, they may provide a structure for systematic inquiry about risk factors for repeated suicide attempts.

BACKGROUND

Rating scales can be helpful in the assessment process. However, a clinical assessment by a trained professional is required to assess suicide risk. This professional must have the skills to engage patients in crisis and to elicit candid disclosures of suicide risk in a non-threatening environment. The assessment should comprise a physical and psychiatric examination including a comprehensive history (with information from patient, parents and significant others whenever possible) to obtain information about acute psychosocial stressors, psychiatric diagnoses, current mental status and circumstances of prior suicide attempts. 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.

RECOMMENDATIONS

1. 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.
2. 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
3. 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.
4. There is insufficient evidence to recommend any specific measurement scale to determine suicide risk.

DISCUSSION

Utility of an assessment instrument depends upon each of several parameters, including, but not limited to: time/historical era, service delivery settings (e.g. primary care versus behavioral health), population (e.g., Military versus Veteran versus Civilian) and across clinical versus community-based). Consequently, it must be acknowledged that no single scale or assessment method is appropriate for all applications.

Important considerations in the selection of an assessment instrument include: the purpose, population, assessment setting, and context in which suicidal ideation and behavior emerges. For example, the suicide risk assessment setting and population associated with that setting would vary widely (e.g. primary care

patients versus deployed Military personnel). Furthermore, the selection of a tool will vary with the stage of assessment, e.g., screening of primary care patients will require different tools than assessment of risk among those who have already been screened as positive (higher risk than the general population).

Another consideration is the extent to which the tool guides the process of evaluation (e.g. the SAMHSA/SPRC safety card versus a check list versus a 4-item mnemonic, e.g. questions keyed to 4 P's in the 4P screener).

In lieu of an assessment tool that includes a scale, a comprehensive yet brief framework may include the relevant reminders and checklist designed to walk a professional through the risk assessment process. Such a framework tool should incorporate the key principles of assessment. This includes: specific suicide inquiry, determination of risk level, determination of level of intervention and documentation.

Advantages of Standardized Suicide Assessment Tools Across DoD and the VA Health Care Systems

There are several advantages for the use of same standardized assessment tool(s) across DoD and VA health care systems.

- In the clinical arena, standardization of measures would facilitate longitudinal monitoring of episodes of care over the pre- and post-military span of an individual's healthcare history
- Standardization of assessment tools across the DoD and VA would support longitudinal research on access to care, patterns of service seeking, and variation in symptom acuity and functional status in association with service seeking and/or treatment received. It would support evaluation of the predictive value of putative risk indicators (demographic, clinical and psychosocial) in relation to short- and longer-term outcomes in military and post-military (e.g. VA) settings
- Standardization of assessment tools across the DoD and VA could also contribute to continuous quality improvement of surveillance, clinical assessment, triage and intervention for prevention of suicide
- Therefore, it will be important to recommend criteria for selection to assist providers and facilities in identifying tools that can triage for more effective next steps, implementation of interventions, etc.
- Assessment of risk for suicide should not be based on any single assessment instrument alone. Structured and semi-structured suicides scales or risk factor checklists are not complete assessments in themselves but can help to inform a management plan
- Structured screening instruments can improve routine clinical assessment in the documentation and detection of lifetime suicidal behavior.

Disadvantages of Assessment Tools in General

- Forms are no substitute for spending time to know the patient.
- Only a few single suicide risk assessment methods have been empirically tested for reliability and validity.
- Standard practice encompasses a wide range of reasoned clinical approaches. The clinician's duty is to perform a competent suicide risk assessment by using a reasonable method.
- When substituted for clinical assessment, forms can increase the risk of missing a patient's suicidal intent.
- Forms tend to be focused on an event, whereas clinical assessment is a process.
- The best scales cannot perform the integrative function of clinical assessment and judgment.
- The range of general and individual suicide risk factors cannot be captured by any instrument, regardless of how sophisticatedly constructed.
- May result in false positive that may lead to unnecessary or harmful interventions
- Can take valuable clinical time to complete (especially in primary care) and negatively affect patient satisfaction.

To date, there is no single recommended method to assess for suicidality in routine practice. Research scales that have been tested but are not routinely used in clinical practice include, the Beck Scale for

Suicidal Ideation (SIS) (Beck et al., 1979), the Columbia Suicide Severity Rating Scale (Posner et al., 2007), the Sheehan Suicide Tracking Scale (Coric et al., 2009), the P4 addition to the PHQ-9, and the Nurses' Global Assessment of Suicide Risk (Cutcliffe et al., 2004). The scoring in these scales is sometimes complicated, and most have been tested in psychiatric specialty care. A few studies have used more complex algorithms to assess suicidality. Oquendo et al. (2003), provides a comprehensive discussion of the utility and limitations of research instruments in assessing suicide risk.

Other research scales and psychological instruments include the Hamilton Rating Scale for Depression (Ham-D), the Beck Depression Inventory (BDI, BDI-II), and the Inventory of Depressive Symptomatology (IDS). The Columbia Suicide History Form (CSHF), which determines lifetime suicide attempts, based on characteristics of suicide ideation; the Suicide Intent Scale (SIS), which identifies the wish to die; the Harkavy Asnis Suicide Survey (HASS), which detects suicide ideation and behavior; and the Beck Hopelessness Scale (BHS), which reveals negative attitudes about the future.

EVIDENCE

One non-systematic literature review that provides comprehensive lists of existing suicide assessment tools for adults and older adults Brown et al., (2002). The review describes the psychometric properties and validation studies for measures designed to assess suicidal ideation and behavior. The review highlights the need for further prospective research to establish the effectiveness of these assessment tools in predicting suicidal self-directed violence. The authors note that current research is insufficient to determine definitively whether or not there is a benefit in implementing existing screening tools for the prevention of suicide.

The review cites numerous measures that have demonstrated adequate internal reliability and concurrent validity, though it highlights the **Scale for Suicidal Ideation** and the **Beck Hopelessness Scale** as two of only very few measures that have shown associations with death by suicide. However, McMillan et al. (2007) meta-analysis concludes that the low specificity rate for identifying those at risk for future self-harm makes it unlikely that the Beck Hopelessness Scale will be "of use in targeting treatment designed to lower the rate of repetition."

Evidence Review of Assessment Tools (Summary of the VA-ESP Systematic review (Haney et al., 2012)

We examined the best available evidence from primary studies related to Veterans and members of the Military. Among the five primary studies that met our inclusion criteria, three are of limited quality. There were no studies identified that evaluated whether a risk assessment tool can accurately reclassify Veterans and Military personnel from low risk for suicide to higher risk. This leads to an inconclusive rating for the overall strength of evidence regarding assessment tools for suicide. Evidence of accurate reclassification would be necessary to increase this overall assessment of strength of evidence for research investigating suicide risk assessment tools.

Though the small number of studies provides insufficient and low strength evidence for the assessment of suicide risk, certain aspects of the findings warrant further discussion.

Two of the studies investigated assessment tools commonly used in VA settings: the PAI (Breshears et al., 2010) and the BDI-II (Hartl et al., 2005) whereas the other three studies investigated tools not commonly used in VA settings (Hendin, 2010; Nademin, 2008 (used in the AF)) or no longer commonly used in VA settings (Tiet et al., 2006). Of these latter three studies of assessment tools less common to VA settings, the IPS is lengthy and the results are seriously called into question due to the method of assessment and group comparison (one group was assessed by estimating history post-mortem and compared to responses from a living comparison group).

The study by Hendin et al. (2010) investigated the ASQ, a brief screening tool designed to assess risk for suicide. Though the sample was relatively small (n=283) and the study was rated as having an unclear risk of bias, preliminarily positive results and ease of implementation suggest that this tool warrants further research investigating potential for use and predictive power in a validation sample of Veterans or members of the Military. The ASQ increased odds of prediction of future suicidal behavior by 2.4 in a

logistic regression model adjusting for sex, substance abuse, and severity of depression. Using a cutoff of ≥3, the ASQ resulted in sensitivity of 0.60 and specificity of 0.74 in this population. The study obtained a rating of unclear risk of bias because of insufficient information on how patients were selected to participate and no information on assessor blinding when assessing the suicidal behavior outcome. Because of the unclear risk of bias and relatively small sample size, this one study provides insufficient evidence that the ASQ predicts suicidal behavior.

Tiet et al. (2006), investigated the use of the Addiction Severity Index (ASI), a lengthy structured clinical interview designed to be used as an intake interview for a substance abuse treatment program. Their study examined over 34,000 Veterans who were assessed for intake as part of substance abuse treatment at 150 VAMCs nationwide. This assessment tool is not ideal for settings that require brief screening tools, though VAs used to use this assessment routinely, and, therefore, the information is readily available in a large number of Veteran medical charts for those Veterans who received substance abuse treatment in the past. As such, the information provided in this article is helpful in establishing risk factors based on an entire population of Veteran responses to routine intake items within the timeframe covered in the study. The authors report a decision tree, delineating all significant risk factors to predict future suicidal behavior. The significant predictors were suicide attempt history, suicide ideation history, recent alcohol abuse, recent cocaine abuse, violent behavior, hallucinations, and employment status. This study was rated as having an unclear risk of bias, largely because of the unclear independence of assessors; however, because of the large sample size (i.e., the entire population of Veterans who completed a structured and electronically documented substance abuse intake process), this single study provides moderate strength of evidence for the reported risk assessment capabilities of the ASI. As noted, however, the ASI is no longer routinely used in VA settings.

Of the tools commonly used in the VA, the following describes considerations for implementation as suicide risk assessment tools: the PAI, though commonly used in VAs and other settings as part of lengthy psychological assessments, is difficult to administer without training, time, and electronic scoring software; however, this tool could potentially be used to design new, brief assessment measures based on the content of the subscales and items predictive of suicidal self-directed violence as preliminary evidence from this one study on a small sample of Veterans who had TBIs. The BDI-II is a brief, easy to administer, easy to score depression-screening tool that is commonly used in VA settings. This tool was examined in conjunction with information on participants' previous suicide attempt history.

Breshears et al. (2010) investigated the use of the Personality Assessment Inventory (PAI) in a population of 154 Veterans with a history of TBI. The PAI is a lengthy assessment tool administered by a psychologist in the context of an in-depth psychological assessment. Breshears evaluated one of the subscales of the PAI, the Suicide Potential Index (SPI), designed to assess aspects of suicidality, and found that it predicted suicidal behavior after controlling for other risk factors. Although this measure is frequently used in VA settings as part of psychological assessments, it is not well suited for use as a brief screening tool and, therefore, would be less useful in primary care settings. The lack of applicability to primary care settings is related to the lengthiness of the overall measure, the computer scoring methods, and the training/educational requirements required for interpretation and scoring. The results suggest potential additive predictive power of the SPI subscale. However, the high risk of bias rating of this study due to lack of assessor blinding and other methodological flaws does not allow for strong conclusions on the basis of this study. Although lack of assessor blinding may be less concerning with more objective outcomes such as suicide, this study used chart review to document suicide attempts, making lack of blinding a potential source of bias. More research to confirm these preliminary findings regarding the use of the SPI subscale would be necessary before recommending its use in a clinical setting.

Nademin et al. (2008) describe the Interpersonal Psychological Survey (IPS), a 34-item measure, which they report as being associated with increased odds of suicide (Odds Ratio [OR]: 1.27). This study, however, was rated as having a high risk of bias due in large part to the inability to account for confounders and differences in assessment techniques between groups. The two groups they examined were 60 members of the Air Force who died by suicide and a matched sample of 122 members of the Air Force. Due to the retrospective nature of the study investigating suicide as the primary outcome,

assessors estimated scores on the assessment tools for the groups of participants who died by suicide, whereas the control group participants completed the measures by self-report. This difference in assessment techniques and other confounders associated with the groups being compared results is insufficient evidence that the IPS predicts suicide.

Hartl et al. (2005) reported findings for a sample of 630 male Veterans diagnosed with PTSD and participating in a residential treatment program. They examined the Beck Depression Inventory-II (BDI), a 21-item, commonly used screening tool for depression that includes an item asking about suicidal ideation. This measure, due to its brevity, frequent usage, and ability to be administered, scored, and interpreted by a variety of providers, has potential for widespread implementation in VA and military settings. Though the authors found that previous suicide attempt (four months prior to intake) was the strongest predictor of future suicide attempt following discharge, they report that BDI-II score was also a significant predictor of future suicide attempt. They reported model sensitivity of 0.63 and specificity of 0.80 in their exploratory sample of 409 Veterans. The replication study examining data on the remaining 221 Veterans used the cutoffs established in the exploratory study. Contrary to the exploratory model, the replication model resulted in sensitivity of 0.11 and specificity of 0.84. Overall, this study provides insufficient evidence for the BDI-II in predicting future suicide attempts in a Veteran population with PTSD due to the inconsistent results as well as the high risk of bias rating of this study.

E2. Detection, Recognition and Referral (in Primary Care)

Assessment of Suicide Risk in the Primary Care Settings:

BACKGROUND:

An integrated understanding of the individual biological, psychological, social and cultural factors impacting suicide and recognition of warning signs is necessary for effective risk assessment and determination. This understanding needs to be translated into effective evidence based screening and assessment framework that can be efficiently and broadly applied in the general medical setting.

Primary care and general medical settings are the entry point for the care of population health. Comprehensive Suicide Risk Assessment is not feasible in the primary care setting due to the time constraints and lack of suicide-specific specialty training in this setting. The goal, therefore, in primary care is to identify patients at risk and refer those at elevated risk to the appropriate level of care for specialty evaluation.

Primary care providers can play important roles in treating suicide risk. Patients may feel most comfortable confiding in their primary provider. As such, providers can be critical in making the connection therapeutic care for patients, and in encouraging patients to follow through and adhere to the treatment plan.

Primary care providers have an opportunity to develop higher sensitivity to identify these at risk patients and prevent suicide. The primary care provider must have a high index of suspicion to identify patients at risk for suicide. Somatic complaints are often a proxy for depression and anxiety. Patients presenting with insomnia, fatigue, pain, headaches, or memory loss should be screened for depression, anxiety, substance use and presence of acute stressors. When present, suicide screening and assessment may be appropriate.

Several risk-stratification protocols are used in primary care to recognize the urgency of medical conditions (e.g., chest pain, respiratory distress) and identify those patients needing referral and/or hospitalization. Similarly, primary care providers would benefit having an efficient way for assessing suicide risk in patients who have potential thoughts of self-harm. The assessment should distinguish the rare patient that need urgent referral to an emergency department/hospital from the majority of patients who can have initial treatment in collaboration with a behavioral health provider.

Primary care providers may find it useful to develop an office, or clinic, protocol that they can follow to streamline the process once a patient is identified as being at high or imminent risk--particularly if referral

to emergency services is indicated. Also, it may be useful for PCPs to identify a mental health provider in the area who they can call for assistance or a quick consultation.

Providers should follow a consistent framework that will structure the assessment process and include the key component for assessment of suicide risk. Real time availability for consultation with Behavioral Health staff is essential. Formulation of the level of risk will allow matching treatment in the appropriate context for the individual patient.

RECOMMENDATIONS:

1. 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).
2. When evidence of a mood, anxiety, or substance use disorder is present, patients should be asked about suicidal thoughts and behavior directly.
3. If suicidal ideation is present, the initial suicide risk assessment should be performed (See Annotation B).
4. 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.

Guidance for the Assessment of Suicide Risk in Emergency Department / Urgent care Settings:

Patient at HIGH ACUTE-RISK for suicide should be assessed and initially treated in emergency acute care setting

BACKGROUND:

There are many paths to the Emergency Department for patients at risk for suicide. Patients may be referred by a healthcare provider, a Suicide Lifeline, EMS or Police, a friend or loved one, or on their own initiative. As in primary care, a low index of suspicion is appropriate to screen for suicidal ideation or attempt. When suicidal ideation or behavior becomes the focus of attention, the patient should be managed to minimize the risk of death. In a busy Emergency Department, psychiatric patients can often be triaged as a low acuity; or placed out of sight, out of mind in a quiet room for evaluation by the behavioral health consultant. This approach places the patient and staff at risk of harm due to inadequate medical assessment and inadequate management of potentially disruptive behavior.

The evaluating clinician must also consider the safety of the clinic, the availability of support staff, and the availability of the necessary additional diagnostic capability when deciding on the appropriate setting for the evaluation.

RECOMMENDATIONS:

1. 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.

E3. Comprehensive Assessment for Risk for Suicide by Behavioral Health Provider

An experienced behavioral health practitioner should evaluate patients at intermediate to high acute risk for suicide

BACKGROUND:

The initial assessment of suicide risk must consider the existence of medically unstable conditions, and these must be evaluated and stabilized before the psychological and suicide evaluation can be safely performed. The initial medical evaluation should include a thorough history of recent suicidal behavior, use of any medications or substances of abuse, and any recent self-injurious behavior. A physical examination to include vital signs, cardiopulmonary examination, mental status examination, and neurological examination should be performed. When indicated, further diagnostic evaluation to include electrocardiogram, and laboratory screening to include hematology, renal and hepatic function, toxicology and alcohol/drug testing should also be considered.

After determining that the patient is medically stable, the goal is to gain a complete understanding of the patient's medical, social, and mental health history and recognize current risk factors for suicide as well as any signs and symptoms of psychiatric illness for diagnostic and treatment purposes.

The Behavioral Health practitioner must evaluate and integrate all available information to determine the patient's risk for suicide and formulate a plan that ensures the patient's safety as suicide-specific treatments are initiated. While the practitioner seeks to gain all available information and insights, many barriers exist that can obscure the assessment. Patients may present barriers to gaining a full assessment by withholding information due to defensiveness or embarrassment, or by simply being too depressed or intoxicated to reliably recall important aspects of their history. Due to the potential for unreliability in the acute crisis, collateral sources of information should be sought to validate the history. The accessibility of collateral sources also informs the treatment plan as it identifies potential sources of support for the patient.

Clinical Assessment of the Patient with Suicide Risk
1. Medical history to rule out relevant conditions
2. Psychiatric history
3. Suicidal behavior history (previous attempts)
4. Substance use history
5. Psychosocial history to include history of life stressors, impulsivity, aggression and relationships
6. Family psychiatric history to include history of suicide
7. Physical examination
8. Mental status examination (MSE)
9. Relevant laboratory tests
10. Drug inventory, including over-the-counter (OTC) drugs and supplements

RECOMMENDATIONS:

1. Gather collateral history from family/unit members, the medical record, escorts, unit commanders (or their representatives), referring physicians, EMS, and police as appropriate.
2. Approach the patient with a non-judgmental, collaborative attitude with the aim of fully understanding the patient's suicidality.
3. Secure all belongings to prevent access to lethal means and elopement from the clinic.
4. 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.
5. 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.
6. Assess for access and past use of lethal means (firearms, drugs, toxic agents).
7. Assess social history of support system, living situation and potential stressful life events.
8. Consider suicidal thinking, intent, behavior, risk factors and protective factors to stratify the risk.

9. Consider the use of a standardized suicide risk assessment framework to inform the evaluation for estimating the risk for suicide.
10. Determine appropriate setting for further evaluation and management based on level of risk, legal guidance, and local policy.
11. Document in detail the data supporting the assigned level of risk, the level of care required, and treatment plans to reduce suicide risk.

Module B: Initial Management of Patient at Risk for Suicide

Three areas must be addressed in the initial management of the suicidal patient; a safety plan, limitation of access to lethal means, and patient and family education. Family education should focus on risks and benefits of alternative treatment options and include a detailed discharge plan. With military Service members, the command element should also be involved in education, safety planning, treatment planning and implementation of duty limitations. Additional areas to address are the medical and other specific patient's needs. These may be psychosocial, socioeconomic or spiritual in nature.

The initial setting and level of care will be determined based on the conclusion of the assessment and the estimation of the risk of suicide. The capacity of the patient to follow through on a safety plan, the availability of a support system and the assurance that access to lethal means can be restricted will allow transition to a less restrictive care setting. These types of factors inform level of care determinations and must be addressed in the acute care setting prior to discharge planning for long-term and follow-up care.

Annotations

F. Determine the Appropriate Care Setting

F1. Matching Care level to Level of Risk

Choose the appropriate care setting that provides the patient at risk of suicide maximal safety in the least restrictive environment

BACKGROUND

A majority of identified suicidal patients are referred to acute or crisis settings (usually the nearest hospital emergency department) for assessment and care by designated mental health providers. In an urgent or emergent high-risk ''crisis'' presentation, the primary purpose of clinical evaluation is to make a determination that balances risk and protective factors. Can the patient be discharged with an adequate safety plan? or does the patient require admission to a higher level of care, on either a voluntary or an involuntary basis?

The difference in care settings reflects the actual or perceived level of safety that can be offered to both the patient and the clinicians involved in the care of the suicidal patient. Care settings include:

■ Inpatient hospital wards ■ partial hospitalization programs ■ outpatient specialty care clinics, ■ primary care clinics ■ emergency departments ■ and numerous care options in deployed situations.

Care also can be provided for the patient who has already attempted suicide and is now in an intensive care unit or medical ward for assessment and treatment of conditions related to the attempt.

The acutely high-risk suicidal patient should be immediately evaluated and treated for medical instability or intoxication and acute psychiatric symptoms, such as anxiety, agitation, insomnia, depression and psychosis. The patient's safety should be the primary concern and hospitalization should be taken into consideration. With the patient's consent family members and, if necessary, social services should be involved in the treatment plan.

RECOMMENDATIONS

1. 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.
2. The inpatient psychiatric hospital setting is particularly suitable for the treatment of acute risk for suicide rather than chronic risk.
3. 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.
4. 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.

DISCUSSION

Level of Risk: High Acute

Care Level: Emergency Department Evaluation with/without Hospitalization

The emergency department (ED) is an appropriate care setting for initial evaluation and short-term monitoring of patients at any severity level.

For the patients in the ED, the determination of whether to discharge to outpatient care, hospitalize, or monitor for a short period will depend on the assessment of the severity of the level of suicidality, the likelihood that acute psychiatric symptoms will resolve in a short time frame (for example intoxication), and the patient's capacity to follow through with treatment and safety plans required for outpatient management.

The ED is often the initial point of contact with the health system for many of these individuals, and it offers a unique opportunity to help people who have attempted suicide to begin to recover from the depression, hopelessness and other conditions and symptoms that led to their suicide attempt. Individuals who have attempted suicide are at increased risk for later dying by suicide. A reasonable estimate of non-fatal repetition is 15–16% at 1 year with a slow rise to 20–25% over the following few years (Owens et al., 2002).

The acutely high-risk suicidal patient should be immediately evaluated and considered for treatment for acute psychiatric symptoms, such as marked anxiety or agitation. The patient's safety should be the primary concern and hospitalization should be taken into consideration.

Hospitalization should be considered in patients at high risk for suicide to: assure their safety, manage complex diagnoses, and deliver emotionally intense therapeutic procedures. High-risk patients being considered for admission should be medically evaluated to determine medical stability and rule out evidence of toxic ingestion or other life threatening conditions.

The inpatient care setting is perceived as the highest level of care for patients at imminent risk of suicide. These are patients at high risk in which suicide is extremely likely in the very near future (hours), and immediate intervention may be warranted to prevent a suicidal act. In fact, no evidence exists to show that inpatient hospitalization is safer than any other care setting and patients remain at risk for suicide during their hospitalization. The main advantage of this care setting is the ability to have the patient in an environment that is engineered to diminish access to lethal means. This is achieved both through the design of the environment with special safety considerations to decrease the chances of patients engaging in suicides by hanging, overdose or cutting themselves and by increasing supervision of the patient. Inpatient settings are also helpful in that they may be able to more quickly initiate interventions that ameliorate acute psychiatric symptoms contributing to the patient's suicidality. Inpatient hospitalization is the preferred level of care for patients at imminent and very high risk for suicide.

Level of Risk: Intermediate Acute

Care Level: Partial Hospitalization or Intensive Outpatient Programs (IOPs)

A partial hospital setting is similar to the inpatient setting, with regard to intensity of treatment, but affords fewer specific safety measures and does not provide the same level of supervision as the inpatient ward. It does provide a consistent daily level of supervision and interventions aimed to treat underlying conditions, specifically the acute manifestations of psychiatric symptoms, and suicidality. This is an appropriate care setting for many patients at less than imminent risk for suicide who do not require continuous direct observation for safety.

Military members with their own on- or off-installation housing and Veterans who live independently may benefit from increased social support provided in a partial hospitalization setting, especially when such support is otherwise unavailable (as family or roommates).

Care Level: Outpatient or Integrated Mental Health

Outpatient specialty (behavioral health) care clinics, primary care clinics, and deployed settings with behavioral health clinicians may be appropriate for the initial evaluation of all severity levels of suicide if the clinics have an adequate plan for managing patients who may engage in suicidal or other harmful behaviors. If a clinic does not have an adequate plan or adequate personnel to enact the plan, patients should be referred to an emergency department for initial assessment. Behavioral health clinics and deployed settings with BH clinicians may be appropriate for management of patients at low risk and for

many at higher acute risk. Primary care clinics are appropriate settings for patients at low risk and for some patients at intermediate acute risk for suicide for both assessment and continued management.

Non-deployed Service members who are living with supportive military members in a dormitory or barracks; Veterans receiving care in a domiciliary or residential rehabilitation facility; and those benefiting from military or Veteran peer-to-peer support programs, may be appropriate for outpatient management even with moderate suicidality.

Level of Risk: Low Acute

Care Level: Primary Care Follow-Up and Reassessment

If a patient is low risk for suicide or once a patient has been returned to the low risk category, any of the following care settings are appropriate for care of his/her underlying condition and continued monitoring/assessment for recurrent suicidality:

- Primary care with or without embedded behavioral health
- Outpatient Behavioral Health Clinics
- Community Living Center (CLC)
- Residential Care Facilities
- Long Term Care Facilities
- Patient's home with family support and education

F2. Criteria for Transition to Less Restrictive Settings

BACKGROUND

Discharging a patient to a lower level of care is a clinical decision based on numerous factors unique both to the individual patient and to the treatment environment. As such, no "check box" algorithm could ever be totally comprehensive in describing this task. The following criteria are provided more as a framework from which to start rather than definitive guidance for all conceivable clinical situations. In some cases, where psychiatric symptoms are present, the level of care may be contingent upon where these symptoms can be safely stabilized. The final decision is based on clinical judgment and the experience of the provider.

RECOMMENDATION

1. 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).

DISCUSSION

The stabilization of active psychiatric symptoms is a very important aspect in determining the decision of level of care for suicidal patients. Components of this decision include, but are not limited to, patients' ability to control their impulsivity, their ability to manage their emotional states, their ability to utilize

support systems and their ability to cognitively utilize information and skills that they have learned through treatment or already knew. For example, patients may recognize that they do not have complete confidence in their ability to manage their impulses, but a clinician could still elect to have them in a less restrictive care setting if they demonstrate the cognitive ability to utilize elements of their safety plan put into place to manage their impulsivity. Another example of operationalizing this concept is the patient who is intoxicated and suicidal in the ED. After the offending agent has cleared the patient's system, the patient may then have both adequate impulse control and cognitive ability to follow through with a safety plan.

Determining whether a safety plan is feasible in an acute crisis is another imperative in determining the correct care setting. The patient has to demonstrate that they have the necessary resources to enact the plan, is able to access these resources, has the capacity to manage the components of the safety plan and that means restriction is feasible.

The clinician must judge the patient's capacity and willingness to engage in a safety plan to determine the appropriate care setting. This must be done in a collaborative manner with the patient and other treatment team members, family members and/or command. This can be one of the most difficult issues for a clinician to determine as m any factors contribute to this decision. Biological, psychological and social factors need to be considered to determine capacity and willingness. Biological considerations include whether any substances or underlying medical conditions interfere with the level of cognition and the ability to understand and utilize data. Psychological conditions include the patients reported mood, observed affect, and observed level of psychological distress. Social considerations include assessment of the patient's connectedness to social supports, length of time the clinician has known the patient and how the patient has managed and resolved crises. If any of these areas cannot be fully assessed, the clinician should consider their evaluation to be incomplete and the patient remains at a high or imminent level of risk until these issues can be resolved.

Analysis of the answers to the following questions may help assess the patient's capacity and willingness to adhere to the personalized safety plan, and support the decision regarding the appropriate setting for continued care:

Early identification of warning signs or stressors *– Was the patient able to identify any warning signs and stressors? What triggered the stress? Did the patient engage in any strategies and interventions for managing the stressors? If so, how successful did the patient perceive feel the interventions were?*

Enhancing coping strategies (e.g., to distract and support*) – Did the patient utilize any coping strategies? If so, how successful were they?*

Utilizing social support contacts *– Did the patient appropriately utilize support systems to either avert this episode of suicidality or to ensure s/he accessed the system of care in an appropriate and timely manner?*

Professionals to call *– Are mechanisms in place to ensure that providers involved in the patient's care are available to be contacted or that professionals who can help with psychosocial issues such as spousal abuse, homelessness, etc. have been contacted?*

Minimizing access to lethal means *(e.g., large quantities of medication, weapons and ammunition) – Has the patient already engaged in behavior to limit access to means? Did s/he follow through on recommendations to limit access to lethal means?*

F3. Hospitalization

Despite insufficient evidence to demonstrate the effectiveness of acute hospitalization in the prevention of suicide, hospitalization is indicated in suicidal patients who cannot be maintained in less restrictive care setting.

BACKGROUND

Inpatient hospitalization is a common measure for maximizing safety for individuals who are imminently at risk for suicide. While it is a useful setting for initiating treatment interventions in a safe environment, hospitalization has not been demonstrated to prevent eventual death by suicide.

Indications for admission

The major criterion for admission to inpatient psychiatric care for the suicidal patient is imminent risk of danger to self. Once admitted, the patient needs to be managed in the least restrictive environment where his/her safety can be maintained (See Annotation G: *Securing Patient Safety*).

If psychiatric hospitalization is indicated, the next decision point is whether the hospitalization is voluntary or involuntary. If it is determined the patient will not voluntarily engage in care in the least restrictive environment, the clinician will need to utilize the local or state statutes which prescribe how to manage involuntary patients. Most guidelines provide at least a brief period, usually 48-72 hours, for clinicians to assess a patient and determine whether the court should be petitioned to continue hospitalization or if a less restrictive plan can be put into place.

The usual reasons for urgent hospitalization include acute suicide risk; acute violence risk due to mental illness; delirium; and acute unstable medical condition. Specialized treatments often best provided in an inpatient setting include:

- Electro-convulsive therapy (ECT)
- Close monitoring and daily titration of medications with the potential for disabling side effects or toxicity
- Constant staff observation as part of intensive behavioral treatment
- Close monitoring of behavior
- Close monitoring of conditions that require intensive monitoring

Once hospitalized, patients often continue to be at a high risk for suicidal behaviors. National Patient Safety Goals (NPSG) and their associated requirements have been published by the Joint Commission on Hospital Accreditation focusing on safe practices that healthcare organizations must implement and maintain. The NPSG establish evidence-informed requirements pertaining to critical aspects of care known to be vulnerable to medical errors and significant risks to patients. The NPSG are based largely, although not exclusively, on The Joint Commission's sentinel event database.

RECOMMENDATIONS:

1. 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.
2. 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.

RATIONALE

There is little data on the benefits and pitfalls of hospitalization for suicidal patients. It is an ethically challenging area in which to conduct research. As a result, much of the data focuses on risk factors and prevention of attempted and completed suicide, rather than treatment after it has occurred. Self-harm can result in social stigma, as can a diagnosis of a mental disorder, common among individuals who attempt suicide.

The aim of hospitalization is to provide immediate, short-term safety for suicidal individuals, and begin to implement treatment to reduce occurrence or recurrence of self-harming behavior, potentially related to a treatable condition. However hospital admission itself is associated with several potential risks, including stigmatization. This can be highly detrimental for some individuals who may already be dealing with extremely low self-esteem, by increasing their experience of being marginalized and alienated. The risks associated with hospitalization are not limited to the patient at high risk for suicide, but also to the potentially negative effect of hospitalization on the outcome for those diagnosed with major psychiatric disorders. For some, such as those with borderline personality disorder, inpatient admission has the potential to foster dependence, exacerbating their symptoms and risk for suicide.

Hospitalization generally occurs because a patient has a more severe disorder and has been evaluated to be at increased risk for suicide. For some patients hospitalization can result in increased distress. Suicide attempts and death do occur during hospitalization, even in the face of aggressive precautions.

It is reasonable to suggest that most people would place the benefit of reduced mortality over any risks such as stigma. What is unknown, based on current research, is whether hospitalization is more effective at ensuring safety, both in the short and long term, than partial hospitalization, intensive outpatient treatment, or some other form of community-based care. It is also unknown whether the use of involuntary hospitalization, while reducing risk in the short term, might increase risk over the long term, if the patient is unwilling to further self-disclose suicidal thoughts in the future.

Clinicians should consider the risks and benefits for each individual patient based on his/her specific assessment, diagnosis, contributing factors, and the most appropriate way to maintain safety while hospitalized.

Goals of Hospitalization

While every hospitalization is different, the following five issues should be addressed for patients admitted to a hospital for suicidality. These include:

- Diagnostic clarification to ensure an underlying psychiatric disorder and any co-morbid disorders can be adequately treated
- Increasing level of safety for the patient by being in a more closely controlled environment with increased supervision
- Initiating treatment after a timely assessment
- Responsive alterations of treatment for co-occurring disorders and/or treatment side effects, as indicated
- Comprehensive discharge planning

Diagnostic Precision

Inpatient hospitalization allows for a period of observation permitting a clinician to complete a more formal and intensive assessment (e.g., medication washout, assessment for and initiation of ECT, identification of medical disorders contributing to the psychiatric condition, and restricting substances abuse). It also allows for time to conduct a more thorough understanding of the stressors, co-morbidities and specific psychosocial risks contributing to both suicidal ideation and the underlying disorder through the intensive multidisciplinary assessment afforded patients upon admission to the inpatient unit. The inpatient setting also allows for collection of additional objective data regarding level of dysfunction and severity of symptoms as the symptoms will be observed directly rather than reported. The assessment of

co-morbidities should be considered broadly, taking into account co-morbid primary psychiatric conditions, medical conditions, substance use/abuse disorders and personality disorders. The treatment of potential underlying disorders for suicide should follow VA/DoD guidelines for the management of Mental Disorders (Major Depressive, Substance Use, Post Traumatic Stress, and Bipolar Disorders). The importance of adequate treatment of these disorders cannot be overemphasized.

Treatment Initiation

An inpatient psychiatric ward is a useful setting for initiating numerous psychiatric treatments. The first type of treatment offered is historically called "milieu" treatment, which refers to the structure and content of the day on a ward. Typically, the milieu consists of: meetings with the physician to diagnose, monitor symptoms and progress, manage medications and their side effects; various group therapies led by different therapists, such as a recreational therapist, art therapist and/or exercise therapist; meetings with social workers or psychologists for individual therapy, family/couples interventions/education and discharge planning; and meetings and groups run by the nursing staff focusing on how the ward runs and specific therapeutic topics. In general, the psychiatric hospital milieu may have an effect in helping patients to manage mental health issues while being in a safe environment. Patients are typically engaged in the most intense level of treatment available as the milieu and any additionally prescribed treatments transpire over the course of a full day in the hospital.

Maintenance of Safety

The main clinical focus for hospitalization is maintaining the patient's safety. This remains true regardless of whether the patient is admitted on a psychiatric unit or a non-psychiatric unit, and therefore, each of these types of units must be able to provide close and continuous observation of patients and safe environment of care.

Most hospitals require an initial period where the patient is under increased supervision, based on data that suggests suicidal behavior may be increased during the initial week of hospitalization.

DISCUSSION

Many clinicians assume that inpatient treatment is the most effective treatment for an individual who is suicidal or made a suicide attempt. While inpatient treatment is the standard of care, it has never been found efficacious in a clinical trial. Conducting randomized trials to evaluate the benefit of psychiatric hospitalization is difficult. To randomly assign an imminently suicidal individual to a non-hospitalized control group is not an ethically viable protocol. Comparing cohorts of admitted and non-admitted suicidal populations is unhelpful as the severity of the presenting situations may be very different. In fact, the Institute of Medicine concluded, "the effectiveness of brief hospitalizations is questionable" (Institute of Medicine, 2002, Reducing Suicide: A National Imperative National Academies Press).

Indication for Hospitalization

Clinical practice guidelines for managing patients at risk for suicide recommend considering the following variables in the decision regarding hospitalization or discharge of patients who have attempted suicide. These variables include : patient is psychotic; expresses persistent thoughts, plans, or intent; distress increases or patient regrets surviving; no support is available; current impulsive behavior, severe agitation, or refusal of help is evident; attempt was violent, near-lethal, premeditated, or precautions were taken to avoid rescue (American Psychiatric Association Practice Guidelines, 2003; Canadian Coalition for Senior's Mental Health, 2006; National Institute for Clinical Excellence 2011; New Zealand Guidelines Group (NZGG) and Ministry of Health, 2003; World Health Organization 2000).

Studies that compared records of patients hospitalized with those discharged from the emergency department after attempt have found that socio-demographic and clinical characteristics would appear to contribute more to the decision to hospitalize.

Owens et al. (1991) found that patients admitted were older, reported more physical ill-health, had expressed a threat or left a note more often, and had more frequently been hospitalized previously in psychiatric units.

Hepp et al. (2004) showed that hospitalization was associated with older age, use of lethal method, previous psychiatric hospitalization, and psychotic disorders. On the other hand, female gender, regular occupational activity, and adjustment and neurotic disorders were related with referral to outpatient treatment.

Goldberg et al. (2007) reviewed records for 257 patients presenting with suicidal ideation to a psychiatric emergency service. Hospitalization occurred for 70% of suicidal persons. Psychosis, past suicide attempts, and the presence of a suicide plan robustly predicted the decision to hospitalize suicidal persons seen in psychiatric emergency services. Diagnosis, pharmacotherapy, having a psychiatrist, and insurance subtype were unrelated to hospitalization decisions, suggesting that psychiatric emergency department staff perceive few alternatives to hospitalization when psychosis and suicide plans accompany suicidal ideation.

Baca-García et al. (2004) identified eleven variables that remained significant in a logistic regression model that explained hospitalization after a suicide attempt. Six variables were associated with increased probability of hospitalization: intent to repeat the attempt, plan to use a lethal method, low psychosocial functioning, previous psychiatric hospitalization, a suicide attempt in the previous year, and planning so that nobody would try to save their life after the attempt. Five variables decreased the probability of hospitalization: a realistic perspective on the future, relief that the attempt was not effective, availability of a method to kill oneself that was not used, belief that the attempt would influence others, and family support. In further analysis of patient's records, Baca-García et al. (2006) found that the main variables associated with the decision to hospitalize a suicide attempter were related to drug or alcohol consumption during the attempt, lack of family support, and attitude toward the attempt.

Miret et al. (2011) analyzed 840 clinical records of patients who had attempted suicide at four public general hospitals in Madrid (Spain). The logistic regression analyses showed that explanatory variables predicting admission were: male gender, previous psychiatric hospitalization, psychiatric disorder, not having a substance-related disorder, use of a lethal method, delay until discovery of more than one hour, previous attempts, suicidal ideation, high suicidal planning, and lack of verbalization of adequate criticism of the attempt.

Suominen et al. (2006) investigated the characteristics of 1198 suicide attempters to psychiatric hospitals and the factors affecting such referral during a 12-month period. They found that a quarter of patients were admitted. Factor predicting the admission were older age, psychotic disorder, mood disorder, lack of alcohol consumption preceding the attempt, somatic illness, suicide attempt on a weekday, and previous psychiatric treatment. In addition, the treatment practices of the hospital treating the suicide attempt also influence the treatment decisions to hospitalize.

Suicide risk appears to be an adequate explanatory variable for predicting the decision to admit a patient to a psychiatric ward after a suicide attempt, although previous hospitalization and other sociodemographic variables contribute to the decision to hospitalize patients at risk for suicide.

Beneficial Effect of Hospitalization

Systematic review by **Hawton et al. (1999**) showed no beneficial effect of general hospital admission following deliberate self-harm. It is important to note that only those attempters at low risk and without immediate medical or psychiatric needs were considered for discharge without treatment. The follow-up period of 16 weeks was relatively short.

Waterhouse et al. (1990) study assessed the effect of general hospital admission versus non-admission in a group of self-harm 'parasuicide' patients managed in an emergency room who had "no immediate medical or psychiatric treatment needs." The average length of admission in this study was 17 hours. There was insufficient evidence to determine if there was a clinically significant difference between general hospital admission and discharge on reducing the likelihood of repetition (RR = 0.77; 95% CI, 0.18

to 3.21). There was also no significant difference in hopelessness scores as measured after 1 week (mean 10.29, SD 5.68 versus mean 10.21, SD 4.97). However, the number of patients in each group was not reported for this outcome. At 4 months, there was no evidence of a difference in suicidal ideation scores between the two groups (SMD 0.28, 95% CI, -0.26 to 0.83). Only those who did not require hospital admission because of medical or psychiatric needs were included in the study, and the majority of patients were not randomized as they were considered to pose too great a risk to be assigned to the non-admission group. Therefore, the inclusion criteria in this study constitute an extreme bias.

Vander Sande et al. (1997) compared the impact of brief psychiatric inpatient admission followed by outpatient appointments and 24-hour access to the unit with treatment as usual. There was insufficient evidence to determine whether there was a clinically significant difference on reducing the likelihood of repetition of self-harm at 12 months (RR = 1.15, 95% CI, 0.67 to 1.98). The study reported one suicide in the treatment group and two suicides in the treatment as usual group.

Despite the lack of strong empirical evidence, it is widely believed that hospitalization is necessary to provide acute safety measures (**Nemeroff et al., 2001**; **Cornelius et al., 2004; Overholser, 1995).**

Potential Harm of Hospitalization

Hospitalization may be helpful in managing the acute stage but can potentially be more harmful than helpful for some patients in the long term. The surrender of freedom and independence can result in regression and hurt the therapeutic alliance, especially when involuntary (**Goldblatt, 1994**).

Psychiatric hospitalization is not without negative consequences to include increasing cost of health care, potentially impacting employment (for example the potential loss of a security clearance), direct cost to patient of hospitalization (not an issue if admitted to military or VA hospitals), lost wages that may contribute to reasons for admission and burden to the family of the patient. It should be used for specific treatment plans and where possible alternatives should be sought (**Comtois, 2002**).

Hospitalization for a mental disorder may result in lifetime of stigma, loss of civil rights in certain jurisdictions that may add more stressors to the patient already at high risk for suicide. Those hospitalized often perceive them as severely mentally ill which reduces their hope for the future and their participation in the treatment designed to increase their desire to live (**Comtois et al., 2006**).

Despite the identified areas of debate, hospitalization is the current standard of care for patient at imminent risk for suicide. Clinicians have a responsibility to consider the least restrictive environment where safety can be maintained and why only in instances of imminent concern for safety can a person be involuntarily hospitalized.

Suicide during Hospitalization

Hospitalized patients continue to be at a high risk for suicidal behaviors. Several review studies looked for characteristics of the patients attempting suicide while hospitalized. While suicides occurring during psychiatric hospitalization represent a very small proportion of the total number of suicides, better controlling the nature of the environment can prevent these events.

Bower et al. (2010) conducted a literature review of studies on inpatient suicides. In total, 98 articles covering almost 15,000 suicides were reviewed and analyzed. Rates and demographic features connected to suicides varied substantially between articles, suggesting distinct subgroups of patients committing suicide (e.g., depressed vs. schizophrenic patients) with their own suicide determinants and patterns. The review found that early in the admission is clearly a high-risk period for suicide, but risk declines more slowly for patients with schizophrenia. Suicide rates were found to be associated with admission numbers, and as expected, previous suicidal behavior was found to be a robust predictor of future suicide. Timing and location of suicides seem to be associated with absence of support, supervision, and the presence of family conflict. The authors concluded that for prevention of suicides, staff needs to engage with patients' family problems, and reduce absconding without locking the door.

One retrospective study of 522 acute psychiatric inpatients (**Stewart et al., 2012**) recommended risk assessment be completed as early as possible, and at-risk patients should be monitored for signs of withdrawal from ward activity, aggression, wanting to leave the ward without permission or non-compliance with medication to enable early intervention.

A review of literature by **James, et al. (2011)**, found substantial variation in the rates of self-harm and attempted suicide exists between studies evaluating the incidence of self-harm within inpatient settings. Patients were more likely to self-harm in private areas of the ward in the evening hours, and often self-harmed in response to psychological distress or elements of nursing care that restricted their freedom.

Although the risk of suicide remains during inpatient hospitalization, at least one British study (**Kapur et al., 2012**), demonstrated that from 1997 to 2008, the rate of in-patient suicide fell 1/3 from 2.45 to 1.68 per 10000 bed days. The largest reduction was seen in suicide by hanging, most likely attributable to improved inpatient safety measures.

Mills et al. (2012) reviewed all root-cause-analysis (RCA) reports completed of suicides and suicide attempts that occurred in ED in the Veterans Health Administration between 1 December 1999 and 31 December 2009. Hanging, cutting and strangulation were the most common methods. The most common anchor point for hanging was doors, and the most common implement for cutting was a razor blade. The most common root causes were problems communicating risk and being short-staffed. Based on these results specific recommendations were made for use of checklist to improve the mental health environment. A follow-up study (Watts et al., 2012) evaluated the effect of implementation of such a checklist (the Mental Health Environment of Care Checklist) and the process designed to remove suicide hazards from inpatient mental health. The implementation of the Checklist was associated with a reduction in the rate of completed inpatient suicide in VHA hospitals nationally. This reduction remained present when controlling for number of admissions (2.64 per 100 000 admissions before to 0.87 per 100 000 admissions after implementation; $P < .001$) and bed days of care (2.08 per 1 million bed days before to 0.79 per 1 million bed days after implementation; $P < .001$).

Inpatient Treatment Interventions

- While Dialectical Behavior Therapy (DBT) is a one-year treatment program, shorter adapted inpatient treatments have been developed and empirically evaluated (e.g., Bohus et al., 2004). Inpatient providers may consider DBT as one option of treatment for suicidal patients with Borderline Personality Disorder.
- The Collaborative Assessment and Management of Suicidality (CAMS: Jobes et al., 2005) model of care has been documented to have utility within an inpatient psychiatric environment (Ellis et al., 2009) as well as outpatient settings. Providers who work in an inpatient setting may consider utilizing CAMS in the assessment and management of their suicidal patients. One benefit of using CAMS in both outpatient and inpatient settings is related to the clear documentation of clinical care that such a tool provides.
- Inpatient Cognitive Behavior Therapy is a promising approach to the treatment of suicidal patients (e.g., Post Admission Cognitive Therapy [PACT]; Ghahramanlou-Holloway et al., 2012). The hospitalization period provides a unique opportunity to provide a targeted and brief suicide prevention treatment in the form of individual psychotherapy to the suicidal patient that can be continued after discharge.

F4. Partial Hospitalization, Intensive Outpatient Program (IOPs)

BACKGROUND

In general, partial hospitalization is not a specific treatment intervention for suicidality, but rather a specialized setting where such treatments can be provided. The advantages offered by choosing to place a patient with suicidality in this setting are the intensity of treatment, which approaches the same level as

the inpatient setting, and the ability to monitor the patients' response to treatment closely. Patients in this setting typically are only "on their own" during the weekdays from close of business one day until the beginning of the next morning and then for the whole weekend. If a patient is able and willing to engage in managing suicidal risk, most treatment modalities can be performed in a partial hospitalization setting.

Few studies have been performed to determine whether the effectiveness of treating a patient in the partial hospital setting is any better than routine outpatient care. One randomized trial conducted in day treatment programs (partial hospitalization setting) investigated the effect of a psychodynamic treatment approach on rate of suicide behavior in patients with specific diagnosis of personality disorder.

Overall, the results of studies on the psychodynamically oriented day treatment programs with patients diagnosed with personality disorders demonstrate promising results in terms of suicide outcomes. However, until these studies can be replicated with patients with other disorders and with other treatment approaches there is insufficient data at present to recommend that partial hospitalization is preferable to other settings.

RECOMMENDATIONS

1. There is insufficient evidence to recommend that partial hospitalization is preferable to other treatment settings for reducing the risk of suicide.

DISCUSSION

Suicidal patients with Borderline Personality Disorder are recurrently self-harming. They chronically think about suicide, threaten to carry it out, and make multiple attempts. Their suicidal behavior can become repetitive as they learn to 'work the system', returning to hospital whenever life gets too difficult (**Paris, 2004**). There is some evidence to suggest that these patients may benefit more from partial hospitalization (**Bateman and Fonagy, 1999**), and thus experience less stigma related to social rejection for being in inpatient treatment. Partial hospitalization may be particularly effective in BPD because it provides a highly structured program.

F5. Discharge Planning

BACKGROUND

Discharge planning begins upon admission and is defined as the activities that facilitate a patient's movement from one health care setting to another, or to home. It is a multidisciplinary process involving physicians, nurses, social workers, and possibly other health professionals. The goal of discharge planning is to enhance continuity of care and mitigate risk factors that could contribute to suicide post-discharge. .

Patients discharged from a psychiatric inpatient hospital stay are at increased risk for suicidal behavior upon discharge. The highest risk period for suicide attempts occurs within the first week of hospitalization and immediately upon discharge from the hospital through the subsequent 12 weeks. As such, discharge planning must be a comprehensive and well-coordinated effort to minimize this risk.

Several factors may contribute to the elevated risk of suicide after admission and discharge from a psychiatric hospital. The structure and restrictive safe environment of the acute care setting – around the clock observation, supervision, caring, and support – are abruptly lost at discharge. At the same time, re-exposure to risk factors such as inadequate social supports, rejection by others, facing unsolved psychological and social stressors, resuming use of alcohol or drugs, and limited engagement and follow-up by outpatient providers may increase the risk of a suicide behavior in the critical immediate period after discharge. In addition, the stigma surrounding psychiatric illness and the awareness of being mentally ill may diminish one's self-esteem and raise risk for reattempt.

Premature discharge may add to the risk for suicide post-discharge. Assessment at discharge that is more focused on stabilization of symptoms and improvement of underlying psychiatric condition(s) may result

in missing an enduring risk for suicide. Assessment may ignore or overlook risk factors that led to admission in the first place, and were denied by the patient in the context of the safe inpatient setting. Patients who pretend to show quick recovery may also bias physicians' judgment and lead to early discharge and insufficient treatment.

Suicide theory resulting from the research of Dr. Thomas Joiner suggests how suicidality may worsen in an inpatient setting. A sense of profound burdensomeness – a feeling of liability and not fulfilling expectations or obligations – may be deepened in those who have received inpatient psychiatric care. Similarly, failed belongingness may be amplified by hospitalization and may persist when the patient is discharged to the outside world. These two variables in Joiner's Interpersonal Psychological Theory of Suicide, together with the fact that the third variable – the capacity or sense of fearlessness about lethal self-violence – may not be affected by hospitalization, and may actually escalate the risk for suicide in the discharged patient.

Criteria for discharge from an acute care facility must be sound, reflect sufficient understanding of the risks and benefits of transition to a lower level of care, and establish clearly that the patient has the sufficient skills to manage his safety at this level of care. The discharge planning process must take into account that, as part of the recovery process, absolute suicide risk may remain at a high level after discharge from an acute setting and for months to come. Therefore, these criteria are meant to guide the decision to discharge from an acute setting to continue treatment and recovery from the acute suicidal crisis.

RECOMMENDATIONS

1. 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.
2. 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.
3. 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

(For further recommendations and discussion see Module D: Follow-up and Monitoring)

DISCUSSION

Many recommendations for addressing suicide risk after hospitalization have been offered to "adopt nationally recognized policies and procedures that best match patients at risk for suicide to follow-up services that begin at or near the time of discharge from … an inpatient psychiatry unit" (Knesper, 2011).

A summary publication -- *The Continuity of Care for Suicide Prevention and Research (*Knesper, 2011) was developed to promote effective clinical and professional practices, and, in particular, guidelines for aftercare treatment programs for individuals exhibiting suicidal behavior, including those discharged from inpatient facilities. (The document may be found in the online library of the Suicide Prevention Resource Center: www.sprc.org)

The National Patient Safety Goals (NPSG 15.0101 – TJC) indicates a requirement that applies to psychiatric hospitals and patients being treated for emotional or behavioral disorders in general hospitals:

- Identification of individuals at risk for suicide while under the care of or following discharge from a health care organization is an important requirement for protecting at-risk individuals.
- Conduct a risk assessment that identifies specific characteristics of the individual served and environmental features that may increase or decrease the risk for suicide.
- Address the immediate safety needs and most appropriate setting for treatment of the individual served.
- When an individual at risk for suicide leaves the care of the organization, provide suicide prevention information (such as a crisis hotline) to the individual and his or her family.

The National Committee on Quality Assurance (NCQA) calls for at least one outpatient visit in the first 7 or in the first 30 days following psychiatric inpatient discharge to improve patient outcomes during this period (2006).

Risk of Suicide After Discharge

Admission to a psychiatry inpatient unit is one of the strongest predictors of subsequent suicide death. Therefore, it is crucial that discharged patients receive prompt follow-up care (Crawford, 2004). Since persons at high risk for suicide are hospitalized often and this risk cannot be eliminated altogether prior to discharge, the suicide risk at the time of discharge may be considerable.

Indeed, the immediate period after discharge is when suicide death is most likely to occur (Qin et al., 2006) and discharged patients remain at high risk for at least the next year.

The risk of suicide in the four weeks after psychiatric inpatient care is around 100 times greater than that for the general population (Goldacre et al., 1993; Geddes et al., 1995; Qin et al., 2005). The weeks after discharge from psychiatric care represent a critical period for suicide risk (Hunt et al., 2009). This risk declines rapidly over subsequent weeks (Meehan 2006). A study of 954 patients discharged from an adult psychiatric unit in the United States found that over 20% self harmed in the 12 months after discharge but that the risk remained constant throughout the follow-up period (Skeem et al., 2006).

The following reviews and observational studies looked at the magnitude of risk and rates of suicide after discharge from acute care. All leading to the conclusion that prevention of suicide after discharge requires early outpatient follow-up and closer supervision of high-risk patients.

Desai et al. (2005) explored suicide rates based on data from a prospective mortality study of psychiatric inpatients from 128 U.S. Department of Veterans Affairs hospitals throughout the United States. Data collected on all patients discharged with a diagnosis of schizophrenia, major depression, posttraumatic stress disorder, or bipolar disorder (N=121,933) between 1994 and 1998. Of 121,933 unique patients included in the sample, 3,588 (2.9%) died within 1 year of discharge. Of those, 481 (0.4% of the total sample, 13.4% of deaths) died of suicide. Suicide deaths were concentrated in the first 6 months after discharge, with 46% in the first 3 months, 18.3% in months 4–6, 20.4% in months 6–9, and 15.4% in months 9–12.

Valenstein et al. (2009) evaluated suicide rates among 887,859 Veterans with depression (NARDEP merged with NDI data) and found that suicide events were highest in the first 12 weeks following psychiatric hospitalizations compared to the subsequent 12 weeks period (RR 1.9; 95% CI, 1.5 to 2.4).

Suicide rates following hospital discharge declined markedly in subsequent time periods but remained above the base rate through 48 weeks. Adults aged 61–80 years were at highest risk in the first 12-weeks periods Rates were also higher in the 12 weeks following changes in antidepressant regimen (new antidepressant starts, adding another antidepressant, and dose changes) compared to the subsequent 12 weeks (RR 1.8; 95% CI, 1.5 to 2.1).

Owens et al. (2002) conducted a review of observational and experimental studies from the UK, Ireland, Scandinavia, Finland, North America, Australia and New Zealand. The review reported that the repetition rate after hospital-treated self-harm is 15%, and the suicide rate was 0.5–2.0% within 1 year.

Qin et al. (2005) evaluated individual data drawn from various Danish longitudinal registers. The study showed two sharp peaks of risk for suicide around psychiatric hospitalization, one in the first week after admission and another in the first week after discharge. The risk is particularly high in persons with affective disorders and in persons with short hospital treatment. This study also indicates that an admission history increases suicide risk relatively more in women than in men, and suicide risk is substantial for substance disorders and for multiple admissions in women but not in men. The author recommended that a systematic evaluation of suicide risk among inpatients before discharge and corresponding outpatient treatment and family support should be initiated immediately after the discharge.

Hunt et al. (2009) compared patients dying by suicide within 3 months of hospital discharge, matched on date of discharge to living controls (n=238). The data collected indicated that 43% of suicides occurred within a month of discharge and 47% of them died before their first follow-up appointment. The first week and the first day after discharge were particular high-risk periods. Suicide cases were more likely to have initiated their own discharge and to have missed their last appointment with services. Patients who were detained for compulsory treatment at last admission, or who were subject to enhanced levels of aftercare, were less likely to die by suicide.

Meehan et al. (2006) - In the UK national clinical survey (1996-2000) sample of cases of suicide in England and Wales who had been in recent contact with mental health services (n=4859). 754 (16%) current in-patients and a further 1100 (23%) died by suicide during the first 3 months after discharge from psychiatric in-patient care. Post-discharge suicide was most frequent in the first 2 weeks after leaving the hospital; the highest number occurred on the first day.

G. Securing Patient's Safety

G1. Education for Patient and Family

Health care professionals should provide adults and their families/caregivers/command, if appropriate, with education regarding suicide, stigma, treatment options, and management strategies.

BACKGROUND

Suicidal patients may benefit from education about the way their emotional responses, thoughts, and behaviors to negative life events may be associated with suicidal crises. Education can include information about: various available evidence-informed treatment options associated with decreases in suicide ideation, intent, and/or planning and increases in factors that prevent suicide, such as hopefulness, problem-solving, and effective interpersonal communication. Family members often struggle with conflicting feelings about the patient's suicidal behavior. Education and an opportunity to discuss their feelings can help.

Family involvement may be and often is critical to the success of discharge planning. Family involvement need not be limited to the "nuclear family." In many instances, partners, close friends, command or other identified supportive social contacts should be considered as people critical to the success of discharge to

a less restrictive environment. Family engagement should include family sessions and education about suicide, warning signs, adherence to the recommended treatment plan, possible contributing family dynamics, removal of means, and various outpatient observation, monitoring, and emergency procedures.

Family education, with appropriate patient consent, is a recommended practice when providers at any point of care first become aware that a patient is at risk of self-directed violence or engaging in suicide behaviors. Family member education, before a patient demonstrates a risk factor, may unnecessarily induce anxiety within the support system. Failure to educate family members of a patient at intermediate or high acute risk for suicide potentially diminishes the ability of the provider and the patient to successfully engage the patient's support system to assist with addressing and mitigating risk. Primary care providers may need to coordinate with behavioral health providers to accomplish family education as recommended, given the fact that such an intervention may require more time than is typically available for a primary care visit. Family education may occur within the context of a single session (e.g. intervention as part of an emergency room visit) or a series of sessions and is appropriate within both inpatient and outpatient settings.

RECOMMENDATIONS

1. 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.
2. Patient and family should receive information about the resources available through the Veterans or Military Crisis Line (including phone, chat and text services).
3. 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.
4. 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.
5. 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
6. 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.

DISCUSSION

In an era that emphasizes patient education and involvement in treatment; educational approaches for prevention of suicidal behavior have been attempted. They are limited in number and are rarely the focus of controlled, random-assignment trials. Two general types of educational interventions for prevention of suicide have been the focus of research: 1) community-based interventions that represent a public-health approach to suicide reduction, and 2) psychosocial interventions directed to individuals identified to be at increased risk for suicide—either by virtue of a history of suicidal behavior or the presence of suicidal ideation or intentional self-harm. Psychoeducation within Community-based Primary Prevention Programs are not addressed in this CPG.

Education as part of Prevention Intervention

Bergmans and Links (2009) report on an observational study of a 20-week psychosocial/ psycho educational group intervention program developed for clients with a history of recurrent suicide attempts. Clients met weekly in small groups of 8 to 10 at the hospital for 1.5 hours for 20 weeks. The intervention program consists of 4 skill development modules focused on emotional literacy, problem solving, crisis management, and interpersonal relationships. Training modules provided a number of sub skills and educate clients to think positively about their capacity to keep themselves safe through implementation of the knowledge and skills taught within this intervention program. This pilot study of 239 individuals presenting with a history of suicide attempt(s) and one or more psychiatric disorders engaged them in a 20-week group intervention; pre- and post-intervention measures were available for a subset of the sample (n = 42 to 77); pre- versus post-intervention measures for this subset of individuals indicated significant reductions in cognitive, affective, and impulsivity deficits associated with risk for suicide and suicide-related behavior. The investigators suggest that this short-term intervention may be an important first step in engaging the client to seek longer-term help for problems associated with risk for suicide.
In the randomized trial conducted by Fleischmann et al. (2008) the intervention in the experimental group received treatment as usual plus brief intervention and contact (BIC), which included patient education and follow-up. Significantly fewer deaths from suicide occurred in the BIC than in the control treatment-as-usual group (0.2% versus 2.2%, respectively; $\chi^2 = 13.83$, $P < 0.001$).

A survey conducted online by the National Alliance of Mental Illness (Cerel et al., 2006) focused on patient perceptions of their interactions with staff during emergency room care following a suicide attempt. The results of the findings were based on responses from 465 patients and 254 family members and close friends who accompanied these patients to the ER. Among the results, approximately 45% of patients did not feel staff respected them. Fewer than 42% of patients felt care staff listened or described the nature of treatment. Fewer than 75% of the family members surveyed felt staff treated them respectfully, and only 54% felt the staff explained the nature of treatment. Fifty-four percent of patients felt "punished" or "stigmatized," and 28% of family members felt "punished" or "stigmatized." Twenty-eight percent of family members and 31% of patients felt patients' injuries were not taken seriously. Twenty-nine percent

of family members and 39% of patients felt staff did not address cultural considerations. Over 14% of both groups reported that staff used confusing "jargon." Although the recommended characteristics of family education have not been formally and independently studied, they do reflect expert consensus in that they are congruent with The Joint Commission patient education standards. In addition, treatment outcomes in general depend significantly on the provider-patient relationship. Concluding that some patients who have negative experiences within their first encounter after a suicide attempt are less likely to follow through with referral seems a reasonable conclusion in at least some cases; therefore, providers must view their role as the first providers following a suicide attempt as vitally important to the patient's ongoing compliance with care.

Stanley et al. (2009) list a number of these family educational contents as important for treatment. In addition, research shows that high parental criticism is associated with self-injurious thoughts and behaviors (Shimazu et al., 2011). Although this study did not specify the role of suicide risk mitigation, the study does show the ability to address the self-directed violence risk factor of depressive disorders.

G2. Limiting Access to Lethal Means (Firearms, Drugs, Toxic Agents, Other)

Consider ways to restrict access to lethal means that Service members/Veterans could use to take their own lives. This includes, among others, restriction of access to firearms and ammunition, safer prescribing and dispensing of medications to prevent intentional overdoses, and modifying the environment of care in clinical settings to prevent fatal hangings. For Service members concerns about firearms must include privately owned guns and ammunition.

BACKGROUND

Various strategies to reduce access to lethal means in order to prevent suicide deaths of an impulsive nature have been developed and implemented in several countries. Means restriction is considered a key component in a comprehensive suicide prevention strategy and has been shown to be effective in reducing suicide rates.

Modification of the environment to decrease general access to suicide means is an important population strategy to reduce suicides. Limitation of access to lethal methods used for suicide—often entitled 'means restriction'—is an important, clinical and individual strategy for suicide prevention. Many empirical studies have shown that such means restriction is effective. Since suicide attempts are often method-specific, the probability of attempting suicide decreases when the patient is precluded from implementing a preferred method. Although some individuals might seek other alternative methods, when a lethal method is unavailable at the moment of potential action, suicide attempts might be delayed so that the suicidal impulses will pass without fatal effects.

Health care providers should routinely assess the presence and the availability (access) of lethal means including firearms and ammunition, drugs, poisons, and other means in the patient's home. (See Module A, Annotation D-3: Assessment of Access to Lethal Means, for review of the means used by Service members and Veterans in suicide). Patient, family or other caregivers should be educated about actions to reduce the associated risks, how to store and secure lethal means of self-harm appropriately and promote vigilance among families and friends of people who have attempted suicide.

RECOMMENDATIONS

1. 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.

Military Service Members

Individual services or commands provide limited guidance to leaders on means restriction when managing personnel in severe distress (**The War Within, Ramchand et al., 2011**). Some evidence supports the use of means reduction or enhancements to safety on all parts of the continuum in suicide prevention, from environmental controls to those targeted at the service member with an intermediate or higher risk of suicide.

Evidence for Restriction of Means

Goldney noted, "restriction of access to means is probably effective not only because of the preclusion of a lethal method of suicide per se but also because it buys time, as the final suicidal impulse nearly always dissipates with time"(2008, p.73).

Firearms – Lubin et al., 2010 reported a 40% decline in the annual number of suicides in the Israeli Army after a change of policy reducing access to firearms during weekends. This is in line with previous population studies that suggest restricting access to firearms is effective in decreasing both suicide rates due to firearms and overall suicide rates (Loftin 1991). These data clearly emphasize the effectiveness of decreasing rates of suicide is an achievement unparalleled by any other means of suicide prevention.

Prescription Medications – In September 1998, Great Britain restricted the number of tablets per packet of paracetamol and other non-opiate analgesics. This was in response to the rising numbers of paracetamol overdoses and increasing numbers of deaths and liver transplantations due to paracetamol poisoning. Before the legislation, packs of 100 tablets could be bought from pharmacies and 24 tablets from non-pharmacy outlets such as supermarkets. There was no limit on the number of packs that could be bought at one time. The legislation restricted pack sizes to 32 tablets from a pharmacy and 16 tablets from a non-pharmacy outlet. Suicide deaths from paracetamol and aspirin fell by 22% in the year after the legislation and this reduction persisted for the next two years.

Alcohol – Lifetime risk of suicide with alcohol dependence is 6%. During 2003-2009, roughly 20% of all U.S. residents who killed themselves had blood alcohol levels that met the standard definition of intoxication, a level of at least 0.08 g/dL. Alcohol abuse is the most prevalent problem and one that poses a significant health risk for the returning Veteran. A study of Army soldiers screened 3 to 4 months postdeployment to Iraq indicated that 27 percent met criteria for alcohol abuse (drinking five or more drinks per typical drinking occasion at least once per week) and were at increased risk for related harmful behaviors (e.g., drinking and driving, using illicit drugs). Despite Soldiers frequently reporting alcohol concerns, few were referred to alcohol treatment.

Hanging – Hanging is a frequently used method of suicide in many countries. In England, there are approximately 2000 hanging suicides per year. Hanging is the most commonly used suicide method in

England; it is the second most common method of suicide in Active Duty US military members. The Rand Corporation paper on suicides among the military population recommended initiatives that include policies (e.g., constructing shower-curtain rods so as to prevent fatal hangings, modify door hinges to reduce deaths by hanging). (Blue Ribbon Work Group on Suicide Prevention in the Veteran Population, 2008).

Implementation of Means Restriction in Military Settings:

Restrict access to firearms – Military personnel have access to firearms, particularly when deployed, and are more likely to own a personal firearm than are members of the general population. Restricting the access to firearms among Active Duty has been shown to decrease the suicide rate by firearms without a compensatory increase in suicide by other means. Discuss with the patient and family members locking up or securing firearms at home or in a military armory and securing ammunition in a different location. Ideally, firearms should be removed from locations were the service member lives and works. The deployed environment is a unique risk factor, with easy access to lethal weapons, and expedited redeployment to the service members' home station should be considered.

Restricting firearms among those specifically trained to use them and for whom the use of firearms may be a function of their job seems daunting or even impossible. There is precedent for such policies, both in the VHA and in DoD. One study in the VHA, for example, found that suicidal patients relied primarily on family members to restrict their access to firearms during times of suicidal crises. These patients found it acceptable for clinicians to ask about firearm ownership, distribute trigger locks, and even provide safe offsite storage of firearms (Roeder et al., 2009).

Occupational Hazards – A strategy applicable to Active Duty members is f the physical profiling system for recommending duty restrictions. Actively suicidal individuals should receive a restricted duty status (profile or limited duty). It is rare that a deployment of a person with intermediate or high acute risk for suicide would be in the best interests of the military mission. A profile change is the primary means for communicating concerns to non-medical authorities (command) so it may be documented when personnel actions (e.g., deployment, permanent change of station) or duty restrictions (carrying weapons, flying, duties requiring security clearance) are considered. When Active Duty members are assessed to be at intermediate to high acute risk for suicide, providers should strongly consider a profile, which places the Active Duty Service member in a temporary non deployable status.

Prescription Medications – Restrict prescriptions of potentially lethal medications to suicidal patients or limit to a non-lethal quantity if the benefit outweighs the risk. Common medications used in overdose include large doses of sleeping pills, barbiturates, pain medications, acetaminophen, and antidepressants (particularly tri-cyclic antidepressants (TCAs), taken under conditions of the low possibility of rescue). Call the Poison Control Hotline if you need help determining a non-lethal quantity.

Hanging – Prevention strategies should focus on countering perceptions of hanging as a clean, painless, and rapid method that is easily implemented. However, care is needed in the delivery of such messaging as some individuals could gain information that might facilitate fatal implementation.

Other methods – Methods vary in lethality. High lethal methods include the use of a firearm, hanging, jumping from significant height, drowning, and vehicular crashes at high speed. Low lethal methods include those where there is a high degree of possibility of rescue, (i.e., where there will be an amount of time sufficient for intervention to occur before death might result; or where the agent, (e.g., drugs), are of insufficient quantity and dosage to be lethal, (e.g., many over-the-counter drugs).

Alcohol and Illicit Drugs –Treat for alcohol dependence as appropriate. Primary care providers should review the alcohol screen at each clinic or periodic health visit. Military members with substance abuse problems are encouraged to seek assistance from the unit commander, senior enlisted, substance abuse counselor, or a military medical professional. Commanders must provide sufficient incentive to encourage members to seek help for problems with alcohol without fear of negative consequences. Self-identification is reserved for members who are not currently under investigation or pending action as a result of an alcohol-related incident.

However, each service mandates medical personnel notify the unit commander and the drug and alcohol program advisor when a Service member is observed, identified, or suspected to be under the influence of drugs or alcohol or receives treatment for an injury or illness that may be the result of substance use (to include suicidal behavior).

If the patient is a high or intermediate acute risk of suicide, a recommendation should be made to the command to prohibit the Service member from possessing or consuming alcohol.

G3. Safety Plan for Patient at Risk of Suicide

Establish an individualized Safety Plan for all persons who are at high acute risk for suicide as part of discharge planning, regardless of inpatient or outpatient status. The Safety Plan is designed to empower the patient, manage the suicidal crisis, and engage other resources. Discuss safety with patients at intermediate and low risk and consider offering education about safety, and a copy of a Safety Plan handout.

BACKGROUND

Historically, providers viewed treatment of underlying disorders as sufficient for addressing suicidality. Recent findings related to suicide behavior highlight the importance of focusing specifically on reducing behavior risk to address immediate safety needs and for development of new coping methods while addressing associated disorders.

Stressful events, challenging life situations, mental/substance use disorders, and other factors can precipitate a crisis of suicidal thoughts and behaviors leading directly to self-injury. Advance anticipation of challenging situations and envisioning how one can identify and break a cycle of suicidal crises can reduce risk of self-injury and enhance a patient's sense of self-efficacy. Open dialogue between patients and clinicians to establish a therapeutic alliance and develop strategies and skills supporting the patient's ability to avoid acting on thoughts of suicide (including minimizing access to lethal means) is an essential component of suicide prevention in clinical settings. Putting this thinking-through process in writing for the anticipation of a suicidal crisis and how to manage it, constitutes a patient's safety (action) plan.

Safety planning is a provider-patient collaborative process – not a "no harm" contract. The safety planning process results in a written plan that assists the patient with restricting access to means for completing suicide, problem-solving and coping strategies, enhancing social supports and identifying a network of emergency contacts including family members and friends, and ways to enhance motivation. These plans are tailored to the patient by assisting the patient with identifying his or her specific warning signs and past effective coping strategies.

Thus, suicidal crises involve experiences and thoughts that are intensely personal; comforting strategies for one patient are not necessarily helpful to another. A behavioral health provider alone cannot develop a safety plan. Formulation of a personal (individualized) safety plan is a process best accomplished with a patient and provider anticipating together likely triggers for future suicidal crises, and collaboratively planning coping strategies that make sense for a given patient.

The plan and the process of developing it should be included in the medical record, and the patient should have received a copy of the plan. "The [safety] plan should be specific…. It should list situations, stressors, thoughts, feelings, behaviors, and symptoms that suggest periods of increased risk…as well as step by step descriptions of coping strategies and help seeking behaviors." (VA Deputy Under Secretary for Operations and Management (DUSHOM) memorandum, Patients at High-Risk for Suicide, dated April 24, 2008.)

RECOMMENDATION

1. 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.
2. 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.
3. 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.
4. 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
5. 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)
6. 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.
7. 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.
8. Safety plans should be updated to remain relevant during changes in clinical state and transitions of care.
9. 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.”)

Component of Safety Plan:

The Safety Plan should consist of a written, prioritized list of coping strategies and sources of support that patients can use to alleviate a suicidal crisis.

Patients are instructed first to recognize when they are in crisis (Step 1) and then to utilize Steps 2 through 5 as needed to reduce the level of suicide risk:

1. *Recognizing warning signs of an impending suicidal crisis*
2. *Employing internal coping strategies*
3. *Utilizing social contacts and social settings as a means of distraction from suicidal thoughts*
4. *Utilizing family members or friends to help resolve the crisis*
5. *Contacting mental health professionals or agencies*
6. *Restricting access to lethal means.*

For patient at Low-Risk for Suicide

Primary care providers can initiate brief safety planning or may be involved in updating plans developed with other providers. Although individuals in the midst of ongoing stressors (such as relationship turmoil or legal proceedings) may not report suicidal ideation during assessment, their state can change quickly in response to proximate stresses. Safety planning is vital in these cases.

Primary care providers should be trained to collaboratively formulate a safety plan for those at intermediate risk of suicide when located where immediate specialty behavioral health assessment and specialty safety planning is not available.

At a minimum, in low risk patients, the 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.

Consider the following Example Safety Plan handout for a patient at low to intermediate acute risk:

When I am feeling overwhelmed and thinking about suicide, I'll take the following steps:

- *Take a deep breath and try to identify what's troubling me right now.*
- *Write down all of the feelings (sad, mad, lonely, helpless, scared, etc.) as a record for later.*
- *Try and do things that help me feel better for at least 30 minutes (e.g. have a bath, phone a friend, walk the dog, or listen to music).*
- *Write down individual negative thoughts and provide an alternative response that changes the perspective.*
- *If suicidal thoughts continue, I will call my emergency contact person who is _____at: _____*
- *If that person is not available, I will call the 24-hour crisis line at: _____ or the 1-800 273-TALK line.*
- *If I still feel suicidal and out-of-control, I will go to the nearest hospital emergency department.*

DISCUSSION

A short protocol that uses safety planning as a crisis-intervention tool has been developed by Barbara Stanley and Gregory Brown, including a version for Veterans called SAFE VET (Stanley and Brown, 2008), though neither the original nor the adaptation has yet been evaluated systematically. Another protocol is

the Collaborative Assessment and Management of Suicidality (CAMS) treatment that includes lethal means restriction, developing crisis response, and building interpersonal connections (Jobes et al., 2005).

Although formal, systematic, scientific reviews of the efficacy of safety planning are lacking, there is expert consensus that safety planning is a vital component of suicide prevention and that "no harm" contracts are insufficient for mitigating suicide risk.

The patient care load within a primary care clinic often makes development of meaningful safety plans challenging. Although such resource challenges are not satisfactory grounds for failure to follow safety planning recommendations, primary care providers need not conduct such safety planning alone when other competent providers are available to assist. When shared provider responsibility is present, the providers should meet together with the patient to summarize a shared understanding of the safety plan and document this action in the medical record.

G4. No-Suicide Contracts

There is no empirical evidence for the usage of "no harm" or "no-suicide" contracts. A safety plan is a preferred strategy for preventing suicide.

BACKGROUND

Historically, suicide management involved conceiving suicidality as a symptom of a mental disorder, indicating initiation of usual treatment (as for major depressive disorder) in order to terminate thoughts and behaviors of self-harm. The emphasis in this paradigm was advising a patient regarding what not to do (harm self) while awaiting the treatment for the disorder to work. Some patients were required to sign a "contract for safety" or agree to a "no harm contract" indicating they would not harm themselves while in a window of vulnerability due to an unresolved mental disorder. As treatment of mental disorders may require weeks or months, often with substantive non-response rates, dealing with suicidality itself was often insufficient or never adequately addressed.

No-Suicide contract documents have been developed to document that a patient agreed to not killing himself/herself over a specified time period. Additionally, evidence indicates that no-suicide contracts are not sufficient to protect individuals against litigation, and may possibly increase liability.

Nothing should replace a thorough evaluation of a patient's risk factors and current warning signs for suicide. A safety plan or a crisis plan is a preferred strategy that has supportive and anecdotal evidence for preventing suicide.

RECOMMENDATION

1. Recommend against the use of no-suicide contracts as intervention to prevent future suicide in patients at high acute risk for suicide.
2. 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.

DISCUSSION

The use of "no-suicide" contracts between patients and health providers, in which the patient agree, often in writing, not to harm oneself, has not been demonstrated to be effective when used on their own (Goldsmith et al., 2002). Two reviews of the literature (Lewis, 2007; Rudd, Mandrusiak, & Joiner, 2006b), concluded that there is no empirical evidence to support their efficacy in reducing suicide, nor are they useful for protecting clinicians from malpractice litigation (Lewis, 2007). When a patient signs a no-suicide contract, the counselor's and staff's tendency is to be less careful in attending to her or him, when in fact

there has been no lessening of risk for suicide (Jacobs & Brewer, 2004). Additional reviews by Garvey et al. (2009), and Kelly et al. (2000) have also concluded that there is no empirical evidence for the usage of suicide contracts.

Garvey et al. 2009 conducted a literature review using different terms to describe the same concept of no-suicide to assess empirical support for the use of contracts, including medico legal implications. The majority of available literature consisted of opinion-based surveys. Overall, empirically based evidence to support the use of the contract for safety in any population is very limited, particularly in adolescent populations. An additional legal review of legal outcomes related to their use (LexisNexis search of all state and federal cases using similar search terms) reinforced that contracts are not sufficient to protect the provider against litigation, and may lead to adverse consequences for the patient/provider relationship.

Kelly et al. 2000 conducted a literature search and identified 32 articles. Of those, only 11 articles directly addressed the use of no-suicide contracts, and of those, only two were considered empirically based. Comprehensive review of all articles suggested there is no empirical evidence supporting the use or effectiveness of no-harm contracts in preventing suicide.

G5. Addressing Needs (Engaging Family, Community; Spiritual and Socioeconomic Resources)

BACKGROUND

Patients at risk for suicide may have a persistent incapacitating mental disorder marked by severe and intolerable symptoms; marital, social, and vocational disability; and extensive use of psychiatric and community services. These patients may sometimes benefit from therapeutic intervention that facilitates developing skills for coping with, by utilizing case management, as well as from psychotherapy or pharmacotherapy.

Problem-solving training or other intervention for promoting resilience should be provided to help patients cope with difficulties or adjustment to stressful life events and other risk factors. A problem-solving approach is practical and designed to enhance a patient's skills to resolve stressors, obstacles, or conflicts that increase distress and the risk of suicidal behavior. Increasing one's personal effectiveness through this approach empowers healthy behaviors and reduces isolation, burdensomeness, and despondency.

For patients at high risk for suicide with a diagnosis of mental disorder, coping with the challenges should be part of psychiatric rehabilitation for the mental health condition. Psychosocial Rehabilitation involves providing the family with education, supported employment, supported education, and supported housing; some serving as case managers; or others working with peer counselors. VHA's Uniform Mental Health Services policies (VHA Handbook, 2009) now mandate psychosocial rehabilitation, expanding such services from inpatient units to outpatient programs in Primary Care settings, Outpatient Clinics, Community-Based Outpatient Clinics (CBOCs), Vet Centers, and Home-Based Care programs and in partnerships with agencies and providers in communities.

Within the military, multiple non-standardized programs with little evidence base address adaptive coping skills and may improve psychological wellness. The majority of such programs are based on the premise that Social/Occupational factors play a significant role in suicidality. Training in skills, attitudes, and behaviors may allow a Service member to interact more appropriately with their environment thereby lessening the impact of some modifiable risk factors for suicide. For example, replacing maladaptive coping skills with more adaptive coping skills may have direct impact on the quality of relationships with significant others and with commands. Skills such as: (1) anger management, (2) conflict resolution, (3) stress and anxiety management, (4) financial planning, (5) career guidance, (6) assertiveness, (7)

relationship building, (8) relaxation, (9) self care, (10) communication, and (11) mindfulness, potentially help Service members cope better with life challenges, improve life quality, and decrease suicide risk.

Programs may emphasize adaptive behavior, healthy decisions, resiliency, mindfulness, and mobilizing a Service member's resources to provide support. Additional targets of such initiative could include: (1) unemployment, (2) financial difficulties, (3) legal issues, (4) lack of supportive relationships (may be self-induced), (5) homelessness or housing instability, (6) lack of social support (may be self-induced), (7) inability to organize comprehensive care, and (8) substance abuse.

Such programs are often conducted in a group setting and may be more supportive and directive than other forms of therapy. Other formats include individual meetings, workshops, and small group counseling led by other members of the care team, not necessarily the BH clinicians. Community services, chaplains, and others may maintain similar services. They may be included in some evidence based treatment regimens.

RECOMMENDATIONS

1. 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.
2. Providers should refer the patient to available psychosocial resources to address the identified individual patient needs.
3. 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.
4. 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

Survivors of suicide attempts and other patients at high risk may need information about financial, rehabilitation, legal, and other services available to them, as well as education about common obstacles to pursuing needed services. Evaluate psychosocial function and refer for psychosocial rehabilitation, as indicated. Available resources include, but are not limited to: Chaplains, Pastors, Family Support Centers, Exceptional Family Member Programs, VA benefits counselors, occupational or recreational therapists, Vet Centers, and peer support groups.

Table B-2 Adjunctive Problem Focused Method/Services

	Domain	Service/training
1	Unemployment or lack of a job that provides adequate income and/or fully uses person's training and skills	Implement vocational rehabilitation training; comprehensive employment readiness through training, resume building, and referral
2	Financial difficulties	Social services referral and evaluation; consider housing, employment, or public assistance requirements
3	Legal issues	Consider to referral to Veteran's Justice Outreach, military base Community Services, or local community resources
4	Relationship (Lack of family or friends that are knowledgeable and actively supportive)	Family advocacy & counseling. Implement family skills training, spiritual counseling, group therapy, social engagement
5	Homelessness (Lack of safe, decent, affordable, stable housing that is consistent with treatment goals)	Address independent living skills, refer to supported housing services, and reconnection with family members HCHV
7	Lack of social support (i.e. self-induced or circumstantial, and is socially inactive or isolated)	Implement social skills training, assessment of personal support network and re-engagement
8	Inability to coordinate and locate personal services	Use of case management services
9	Patient/family and other significant social supports are not fully informed about aspects of health needs	Provide education, include in treatment planning as patient allows.
10	Requests spiritual support	Provide information /access to religious and spiritual advisors or other support
6	Substance abuse	Integrated substance abuse treatment

G6. Additional Steps for Management of Military Service Members (SMs)

BACKGROUND

The management of the Active Duty Service member with suicidality can be complicated by many factors inherent in military service. The environment where a patient may manifest suicidality may frequently not mirror any of the care settings already described and/or immediate accessibility to a mental health provider may be limited. In these instances the care provider must determine the need for an evacuation to a more distant location where appropriately trained providers, medical support, and the ability to more adequately control the environment are available. Additional differences include the inherent quality of the relationship of Service members to their commands, which does not exist in other care settings. A final distinct difference, particularly in deployments to combat zones and in certain training environments is the fact that Service members often have readily available access to either their own, or other Service members' weapons.

One of the significant challenges in managing suicide risk in Military member is the "Clash of Cultures" between the military and the medical mindsets (Bryan 2012). Military members and leaders value ideals like mental and physical toughness in the face of adversity. The Warrior Ethos demands a sense of collectivism. That one is part of, and reliant on the whole, while highly adaptive for military operational success, results in diminished focus on the individual. The individual focus of most suicide prevention efforts must be adapted to resonate with the belief that the group is only as strong as its members in a way that capitalizes on cohesion as a protective factor. Warriors also value self-reliance and self-sacrifice in service of the unit, the mission, and the Nation. In order to achieve the military objective, this

selflessness is burnished with a fearlessness of death and significant denial about one's own mortality. Self-sacrifice and desensitization to death are important factors to understand in the management of service members at risk for suicide.

Military culture and the warrior ethos adopted stoicism as an ideal. This stoicism, while adaptive in combat, creates a significant barrier to the recognition of, and help seeking behaviors for, emotional issues (Sherman 2005). The effective management of suicide risk must take these important and adaptive qualities of military culture into consideration and adapt all communication and attitudes to resonate with the warrior ethos. The challenge is always how best to capitalize on the strengths of military culture while protecting against the potential for marginalization of a member who is at risk for suicide.

The following apply both to Active Duty Service members managed by DoD and to activated Reserve and National Guard members who may be receiving care from either the Veterans Administration Health Care System or from the DoD.

RECOMMENDATIONS

1. Providers must take reasonable steps to limit the disclosure of Protected Health Information (PHI) to the minimum necessary to accomplish the intended purpose.
2. 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 and benefit of involving command and follow service Department policies, procedures, and local regulations.
3. 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.
4. 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.
5. 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.
6. 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.
7. 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.
8. 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.

DISCUSSSION

The odds-ratio for suicide increased across all military Departments in 2007 among those who deployed to OIF or OEF (Hyman, Ireland, et al., 2012). This may be accounted for by (Bryan et al., 2010) factors affecting suicidality and risk management challenges in war zones. Deploying Service members may be more at risk for suicidal ideation and completed suicide due to experiencing "trauma, violence, combat exposure, and habituation to the fear of death" (Bryan et al., 2010 p713f). Insomnia, agitation, and hyper arousal compound reactions to these stressors in the context of all members carrying weapons and fewer behavioral health resources. Those without a sense of belonging in their units may be at special risk as well.

Special precautions are indicated regarding sharing of information and involvement of command, either in-garrison or while deployed, when it is determined that a Service member is at risk for suicide.

Service members have the same rights as others to Protected Health Information (PHI) with some exceptions with regard to the Service member's command element. All PHI shared with command should only be disclosed in accordance with service specific and DoD policies and regulations.

PHI may be disclosed to a Service member's Commander when military readiness is jeopardized.

Disclosures may include sharing information to:

- Determine the member's fitness for duty
- Report on casualties in any military operation
- Avert a serious and imminent threat to health or safety of a person, such as suicide, homicide, or other violent action
- Indicate whether prescribed medications might impair duty performance
- Inform whether diagnosed condition might impair a member's performance of duty or harm a mission
- Indicate when member is in a substance abuse treatment program
- Respond to a command-directed mental health evaluation
- Report an injury that indicates a safety problem or a battlefield trend
- Report that the member requires hospitalization
- Carry out required or occupationally specific activities IAW applicable military regulations or procedures.

Providers must take reasonable steps to limit the disclosure of PHI to the minimum necessary to accomplish the intended purpose. Medical conditions that do not affect the member's fitness for duty/mission or are not necessary to assure the proper execution of the military mission are not revealed to the unit. For example, commanders would not be advised of a member's self-referral to mental health if none of the issues listed above are evident. Each service prescribes a formal way to document communication with commanders. For example, the Army may document duty limitations in a medical profile, whereas the Navy may put a Sailor on a limited duty profile for a temporary condition. These mechanisms do not preclude direct conversation, and when safety issues are imminent, it is recommended that both direct communication and appropriate service-specific documentation are utilized. An example of specific communication would include a comment such as "No access to weapons until cleared by a qualified mental health provider," or "Please monitor that Service member is compliant with treatment plan and notify provider of any concerns that Service member is not following through with the recommended plan." A final distinction has to do with the unique legal considerations related to limited privilege, limits of confidentiality and the differences in military and civilian legal codes.

Command elements can be a powerful ally to facilitate a safety plan. On rare occasions, poor leaders may create a barrier to ideal care. This practice is not indicated except in extreme situations.

The practice of unit watch is not recommended for patients who meet criteria for hospitalization due to imminent risk. Unit watch may be necessary to ensure the safety of a Service member who meets criteria for hospitalization until the Service member can be safely transported to an inpatient psychiatric setting (e.g., deployment, field training exercises, training aboard ship, etc.

Providers should determine the utility of a command element to be a useful ally in safety planning for a Service member. This should include determining the ability of the command to become part of the social supports for the Service member. Adequate direction, discussion and education are often needed to communicate exactly how a command can help the Service member recover and regain the ability to return to full duty without restrictions.

For Active Duty component Service members and activated Reserve and Guard members, the command should always be involved in the treatment plan of a suicidal patient. This is true even in instances where the command is identified as one of the factors contributing to the suicidality.

Continuous command involvement is indicated for Service members and may include:

- Command-directed mental health evaluations
- Implementing medically-directed duty restrictions (Profile)
- Restrictions from weapons
- Suspending security clearance and access to classified areas, as indicated.

Module C: Treatment of the Patient at Risk for Suicide

The treatment plan for a patient at high risk for suicide should be based on the balance of potential benefits and harm of specific medical treatment as well as the potential benefits of psychotherapies and psychosocial interventions. After assessing evidence quality for suicide prevention distilled from surveillance of 16,500 English language post-2005 studies, with a final analysis of 35 relevant randomized controlled studies and 38 systematic reviews, the Working Group concluded, "there is a lack of strong evidence for any interventions in preventing suicide and suicide attempts". The dearth of quality research available on effective suicide prevention practices is mainly due to the difficulty conducting randomized controlled trials (RCTs) in high risk for suicide population and the low base rates of suicide and suicide attempts, even in groups at higher risk for suicide.

In formulating recommendations in this guideline, the working group evaluated the empirical evidence-base, considering RCT as the highest level of the evidence-based hierarchy. Although therapy provided in clinical trial settings differs from therapy practiced in day-to-day care, the recommendations can only represent the techniques and protocols as they were studied and reported in RCTs.

The recommendations are based on the best available evidence in suicide prevention in the civilian context. Results of studies currently under way may be informative regarding the usefulness of interventions in the military and identify relative efficacy of different evidence-based strategies of risk reduction and potential differences in patient-based outcomes.

Annotations

H. Determine Treatment Plan

Establish a treatment plan for patients at risk for suicide addressing the patient's potential (risk) for suicide, fostering the therapeutic alliance, and addressing mental health or medical disorders, and a range of available treatment alternatives from outpatient follow-up to hospitalization with constant observation and assurance of safety.

BACKGROUND

Developing of a treatment plan for a patient with suicidal thoughts or behaviors should be based on the balance of potential benefits and harm of specific medical treatment as well as the potential benefits of psychosocial interventions, including specific psychotherapies. Many patients with suicidal thoughts, intent, or behaviors will benefit most from a combination of these treatments. Treatment should address the modifiable potentiating factors identified in the initial suicide assessment.

Treatment should be a collaborative process between the patient, clinical team and, if the patient consents, others such as family members, unit members/ command, community organizations or other resources available to the patient. The clinician should continue to make re-assessments of suicide risk during the course of treatment. In general, therapeutic approaches should target the suicide risk and the specific psychiatric conditions and associated symptoms such as depression, anxiety, aggression, pain, and sleep disturbance. Treatment goals of psychosocial interventions may be broader and longer term, including achieving improvements in interpersonal relationships, providing training in coping skills and addressing psychosocial functioning.

RECOMMENDATIONS

1. 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
2. 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.
3. 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).

4. 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.

I. Psychotherapy

BACKGROUND

Focal psychotherapies are effective for the treatment of a range of common psychiatric and behavioral problems. Most evidence-based psychotherapy interventions for prevention of suicide can be considered broadly as treatment designed to influence dysfunctional cognitions, emotions, and behaviors through a goal-oriented, systematic procedure. Much of the evidence base for reducing suicide risk has concerned cognitive behavioral approaches. Cognitive-behavioral therapy (CBT) can be seen as an umbrella term that encompasses many different therapies sharing a conceptual foundation in behavior learning theory, cognitive theory, emotional processing theory, and interpersonal relationship theory approaches. The objective is typically to identify and monitor thoughts, assumptions, beliefs, and behaviors that are related and accompanied by debilitating, inaccurate and dysfunctional emotions. This is done in an effort to replace them with more realistic and useful ones. For the prevention of suicide, the primary goal of CBT is to teach suicidal patients that death is not the only option.

CBT includes a variety of approaches and therapeutic systems. The vast majority of interventions that have been evaluated in clinical trials involve a combination of the following core therapeutic components:

- Cognitive (irrational negative thoughts, core beliefs and cognitive distortions, problem solving deficits)
- Emotional (avoidance of unpleasant experiences that was activated prior to the suicide attempt)
- Behavioral (reduced activity, impulsive behavior)
- Interpersonal (poor communication and impaired social function)

Therapeutic techniques vary among cognitive and behavioral approaches according to the types of issues addressed. The interventions include various activities such as Socratic questioning, keeping a positive diary, positive self-verbalization, increasing tolerance of distress, mindfulness training, using existing coping skills, learning new coping skills, changing cognitions related to loss of control, skills training through modeling or role playing, removing obstacles to social support, and psychoeducation as an important component of all interventions. However, very few studies have dismantled these individual components to assess the relative efficacy of each one independently.

The treatment interventions for prevention of suicide have been packaged in various ways, and the majority of interventions included in the RCTs were grouped into four main categories based on the components most emphasized or the specific names used in the published literature: 1) Cognitive-Behavioral Therapy (CBT), 2) Problem Solving Therapy (PST), 3) Dialectical Behavior Therapy (DBT), and 4) Interpersonal therapy (IPT). All of these four categories include the components described above in different combinations.

Cognitive-Behavioral Therapies (CBT) emphasize the modification of core beliefs and schemas related to perception of self, the world, and the future. The approach involves changing problematic behaviors through cognitive restructuring (challenging automatic or acquired beliefs, such as beliefs about safety or trust) but also include relaxation techniques and discussion/narration of the potentiating factors (circumstances at the time of the episode, motives and reasons for self-harm).

Another form of behavioral therapy emphasizes skills-training interventions. This approach is premised on an assumption that dysfunctional behaviors stem from underlying skills deficits. Their goal is to decrease suicidal behaviors by increasing adaptive coping strategies such as distress tolerance, emotion regulation, and interpersonal skills. Another skill training intervention is **Problem Solving Therapy (PST)** that

emphasizes the emotional and maladaptive ways that individuals react to stressful conditions when facing of significant problems. The goal of problem solving is to increase the person's understanding of the links between his/her current distress and his/her current problems, the ability to define his/her problems, and to teach specific strategies for problem solving. PST is based on the principle that the most adaptive response to significant problems is to engage in problem solving. However, in the face of significant problems, many individuals may be overwhelmed, and react in emotional and maladaptive ways that can lead to depression, other mental health conditions, or suicide.

Problem solving interventions are included in several studies as a pragmatic approach that involves patients learning and practicing problem solving as a coping skill. Safety planning is one example of a structured problem solving approach to help the patient cope with a crisis situation.
Several studies evaluated the effectiveness of skills training for reducing suicidal behavior in individuals with personality disturbance using manual-assisted cognitive therapy (MACT).

Dialectical Behavior Therapy (DBT) was initially developed by Linehan (1993) after having found that cognitive behavior therapy (CBT) is problematic for chronically suicidal individuals such as those suffering from personality disorders. DBT places more emphasis on managing the patient's multiple, severe problems, suicidal behavior, and extreme emotional sensitivity by providing structured, staged treatment and multiple sources of support for both patient and provider. DBT assumes that emotion dysregulation is the core disorder in Borderline Personality Disorder and a main causal pathway for suicide-related behaviors. Lack of adequate coping skills for dealing with emotional distress may lead to an attempt to escape through suicide. DBT also uses mindfulness techniques to increase self-awareness and strategies from other therapeutic approaches to help the individual move toward accepting that change is possible and to learn new coping skills necessary to begin to make such changes. Some trials have used self-learning reading material that follows the DBT approach.

Interpersonal therapy (IPT) focuses on impaired social functioning and addresses interpersonal difficulties that lead to psychological problems. The goal of this treatment is to provide new interpersonal learning experiences to overcome grief due to loss, interpersonal disputes, role transitions, and interpersonal skill deficits. IPT that is delivered in a group setting provides opportunities to resolve interpersonal conflicts by addressing the "here-and-now" interpersonal transactions. Relational information provided through the transactions in the group allows for a shift in the patient's self-schema.

Psychodynamic therapies have not been directly targeted at the problem of suicide. Recent trials have been conducted to evaluate specific forms of **psychodynamic therapy**, titled transference focused psychotherapy and schema-focused therapy as an integrative approach that combines aspects of CBT, experiential therapy, attachment theory, and psychodynamic theory. **Mentalization-Based Therapy** (MBT) is a psychodynamic approach that emphasizes the relational aspect of personality disturbance, with treatment strategies focusing on the attachment relationship and on restructuring the individual's self-image and understanding of others. According to MBT, borderline pathology, including suicidal behaviors, stems from a disorganized attachment system resulting in impaired relationships and emotional instability.

Although not targeted specifically to suicide or suicidal behaviors, other psychosocial treatments (e.g., treating alcohol and other substance use disorders that are themselves associated with increased rates of suicide and suicidal behaviors) may be helpful in reducing symptoms and improving functioning in individuals with psychiatric disorders. For patients at risk for suicide, specific psychosocial interventions such as intensive care plus outreach, brief psychological interventions and follow-up; or family, couples/group therapies may be useful despite limited evidence for their efficacy.

The following overarching principles should guide providers in selecting the appropriate type of evidence-based therapy for patients at risk for suicide:

- The benefits and risks of evidence-based psychotherapies for suicide prevention should be evaluated, discussed amongst providers, and documented in treatment planning for all patients who have survived a suicide attempt and others at high risk for suicide.

- The goal of therapy and the identification of the problem areas upon which therapy will focus should be based on the way the individual's prior experiences influences current cognitions, emotions, behavior and relations.
- The selection of individual specific therapy between effective evidence-based treatment options should be based on the patient's diagnosis and preference, the provider training and experience, comfort in pursuing the technique, and available resources in the care setting.

J. Suicide-Focused Psychotherapy Addressing the Suicide Risk

BACKGROUND

Specific forms of cognitive therapy have been shown to decrease the risk of suicide. A provider using the cognitive therapy model identifies the suicidal behavior as the primary problem rather than as a symptom of a psychiatric disorder. Similar to cognitive therapy protocols for other problems, the provider pursues evidence of cognitive distortions in a patient's core beliefs and schemas that fuel suicidal behavior. The provider can then address these distortions by evaluating cognitive processes that will lead the patient to the conclusion that death is not the only solution.

Evidence-based cognitive therapy (CT) for suicide prevention can be utilized by providers to treat suicidal patients regardless of non-psychotic psychiatric diagnosis and can be used in conjunction with other forms of treatment that the suicidal patient is receiving.

There is some evidence that cognitive therapy and skills training can be used to address patient's problems associated with self-harm behaviors and suicidal thoughts regardless of the psychiatric disorder. Suicidal patients may have deficits in problem solving such that dying by suicide may be perceived as the only solution to their perceived life problem(s). While a range of theories and psychotherapies has been studied, some research supports structured, problem-solving approaches that specifically target and treat suicidal ideation and behavior (independent of diagnosis).

Providers should recognize the benefit of evidence-informed practices in teaching patients about effective problem solving. Problem solving training can be integrated into other CBT interventions, or offered as a stand-alone treatment.

No clinical trials were designed and conducted to determine whether any specific psychotherapy decreased the rate of death from suicide. Even in high-risk populations, rates of death from suicide are low relative to those for typical outcomes of clinical trials, and it would require unrealistically large studies to identify effects. Instead, all of the clinical trials have been designed to determine whether treatment led to decreases in the rate of suicide attempts or self-directed violence in patients at high risk, usually among those who have survived one or more prior attempts. Accordingly the following recommendations are, in general, based on the evidence that specific forms of psychotherapy prevented repeated suicide attempts. From a rigorous and formal perspective, there may be questions about whether it is possible to draw conclusions from this literature about the prevention deaths from suicide. Mann et al., (2005) and others have argued that interventions to reduce repetition of suicidal behavior following an initial attempt could have an impact on suicide rates, but the evidence is insufficient.

RECOMMENDATIONS

1. 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]

DISCUSSION

In the past decade, many cognitive behavioral treatment protocols for suicidal behavior have been evaluated in RCTs (Tarrier et al., 2008). Studies of cognitive behavioral interventions have been conducted in specific populations: those with recurrent self-harm, (Tyrer et al., 2003), young people with multiple episodes (Slee et al., 2008), or in populations with high rates of repetition in the control group (Brown et al., 2005). Caution is advised in interpretation of the conclusions from these studies because of the small size of most trials, the lack of distinction between self-harm and suicide attempt, the populations studied being unrepresentative of people who self-harm and the absence of information about the acceptability of interventions.

Systematic reviews have indicated that problem-solving therapy is promising as an effective brief intervention for adults following self-harm (Hawton et al., 2000). There is evidence to suggest that many people who self-harm demonstrate specific deficits in the ability to solve the problems they face. Those who present with self-harm to hospitals for the second or subsequent time, show poor problem-solving skills (Pollock et al., 2004).

J1. Cognitive Therapy (CT) for Suicidal Patients Treating the Risk for Suicide

Cognitive therapy for suicide prevention is a short-term (i.e., 10 session protocol) evidence-based practice (**Brown et al., 2005**) that can be utilized by providers to treat suicidal patients regardless of psychiatric diagnosis. The primary goal of CBT for the prevention of suicide is to teach suicidal patients that death is not the *only* option. The central feature of this CT was the identification of proximal thoughts, images, and core beliefs that were activated prior to the suicide attempt. Cognitive and behavioral strategies were applied to address the identified thoughts and beliefs. Study participants were assisted in developing adaptive ways of coping with stressors. The intervention addressed specific vulnerability factors that included hopelessness, poor problem solving, impaired impulse control, treatment noncompliance, and social isolation. A relapse prevention task was conducted near the end of therapy.

Brown et al. (2005) randomized 120 suicide attempters recruited from an Emergency Department within 48 hours of the attempt, (77% had a major depressive disorder and 68% had a substance use disorder), to receive either cognitive therapy (CT) or treatment as usual (TAU) and were followed up for 18 months. The short-term evidence-based cognitive therapy (i.e., 10 session protocol) has shown to be beneficial for patients regardless of a psychiatric diagnosis. The results showed that the rate or reattempts in the CT group was 50% lower than in the TAU controls. From the baseline to the 18-month assessment, 13 participants (24.1%) in the cognitive therapy group and 23 participants (41.6%) in the usual care group made at least 1 subsequent suicide attempt (HR=0.51, 0.26-0.997).

Slee et al. (2008) conducted an RCT (n = 77), which compared specific, individual, time-limited CBT with TAU. The study demonstrated clinically significant reductions in terms of suicidal ideation that increased over follow up. While the number of self-harmers remained the same in both groups post intervention, there were significantly fewer incidents of DSH in the CBT group at 9 months follow up. The number of people who engaged in DSH did not change; but the incidents of DSH were reduced in the CBT group.

The central feature of the CBT intervention (provided in ten weekly sessions and two follow-up sessions) was identifying emotional, cognitive and behavioral factors that played a part in the maintenance of self-harm. The treatment starts with the assessment of the most recent episode of self-harm (e.g., circumstances at the time of the episode, motives and reasons for self-harm, cognitions, emotions and behavior prior to and at the time of the episode). Specific maintenance factors that were addressed included dysfunctional cognitions, emotion regulation difficulties and poor problem solving. Relapse prevention was addressed toward the end of therapy sessions. Although treatment is individual,

involvement of a partner in the therapeutic process is of great importance, since these patients need the support of others to overcome self-harm. In order to maintain treatment integrity, the therapists followed a manual detailing treatment protocol. In addition, checklists and outlines were used in every session to foster correct execution of the treatment. The results of this study suggest that suicidal process appears to have been at least partially deflected by the CBT intervention. This is important for patients with recurrent and chronic self-harm with a high risk of repetition and high levels of psychiatric comorbidity.

J2. Problem Solving Therapies (PST) Treating the Risk for Suicide

Problem Solving Therapy (PST) is a type of short-term cognitive behavioral therapy that has been demonstrated to be effective in the treatment of depression and other mental health conditions among primary care patients (Mynor-Wallis et al., 2000) as well as those in mental health specialty care. Problem solving approach is not a process through which therapists solve patients' problems. Instead, it is a process that involves patients learning, and practicing problem solving as a coping skill. In addition to supporting patients in effective strategies for addressing current problems, PST leads to positive experiences of the patient's ability to successfully solve problems, therefore increasing confidence and feelings of self-control. Problem-solving therapy is a pragmatic approach, suitable for a sizeable proportion of patients at risk for suicide. It has the advantages of being relatively easily taught, usable by a range of clinicians, brief and comparatively inexpensive.

Overall, the conclusion from Mann, (2005) that there are "promising results" for PST for the prevention of suicidal behavior has been strengthened by research conducted since the time of that review. Specifically, when the studies included in the Mann review are complemented with new research, there may be additional indication for the effectiveness of PST for the prevention of self-harm in individuals with at least two previous episodes.

Application to Suicide Prevention

A systematic review by **Hawton et al. (2002)** reported a trend towards reduced repetition of deliberate self-harm when the patient was enrolled in problem-solving therapy. An update of the review in 2005 expanded the number of studies considered and came to similar conclusions. The review did not focus on the distinction between suicide attempts and deliberate self-harm (independent of motivation). Nevertheless, the findings are salient.

This review was based on 5 studies (Evans, 1999; Salkovskis, 1990; Gibbons, 1978; Hawton, 1987; and McLeavey, 1994) of patients who had survived at least one suicide attempt or other episodes of deliberate self-harm (DSH). The conclusion was "All five studies reported reduced repetition of DSH in patients in the experimental groups. However, the summary odds ratio of 0.70 (95% confidence interval 0.45 to 1.11 was not statistically significant. We examined separately, the two trials in this category, which included only repeaters. The summary odds ratio for this analysis was 0.43 (0.13 to 1.39) (Hawton et al., 2005).

Studies that evaluated problem solving used different outcome measures. Caution should be used in regards to the strength of the recommendation when combining studies with different outcomes of importance.

Hatcher et al. (2011) used a novel (Zelen) design where patients were randomized prior to giving consent to facilitate enrolling a representative cohort of patients (n=1094). Primary outcomes were a second hospital presentation with self-harm at 1 year for all episodes. By design, the study included separate analyses for first-time and repeat presentations at the index episode. The study investigated whether problem-solving therapy would improve outcomes in adults presenting to hospital with self-harm, compared with usual care. The results showed no significant difference at 12 months in the proportion of people who had presented again with self-harm when comparing all episodes (PST 13.4%, TAU 14.1%; relative risk reduction RR = 0.05, 95% CI -0.28 to 0.30, P = 0.79) or where the index episode was the first episode (PST 13.4%, TAU 9.4%, RR = -0.42, 95% CI -1.17 to 0.08, P = 0.37). However, the planned subgroup analysis demonstrated that where the index episode was a repeated event, those who received PST were

less likely to present again with self-harm. (PST 13.5%, TAU 22.1%, RR = 0.39, 95% CI 0.07 to 0.60, number needed to treat 12, P = 0.03). The investigator concluded that PST may be and effective intervention in adults with more than one episode of self-harm. Other findings include greater reductions in suicidal ideation in the entire sample of patients randomized to PST relative to those randomized to TAU.

The study by **Stewart et al. (2009)** included two treatment group and a control group. PST was compared to CBT and TAU as control. There were only 12 patients in each group. The average number of reattempts per patient was 0.33 in those who received PST, 0 in those who received CBT and 0.22 in those who received TAU. The study did report on the proportion of patients who reattempted. Due to the small number of participants and no report on tests for the significance of the differences between groups the study is excluded from the analysis of the evidence.

Other Populations and Outcomes

The potential value of PST is supported by additional studies including a small scale RCT of PST versus usual care in patients with traumatic brain injury (Simpson, 2011) that showed PST to be effective in the reduction of hopelessness (but not suicidal ideation).

Findings from several randomized clinical trials demonstrate decreases in suicidal ideation in patients with problem solving therapy relative to those who received TAU (Hatcher, 2011; Bannan, 2010; Stewart, 2009; but not Patsiokas, 1985 or Simpson, 2011). Related research evaluated a brief psychoeducational intervention providing training in problem solving skills versus a control condition providing health education and found that problem solving training led to greater decreases in suicidal ideation (Fitzpatrick, 2005). Finally, Townsend, 2001, conducted a meta-analysis of problem solving therapy studies in patients with deliberate self-harm and reported that the treatment was effective in reducing depression and hopelessness.

EVIDENCE TABLE

	Evidence	Source	LE	QE	NB	SR
1	Cognitive Therapy for Suicide Prevention (CT-SP) or Problem Solving Therapy (PST) for prevention of repeated self-directed violence in individuals with multiple previous attempts	Brown et al., 2005 Hatcher et al., 2011 Salkoviks et al., 1990	I	Mod	Sub	B
2	Cognitive Therapy for Suicide Prevention (CT-SP) focused on the risk of suicide to reduce reattempts in patient with a recent attempt and high risk for suicide	Brown et al., 2005 Slee et al., 2008	I	Mod	Mod	C
3	Problem Solving Therapy focused on the risk of suicide to reduce repeated self-directed violence in patients at high risk	Gibbons et al., 1978 Hatcher et al., 2011 Hawton et al., 1987 McCleavy et al., 1994 Salkoviks et al., 1990	I	Mod	Mod	C

LE=Level of Evidence; QE=Quality of Evidence; NB=Net Benefit; SR=Strength of Recommendation (See Appendix A)

K. Psychotherapy for Co-occurring Mental Disorders Associated with Suicide Risk

When the self-harming behavior or suicide risk is associated with a psychiatric illness then that illness needs to be identified and treated and the treatment plan needs to be modified to specifically address the risk of suicide.

BACKGROUND

Evidence supports the efficacy of psychotherapy in the treatment of specific psychiatric disorders associated with increased suicide risk. Treatment of the underlying disorders and psychiatric symptoms is important to support the prevention of suicide. If the self-directed violence behavior or suicide risk is attributable to a psychiatric illness then that illness needs to be identified and treated and treatment plan need to be modified to specifically address the risk of suicide.

Several forms of psychotherapies have been studied. For example, cognitive behavioral therapy, interpersonal psychotherapy, problem solving therapy, and acceptance and commitment therapy have been found to be effective for the treatment of depression. Dialectical Behavior Therapy has been shown in multiple studies of patients with a diagnosis of borderline personality disorder to decrease suicide attempt behaviors, self-harm behaviors, and other suicide-relevant markers like suicidal ideation and hopelessness. More recent trials have been conducted to evaluate specific forms of psychodynamic therapy as transference focused psychotherapy and schema-focused therapy as an integrative approach that combines aspects of CBT, experiential therapy, attachment theory, and psychodynamic theory.

RECOMMENDATIONS

1. 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:

K1. Risk for Suicide in Borderline Personality Disorder

2. 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]
3. 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]
4. Specific psychodynamic psychotherapies (i.e., MBT, brief psychodynamic interpersonal therapy) for patients with BPD who are a high risk for suicide. [I]

DISCUSSION

Better treatments for Borderline Personality Disorder (BPD) and particularly for the suicidal behavior experienced by these patients have been sought for some time. It has been estimated that although 10% will eventually complete suicide, this outcome is not readily predictable, and hospitalization is of unproven long-term value for suicide prevention, possibly producing negative effects (Paris 2004).

A number of comprehensive psychotherapy treatment strategies have been studied in randomized controlled trials (RCTs), with dialectical behavioral therapy (DBT) having the most research. Other approaches have included cognitive behavioral therapy (CBT), skills training interventions such as Manual Assisted Cognitive Therapy (MACT), acceptance based emotional regulation, Systems Training for Emotional Predictability and Problem Solving (STEPPS), Mentalization-based Therapy (MBT), and psychodynamic approaches. There have been some reservations expressed about the limited research

base and the methodological limitations of the published studies for DBT with regard to suicide prevention (Scheel 2000, Stoffers, 2012).

Results for DBT in reducing repeated self-directed violence in patients with BPD have been mixed, with several studies showing benefits (Linehan 1991, 1993, 2006; Verheul 2003), and some studies, including one of the largest of DBT, showing no or limited benefit (McMain 2009, Turner 2000). Studies of shorter versions of DBT have shown no or limited benefit (Koons 2001, Carter 2010). Studies of other strategies have generally been of poor to fair quality and have also shown no to small benefit. In aggregate, the studies suggest that there is a substantial role for psychotherapy in BPD, with DBD having the greatest evidence-based, but with a strong need for additional research.

DBT has also been applied in to other outcomes than suicide prevention in women with BPD. This studies for treatment of depression in elderly women (Lynch 2003), bulimic behavior [Safer 2001), and drug dependence (Linehan1999, 2002).

DBT has been demonstrated to be effective in RCTs for other outcomes including retention in treatment (Linehan 1991, 1999), fewer inpatient hospital days (Linehan 1991), social and global adjustment (Linehan, 1999), and reduction in substance use (Linehan, 1999, 2002).

K2. Borderline Personality Disorder

Dialectical Behavior Therapy (DBT) for Borderline Personality Disorder

Having found cognitive behavior therapy (CBT) problematic for chronically suicidal individuals, Marsha M. Linehan developed the DBT model. DBT was first validated with female patients who met diagnostic criteria for Borderline Personality Disorder (BPD). DBT focuses on managing the patient's multiple, severe problems, suicidal behavior and extreme emotional sensitivity by providing structured, staged treatment and multiple sources of support for both patient and provider. Randomized controlled studies provided support for the efficacy of DBT not only in increasing the use of coping strategies to improve emotion regulation, but also in reducing suicidal and self-harm behaviors in individuals with BPD, a psychiatric subpopulation at elevated risk for self-injurious and suicide-related behaviors. In recent years, DBT has been adapted for other psychiatric conditions featuring emotion dysregulation, including substance-related disorders and binge eating, and applied to other clinical populations (e.g., depressed suicidal adolescents), in a variety of settings (e.g., inpatient, forensic).

Linehan's biosocial theory of suicide (1987, 1993;), assumes that emotion dysregulation is the core disorder in BPD and a main causal pathway for suicide-related behaviors. Individuals with BPD react strongly to emotional stimuli, experience them with intolerable intensity, and as a result, have difficulty regulating emotional and behavioral reactions. Lack of adequate coping skills for dealing with emotional distress may lead to an attempt to escape through suicide. Individuals with BPD experience anxiety about distressing emotions, which may result in self-loathing, self-injurious behaviors, and/or suicide-related behaviors. These behaviors are then reinforced by others who may become less critical or more solicitous after the individual, for instance, threatens self-harm or attempts suicide. Environmental factors such as adverse events, lack of social support, or having others model suicidality may also trigger emotions and cognitions that lead to suicide-related behaviors (Brown, 2006). All of these causal factors interact, creating a cycle of intolerable emotion, self-punishing acts, and reinforcement from the environment.

With its emphasis on skills training and mindfulness-based emotion regulation, DBT is the most thoroughly studied treatment of the existing psychotherapies for suicidal behavior. The systematic review by **Mann et al. (2005)** stated that DBT reduced suicidal self-directed violence compared with standard after care. A more recent meta-analysis (Tarrier et al., 2008) concluded that the results of several RCTs support the efficacy of this approach in treating BPD patients with self-injurious behaviors. There is limited evidence for the effectiveness of dialectical behavior therapy in preventing death from suicide. DBT is an efficacious treatment of high-risk behaviors in patients with BPD and may be a treatment of choice for patients with severe, life-threatening impulse control disorders. Compared to other psychotherapies, DBT in its conventional form is of longest duration and greatest intensity.

Seven randomized trials, reported in 9 publications, evaluated standard outpatient DBT for the prevention of recurring suicide-related behaviors in individuals with borderline personality disorder and history of suicidal behaviors. Four studies used the standardized version of DBT. One study used a modified version of DBT, and two additional studies the version of DBT was shortened to 6 months:

Linehan et al. (1991) was the first study to suggest the effectiveness of psychosocial interventions related to suicidal outcomes in individuals with BPD. The study included 44 women aged 18 to 45 years, diagnosed with BPD and with a history of at least 2 parasuicidal incidents in the past 5 years. Participants were randomly assigned to either DBT or to a community treatment-as-usual (TAU) control group. The treatment lasted 1 year, with assessment every 4 months. At most assessment points and during the entire year, the subjects who received dialectical behavior therapy had fewer incidences of parasuicide and less medically severe parasuicides, were more likely to stay in individual therapy, and had fewer inpatient psychiatric days. After one year of follow-up the treatment group had significantly fewer psychiatric inpatient days and better interviewer-rated social adjustment during the final 6 months **(Linehan et al., 1993).** However, there were no differences between treatment groups on measures of hopelessness, depression, or suicidal ideation—all risk factors for suicide.

Verheul et al. (2003) randomly assigned a group of 58 substance-abusing and non-substance-abusing women with BPD to either outpatient DBT or to a TAU group. Participants were recruited through clinical referrals from both addiction treatment and psychiatric services but were not required to have shown recent parasuicidal behavior. This was the first clinical trial of DBT that was not conducted by its developer and that was carried out outside the USA. The authors reported that DBT therapy "resulted in better retention rates and greater reductions of self-mutilating and self-damaging impulsive behaviors (including substance abuse) compared with usual treatment, especially among those with a history of frequent self-mutilation". The study provides evidence that standard DBT is suitable for patients with BPD regardless of the presence of substance use disorders.

In a follow-up study of the same group**, van den Bosch et al. (2002)** found that the benefits of DBT over TAU in terms of lower levels of impulsive and self-mutilating behaviors were sustained at 18 months (6 months after treatment discontinuation). However, the follow-up study also demonstrated that patients in the DBT group showed no improvement during the 6-month follow-up period when no DBT was applied. In their discussion the authors suggest that once the high-risk behaviors are sufficiently reduced and stabilization has set in, maintaining the benefit of the treatment results requires prolonged treatment.

In a more recent trial by **Linehan et al. (2006)** the investigators randomly assigned 111 women to either DBT or to treatment by community treatment by experts (CTBE). The CTBE was developed specifically for this study to control for factors that were previously uncontrolled for in DBT studies. Patients were followed for 1 year post-treatment, a period that exceeds the length of previous (Linehan, 1991) follow-up periods. DBT was associated with significant better outcomes in the intent-to-treat analysis than CTBE in most target areas during the 2-year treatment and follow-up period. Findings indicated that patients receiving DBT were one-half as likely to make a suicide attempt (23.1% compared with 46%; Hazard ratio [HR] 2.66, p = .005), required fewer hospitalizations for suicide ideation, fewer emergency department visits, and lower medical risk associated with self-injurious behaviors and suicide attempts. They were also less likely to drop out from treatment prematurely. However, as there were no suicide deaths in this trial, there is insufficient evidence to draw conclusions about the relative effectiveness of suicide death prevention.

McMain et al. (2009) was single-blind trial in which 180 patients (mostly women) diagnosed with borderline personality disorder who had at least two suicidal or non-suicidal self-injurious episodes in the past 5 years were randomly assigned treatment with DBT (n=90) or general psychiatric management (n=90). The researchers found that after a year of treatment both groups improved significantly on most clinical outcomes measures. Both groups showed statistically significant decreases in the frequency of suicidal episodes (odds ratio=0.23, p=0.01) and non-suicidal self-injurious episodes (odds ratio=0.52, p=0.03). There were no significant differences across any outcome between the two treatment groups. DBT was not superior to general psychiatric management with both intent-to-treat and per-protocol

analyses. Similar to the evidence from the Linehan et al. (2006) study, this trial provides insufficient evidence to draw conclusions about differential effects on risk of suicide death due to a lack of observed events. The authors stated in their discussion that this trial was "the largest trial comparing dialectical behavior therapy and an active high-standard, coherent, and principled approach derived from APA guidelines and delivered by clinicians with expertise in treating borderline personality disorder….It demonstrates that dialectical behavior therapy and general psychiatric management are both effective in bringing about change in a broad range of areas relevant to borderline functioning" (McMain et al., 2009).

Carter et la. (2010) evaluated the efficacy of the outpatient DBT in a shorter duration of 6 months (compared to one year in the initial studies by Linehan, 1991) in patients with a history of previous suicide-related behavior. The study randomized 73 female subjects meeting criteria for BPD into treatment of DBT and the control condition. The control group was treatment as usual plus waiting list for DBT. Primary outcomes, measured after 6 months, were differences in proportions and event rates of: any DSH; general hospital admission for DSH and any psychiatric admission. Both groups showed a reduction in DSH and hospitalizations, but there were no significant differences in DSH, hospital admissions or length of hospital stay between groups. This study failed to replicate some of the important findings (significant reduction in DSH and reduction in psychiatric hospitalization) from previous studies comparing DBT to TAU (Linehan1991 & Linehan 2006). Although there was improvement in both groups over time, there was no significant differential reduction in hospitalization, self-reported DSH, or event rates.

Another study looked at the effectiveness of psychotherapy informed by DBT in patients with borderline personality disorder. **Turner et al. (2000)** randomly assigned 24 patients diagnosed with BPD either to a treatment involving a blend of DBT and psychodynamic techniques or to client-centered therapy. Patients in the DBT-informed group substantially reduced the number of suicide and self-harm attempts.

Koons et al. (2001), a small randomized clinical trial, evaluated suicide related outcomes in patients with borderline personality disorder. The author did not report on inclusion criteria with regard to previous histories of suicide-related behaviors. The results suggested a non-significant effect of DBT on number of parasuicidal events, but a significant effect of treatment was found on suicidal ideation. These results should be interpreted with caution since data from only 20 treatment completers of the 28 participants were analyzed.

Cognitive, Behavioral, and Skills-based Therapies for Patients with Personality Disorder

Cognitive-Behavioral Therapy (CBT)

Two articles (Davidson et al., 2006 and Davidson et al., 2010), describe an RCT of CBT specific to DSM-IV-TR Cluster B personality disorders versus treatment as usual.

Davidson et al., (2006); (Palmer, 2006) reported on the United Kingdom the Borderline personality disorder Study of Cognitive Therapy (BOSCOT) - a large multisite study. One hundred and six patients with BPD were randomized to either cognitive behavior therapy in addition to their usual treatment (CBT) or treatment as usual (TAU). Assessments were conducted before, after, and at 1-year follow-up after discontinuation of treatment. Patients assigned to CBT were less likely to attempt suicide and showed more improvement in other areas compared to with patients in the TAU group. The global odds ratio (OR) at 12 months (the end of the treatment period) was 1.04 (95% CI 0.52 to 2.00, P=0.96), and at 24 months (the end of the follow-up period), 0.86 (95% CI 0.45 to 1.66, P =0.66). There were no significant differences between the CBT and the TAU group in the number of subjects seen in inpatient psychiatric hospitalization or the Emergency Department with at least one suicidal act. There was a significant reduction over the two years in the mean number of suicidal acts in favor of CBT plus TAU over TAU, with a mean difference of -0.91 (95% CI -1.67 to -0.15, p =0.020).

A later study by **Davidson et al. (2010)** followed 93 of the original 106 subjects (Davidson et al., 2006). The data, available on 76 of patients showed no statistical difference in follow-up rates between the CBT and TAU groups (80% vs. 63% respectively). Although the original effect was maintained over 6 years follow-up it did not reach statistical significance. The follow-up group of 76 patients had very similar results at 2

years, with a treatment effect in favor of CBT significant at P = 0.0085. Note: Just over half the patients who met criteria for borderline personality disorder at entry into the original study no longer did so 6 years later (Similar to other studies in which patients become less symptomatic over time).

This trial of 106 participants provides low-strength evidence that there is a non-significant intervention effect on number of subjects with suicidal acts over six years (56% compared with 73%; [OR] 0.37; 95% [CI], 0.10 to 1.38) and mean number of episodes of suicidal acts (1.88 compared with 3.03; MD 1.26; 95% CI, -0.06 to 2.58).

Skills-Training Interventions - Manual-Assisted Cognitive Therapy [MACT]

Manual Assisted Cognitive Treatment (MACT) was developed by Schmidt and Davidson (2004) with the prospect of finding a briefer, less extensive, and more transportable treatments compared to Dialectical Behavioral Therapy (DBT) and Mentalization Based Therapy (MBT). MACT is a six-session therapy that incorporates elements of DBT, cognitive-behavioral treatment, and bibliotherapy. Each session is structured around a chapter of a booklet covering: functional analysis of episodes of parasuicide (i.e., DSH and suicide attempts), emotion regulation strategies, problem-solving strategies, management of negative thinking, management of substance use, and relapse prevention strategies. Several studies evaluated the effectiveness of skills training for reducing suicidal behavior in individuals with personality disturbance. The studies provide mixed results in terms of the effectiveness of brief skills-based interventions for patients with Axis II disorders. It is difficult to generalize the findings of the MACT intervention because they involved patients with a wide range of severity of personality disturbance. The studies that yielded positive findings involved homogeneous samples of patients with deliberate self-harm behaviors and BPD. Skills' training appears to hold promise for addressing self-harm behavior in BPD; however, more research needs to be conducted on this approach (McMain 2007).

Evans et al. (1999) conducted the first pilot study of MACT, randomly assigning 34 patients with defined Cluster B personality disorder who recently engaged in DSH or suicide attempts to a brief MACT intervention or to TAU. Participants in MACT attended only an average of 2.7 sessions of the prescribed 6 cognitive therapy sessions. In addition, treatment included bibliotherapy (6 self-help booklets). Treatment strategies included skills training and behavioral analysis (similar to DBT). The rate of deliberate self-harm acts over the 6-month evaluation period was lower in the MACT group, although this difference was not statistically significant.

Tyrer et al. (2003; 2004) evaluated the effectiveness of the MACT intervention in a large, multicenter RCT. The Prevention of Parasuicide MACT (POPMACT) study involved 480 patients who came to emergency rooms following a self-harm episode with a history of suicidal behavior. Participants were randomly assigned to either MACT or TAU. Similar to the pilot study (Evans, 1999), the MACT treatment included a 70-page self-help booklet and offered a maximum of 7 treatment sessions. Evaluations were conducted at baseline, 6 months, and 12 months. Repetition was 7% less in MACT and completed suicides were also less (2) than for those allocated to TAU (5). MACT treatment reduced suicides and episodes of self-harm and was significantly cheaper. Analysis of results of a subgroup of individuals characterized by more severe personality disturbance (with very high rates of deliberate self-harm) showed that MACT was less effective than TAU. Interpretation of the potential efficacy of this study is difficult. First, the study did not distinguish DSH from suicide attempts, second only half of the patients who were eligible to participate were included in the study with no data reported on the exclusion of others; third, the low (62%) attendance at MACT sessions can be assumed to have diminished MACT's effectiveness and leaves the possibility that better attendance could enhance results. The investigators concluded that the absence of effects for patients with more severe personality disturbance is not unexpected, given that MACT is a brief treatment and that MACT has value in preventing self-harm cost effectively but this appears to be confined mainly to those who do not have BPD.

Weinberg et al., (2006) conducted a small randomized controlled trial of MACT that also was modified to focus on deliberate self-harm (DSH) in patients with BPD. Thirty patients who were engaged in DSH while in ongoing treatments or in treatment-as-usual (TAU) were randomly assigned to receive MACT (N = 15) or not. DSH and level of suicide ideation were assessed at the baseline, at completion of the MACT

intervention, and six months later. Compared with those receiving TAU alone, patients receiving the additional MACT intervention made greater reductions in the frequency and severity of deliberate self-harm behavior at post treatment and at 6-month follow-up. In contrast to the two original MACT reports (Evans et al., 1999; Tyrer et al., 2004), all subjects in this trial attended all MACT sessions, a fact that may have contributed to its efficacy. However, the results should be interpreted with caution given the small sample and the bias introduced by relying on participants' self-reporting in assessing DSH.

Acceptance-Based Emotion-regulation

Gratz et al. (2006) evaluated the efficacy of an emotion-regulation skills group intervention provided as an adjunct to standard treatment. Twenty-two women with BPD and recent deliberate self-harm behavior were randomized to receive either 14 weeks of emotion-regulation skills in addition to standard care (n=12) or to continue standard care alone (N=10). Among the outcome measured the researchers used a behaviorally based questionnaire -The Deliberate Self-Harm Inventory (DSHI) - that assesses various aspects of deliberate self-harm and valuated the frequency of reported self-harm over the specified time period (i.e., in the 3.5 months prior to the study, since the last assessment, etc.) Results indicated significant between group differences (with large effects sizes) on all measures. The treatment group evidenced significant changes (with large effect sizes) on the DSHI and frequency of reported self-harm. The additional skills group intervention contributed to better outcomes on self-harm behaviors, BPD symptoms, and emotion dysregulation.

Systems Training for Emotional Predictability and Problem Solving (STEPPS),

Blum et al. (2008) randomly assigned 124 subjects with borderline personality disorder to STEPPS + TAU, or TAU alone. STEPPS is a 20-week manual-based group treatment program for outpatients with borderline personality disorder that combines cognitive behavioral elements and skills training with a systems component.
In addition to a total score on a rating scale for BPD, the primary outcome measure, measures for functioning, suicide attempts and self-harm acts were available for 108 subjects. Subjects assigned to STEPPS experienced greater improvement in the rating scale for BPD total score and subscales assessing affective, cognitive, interpersonal, and impulsive domains. However, there were no differences between groups for suicide attempts, self-harm acts, or hospitalizations. Although there were no suicides, no reduction in suicidal and self-harm acts during the 20-week treatment or follow-up was observed. Unlike other this study did not require subjects to be suicidal at intake. The short term treatment (20 weeks) and the low base rate of suicidal behaviors may have made it difficult to show a treatment effect.

Psychodynamically Oriented Treatment for Patients with Personality Disorder

Psychodynamic approaches typically emphasize the relational aspect of personality disturbance, with treatment strategies focusing on the attachment relationship and on restructuring the individual's self-image and understanding of others.

Mentalization Based Therapy (MBT)

According to mentalization-based psychotherapy (MBT), borderline pathology, including suicidal behaviors, stems from a disorganized attachment system that leads to impaired relationships and emotional instability. MBT is a psychodynamic treatment rooted in attachment and cognitive theory. Developed by Bateman and Fonagy, " it requires limited training with moderate levels of supervision for implementation by generic mental health professionals. It aims to strengthen patients' capacity to understand their own and others' mental states in attachment contexts in order to address their difficulties with affect, impulse regulation, and interpersonal functioning, which act as triggers for acts of suicide and self-harm"(Bateman et al., 2009). The psychodynamic approach emphasizes the relational aspect of personality disturbance, with treatment strategies focusing on the attachment relationship and on restructuring the individual's self-image and understanding of others. Thus it includes several of the components of DBT and other CBT protocols.

Bateman and Fonagy evaluated the treatment effect of MBT in the context of a partial hospital program. The studies showed treatment to be cost-effective and superior to treatment as usual over a period of 36 months (Bateman et al., 2001; 2003). Treatment effects remained 5 years after all index treatment had ceased (Bateman et al., 2008).

The effectiveness of psychodynamically oriented day treatment programs (in partial hospitalization setting) was evaluated in two studies reported in 4 publications:

Bateman & Fonagy (1999) randomized 44 patients diagnosed with BPD and a history self-harm behavior and suicide attempts to a psychoanalytically oriented 18-month partial hospitalization group or to standard psychiatric care. The treatment was based on a mentalization-based psychotherapy (MBT) with multiple treatment modes, including weekly individual sessions, group psychoanalytic therapy, weekly expressive therapy oriented toward psychodrama techniques, a weekly 1-hour community meeting, a monthly 1-hour meeting with a case manager, and a monthly meeting with a resident for medication management. Therapists telephoned, sent letters, or made home visits if a patient failed to attend appointments. The results showed that the treatment group had reduced frequency of suicidal and self-mutilating acts. The implications, according to the author's conclusion, were that a structured and intensive program can be beneficial in decreasing the risk of suicide in individuals with severe BPD.

(Bateman, 2001) conducted an 18-month follow-up study to determine whether the treatment gains were maintained. During the follow-up period participants were allowed to have further treatment. This introduces a risk of bias in interpreting the results. Individuals in the partial hospitalization program were offered group analytic therapy twice weekly and a review in a psychiatric outpatient clinic every 3 months. Results indicated that treatment gains were maintained. Compared to the control group, participants in the treatment group were significantly less likely to engage in self-mutilating acts, suicide attempts, and medically serious suicidal behaviors. In a second follow-up study (**Bateman, 2008**) the researchers followed the 41 subjects for an additional 5 years after the end of the treatment period. Overall, 46% of the patients made at least one suicide attempt (one successfully), but only 23% did so in the original treatment group, compared with 74% of the treatment as usual group.

Chiesa et al. (2004) evaluated a step-down (SD) treatment approach in 143 patients diagnosed with personality disorder (85% cluster B). Participants were assigned randomly to 1 of 3 groups: 1) one year of a specialized psychodynamic residential inpatient program (IP); 2) 6-month admission to the specialized psychodynamic residential program, followed by twice-weekly outpatient group therapy and access to an outreach nurse for 12 to 18 months (SD) or 3) a general community psychiatric TAU. After 2 years, the SD group was superior to both the IP and TAU groups on several outcome measures, including self-harm and suicide attempts. At 6-year follow-up, 61% of the SD patients had clinically significant improved changes in symptoms, compared with 26% and 13% for IP and TAU patients, respectively. Subjects in IP treatment made improvements on symptom severity and global functioning but did not show changes on self-harm behaviors, suicide attempts, or readmission rates. In contrast, patients receiving TAU showed no noticeable improvements on outcomes except on self-harm rates and hospital admissions, which declined. The authors maintain that the significant improvements in the SD treatment group suggest that helping PD patients make the transition from hospital to life in the community likely played an important role in treatment success.

Some limitations increase the risk of bias in interpreting the results of these studies. The studies were conducted with specifically designed programs for care of specific patients (either a partial hospital for personality disorders or a personality disorder specialty clinic), and mostly conducted by one clinician/researcher who was also the person who developed the specific clinical intervention. It is difficult to generalize these results to other populations (e.g., military and veterans' population) or to any other partial hospitalization program or outpatient setting unless the results can be replicated with patients with other disorders and other treatment approaches.

A third trial investigated MBT as a treatment for suicidal and self-harming patients with borderline personality disorder when delivered in an outpatient context:

Bateman et al. (2009) compared MBT to Structure clinical management (SCM) as the control condition. The MBT reinstated mentalizing during a crisis via telephone and 6 hour/week individual psychoanalytic treatment, group analytic psychotherapy, expressive therapy, and weekly community meeting. The SCM focused on support and problem solving, weekly individual, group psychotherapy counseling model and supportive approach. Compared to SCM, there is low-strength evidence that MBT significantly reduced the proportion of patients with life-threatening suicide attempts after 18 months (2.8% compared with 25.4%; effect size of d = .65) and those with severe self-harm incidents (23.9% compared with 42.9%; effect size of d = .62). The number of 6-month periods free of risk behavior increased in patients assigned to MBT more than for patients in the SCM group ($p<0.002$); Differences became significant after 12 m of treatment. However, the trial provides insufficient evidence to draw conclusions about their relative effectiveness in self-directed violence prevention due to the presence of an unacceptably high risk of bias, as well as imprecise data.

Brief Psychodynamic Interpersonal Therapy for Borderline Personality Disorder

Guthrie et al. (2001) investigated the effects of a brief psychological intervention (brief psychodynamic interpersonal therapy) for patients after deliberate self-poisoning compared with usual treatment. Of the 233 adults who presented to the emergency department after deliberately poisoning themselves, 119 (51%) agreed to participate in the study. Seventy one (60%) had a history of self-harm, and 67 (56%) had a history of psychiatric treatment. Participants were randomized to receive four sessions of therapy delivered in the patient's home. Control patients received “treatment as usual”. In addition to ideation, the primary outcome, self reported subsequent attempts at self-harm were measured at a 6 month follow-up. Intervention had a significantly greater reduction in suicidal ideation at the six-month follow-up compared to the control group (Mean score on Beck scale for SI 8.0 v 1.5). Participants in the intervention group were significantly less likely to report repeated attempts to harm themselves compared to TAU (proportion repeating 9% v 28%; P = 0.009). There was no suicide death in either group. Results of the study are assessed at high risk of bias. Self-harm was based on reports from the patients themselves. Only half of the eligible participants agreed to participate, and had high level of psychological morbidity. Results may therefore not be generalizable to other groups of people who poison themselves but may have less severe psychological problems. The authors conclude that the results are promising, but larger studies of interpersonal psychotherapies in different settings are needed to establish benefits for patients who poison themselves. Compared with usual treatment, four sessions of psychodynamic interpersonal therapy reduced suicidal ideation and self reported attempts of self-harm. The brief intervention evaluated in this study is different from psychotherapy commonly referred to as Interpersonal Therapy (IPT), although both are concerned with identification of deficiency of interpersonal skills.

EVIDENCE TABLE – PSYCHOTHERPY FOR BORDERLINE PERSONALITY DISORDER

	Evidence	Source	LE	QE	NB	SR
Dialectical Behavioral Therapy (DBT) for Borderline Personality Disorder (BPD)						
1	DBT to reduce repeated self-directed violence (12 months treatment) in patients with BPD	Linehan et al., 1991, 1993 Linehan et al., 2006 McMain et al., 2009 Turner et al., 2000 Verheul et al., 2003	I	Mod	None-Small	I
2	Shorter versions of DBT to reduce repeated self-directed violence (6 months treatment) in patients with BPD	Carter et al., 2010 Koons et al., 2001	I	Mod	None-Small	I
Cognitive, Behavioral, and Skills-based Therapies for Borderline Personality Disorder						
3	Use of CBT to reduce self-directed violence in patients with BPD	Davidson et al., 2006; 2010 and Palmer et al., 2006	I	Mod	None-Small	I
4	Skills-Training Interventions [MACT] in patients with BPD	Evans et al., 1999 Tyrer et al., 2004 Weinberg, 2006	I	Low	None-Small	I
5	Emotional regulation in group (14 or 20 weeks) in patients with BPD	Blum et al., 2008 (STEPPS) Gratz et al., 2006	I	Low	Small	I
Psychodynamically Oriented Treatment for Borderline Personality Disorder (BPD)						
6	MBT increase number periods free of risk behavior after 12 months in patients with BPD	Bateman et al., 1999; 2008 (Partial hospitalization) Bateman et al., 2009 (Outpatient)	I	Mod	Small	I
7	Brief Psychodynamic interpersonal therapy in patients with BPD	Guthrie 2001	I	Low	Small	I

LE=Level of Evidence; QE=Quality of Evidence; NB=Net Benefit; SR=Strength of Recommendation (See Appendix A)

K3. Risk for Suicide in Schizophrenia

RECOMMENDATIONS

1. There is insufficient evidence to recommend for or against use of CBT to reduce the risk of suicide behavior in patients with schizophrenia [I]

DISCUSSION

Cognitive Behavior Therapy (CBT) for Treatment of Schizophrenia

Suicide is the major cause of death amongst schizophrenic patients. Almost half of patients with schizophrenia experience suicidal ideation at any point in time or having a history of attempts. Clinical trials of CBT for psychosis (CBTp) have shown significant benefits in terms of symptom reduction. Potentially suicide risk could be reduced by a direct reduction in ideation and planned self-harm or indirectly through a reduction in other factors that may be associated with suicide behavior, such as positive symptoms, depression or hopelessness.

Only one study compared CBT versus supportive counseling in patients with a psychotic spectrum disorder.

A large multicenter RCT [SoCRATES trial (Lewis 2002)] evaluated the treatment of CBT for psychosis (CBTp) in acutely ill recent onset schizophrenic patients. The results of the trial showed a significant benefit for CBTp in symptom reduction at 4 weeks that had faded by 6 weeks in the acute phase (Lewis et al., 2002). There were significant advantages in symptom reduction for both CBTp and supportive counseling groups over treatment as usual alone at 18-month follow-up, although no differences in rates for relapse.

Tarrier et al., (2006) analyzed the result of the SoCRATES trial to investigate the effect of cognitive behavior therapy on suicide behavior. Participants (N=278) were randomized to receive either manual based cognitive-behavior therapy for psychosis (CBTp) or supportive counseling. A third control group was TAU. Treatment was delivered over a five week period during hospitalization for an acute episode followed by assessment at baseline, 6 weeks, 3 months, and 18 months. The rates of moderate to severe suicidal behavior were 13% at admission, 4% at six weeks, 1.5% at three months and 6% at 18 months. There were no significant differences between the three treatment groups in any of these comparisons at any time point. These results indicate that psychological treatment did not significantly reduce or worsen suicidal behavior compared to TAU. This trial provided insufficient evidence to draw definitive conclusions about the effectiveness of the intervention.

EVIDENCE TABLE:

	Evidence	Source	LE	QE	NB	SR
1	CBT (for psychosis) to reducing rates of self-harm after treatment for 5 weeks of patients diagnosed with Schizophrenia	Tarrier et al., 2006	I	Mod	None	I

LE=Level of Evidence; QE=Quality of Evidence; NB=Net Benefit; SR=Strength of Recommendation (See Appendix A)

K4. Treatment of High Risk for Suicide and Comorbid Substance Use Disorder (SUD)

BACKGROUND

As documented throughout this guideline, substance use disorders are a prevalent and potent risk factor for suicide attempts and suicide. The recommendations for management and treatment made throughout this guideline generally apply to individuals with substance use disorders and should be followed.

RECOMMENDATION

1. Ongoing management of suicidal patients with SUD should include treatment by a licensed mental health practitioner.
2. 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
3. Intervention strategies in patients in whom suicide risk is associated with using substances should emphasize safety, relapse prevention, and addressing the substance use.
4. 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).

DISCUSSION

Managing the Intoxicated and Suicidal Patient

Individuals at acute risk for suicidal behavior who appear to be under the influence of alcohol or other drugs, either based on clinical presentation or objective data (e.g., breath or laboratory tests), should be maintained in a secure setting until intoxication has resolved whenever possible, at which point a comprehensive suicide risk assessment can be performed (**Leamon & Bostwick, 2012**). Risk management options include, but are not limited to, admitting the patient for inpatient hospital care, making a referral for residential care, detoxification, or ambulatory care, or scheduling the next visit for the near future. Beyond arranging appropriate care, there is the opportunity to provide a brief therapeutic intervention once intoxication has resolved. Indeed, the individual's suicidal presentation, no matter how short lived, may represent a "teachable moment" during which time the patient may be more receptive to developing an individualized safety plan (**Stanley and Brown, 2012**), motivational interventions (**Britton, Conner, & Maisto, 2012**), or other brief strategies. Safety planning that includes attention to access to firearms, the most deadly method of suicide, as well as other means availability including safe storage or dispensing of medications warrants high priority (**Bryan et al., 2011**). Making efforts to ensure that management of suicide risk is coordinated or integrated with treatment for substance use disorder and comorbid conditions is also key including communication with the patient's specialty care provider (e.g., substance abuse counselor) and/or primary care doctor (**Center for Substance Abuse Treatment, 2009**).

In managing intoxicated patients, clinician should keep in mind that suicidal thoughts or behavior are not typical consequences of acute substance use and suggest the individual is at increased risk. Accordingly, detoxification alone is never sufficient in the presence of suicidal thoughts or behavior.

L. Pharmacotherapy to Reduce Risk of Suicide

The evidence for the use of pharmacological interventions specifically to address suicide risk is limited.

RECOMMENDATIONS

1. 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
2. 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)

M. Pharmacological Treatment to Reduce Risk for Suicide in Patients with Mental Disorders

When self-harm behavior or suicide risk is attributable to a psychiatric illness, that illness needs to be identified and treated and the treatment plan modified when appropriate to specifically address the risk of suicide.

RECOMMENDATIONS

1. Pharmacological intervention may be markedly helpful in managing underlying mental disorders and the danger of repeated or more dangerous self-directed violence.
2. 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.

3. 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.

RATIONALE

Decades-long challenges associated with adequately blinding both patients and researchers during psychotropic drug trials remain. Both patients and raters are subject to anticipate improvement (placebo effect) when expected side effects of a trial medication appear to be experienced by subjects. Clinical trials pose methodological, pharmaceutical, and ethical challenges when suicide is considered the outcome. This is an especially cogent concern for suicidal individuals suffering depression and fatigue, as antidepressants tend to improve one's energy level weeks prior to improving mood, potentially enabling one still suicidal to initiate actions resulting in self-harm. Thus, addressing suicidality associated with a mood disorder with pharmacotherapy can be a double-edged sword. There is less ambiguity in terms of considering the use of antipsychotics when indicated for one afflicted with both active psychosis and suicidality.

Conclusions on medication effects on suicide are drawn from randomized clinical trials designed to determine a drug's efficacy as well as observational and registry data. Patients with a history of suicide, current suicidal ideation or severe mental illness are routinely excluded from clinical trials. Thus, multiple systematic reviews and meta-analyses have been published using findings from available data not including patients at greater risk for suicide. Lithium and clozapine have been reported to reduce suicide risk of patients with a mood disorder or schizophrenia.

M1. Use of Antidepressants to Prevent Suicide in a Patient with a Mood Disorder

Closely monitor patients for changes in thoughts of suicide or suicidal behaviors after antidepressant treatment has been initiated or the medication dose is changed.

BACKGROUND

The effect of antidepressants on suicide is uncertain. Clinical trials of antidepressants for the treatment of depression routinely exclude persons with suicidal ideation or a history of suicide resulting in a very low incidence of suicide among study participants. The few trials of patients with suicidal ideation or history of suicide attempt were small, short in duration and often not designed to detect a change in suicidal status.

Observational trials or ecologic studies have reported an inverse relationship between rates of suicide and antidepressant prescribing over time after controlling for other variables such as unemployment, alcohol consumption and access to mental health care. The relationship was linked to the introduction of SSRIs and other second-generation antidepressants, which are better tolerated, have greater patient adherence, more likely to be prescribed in a therapeutic dose, safer in overdose, and more likely to be prescribed by primary care providers. Such a clear inverse relationship has not been found in all studies or countries. Suicide rates in many countries began declining prior to the introduction of the SSRIs and demographic subgroups such as adolescents and young adults did not show any change in suicide rates despite an increase in the rate of antidepressant prescribing. Other factors contributing to a decline in suicide rates include changes in social and economic conditions, limited availability of lethal means, less substance use, and a birth cohort effect. The reported decline in suicide rates since 1983 cannot be solely attributed to the introduction of the second-generation antidepressants; other factors are likely to have contributed.

The FDA warning of an increased risk of suicidal thinking and behavior in children, adolescents, and young adults (18-24 years of age) with major depressive (MDD) and other psychiatric disorders does not prohibit the prescribing of an antidepressant to these patients. Analysis of data pooled from placebo-controlled trials with fluoxetine and venlafaxine found that relief of depressive symptoms sufficient to reduce the depression severity was needed to reduce suicidal thoughts and behavior. The reduction of suicide risk

was greater with antidepressant treatment than placebo and found across all adult age groups. There was no evidence of an increased suicide risk associated with antidepressant treatment. A 27-year observational cohort study found patients with a more affective syndrome were more likely to be initiated on an antidepressant. The study also found that exposure to an antidepressant reduced the risk of suicide behavior, and that there was small increase in the risk of suicide behavior during the first 4 weeks of antidepressant exposure.

Consistent with the FDA box warning, clinicians must closely monitor young adult patients (18-24) for changes in thoughts of suicide or suicidal behaviors after an antidepressant is initiated or during a dose change. The concern about increasing the risk of suicide in the elderly was not included in the FDA box warning.

RECOMMENDATIONS

1. 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.
2. 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]
3. 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.
4. 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.

See VA/DoD CPGs for Management of Major Depressive Disorder and Bipolar Disorder

DISCUSSION

FDA accessed all proprietary clinical trials to analyze the risk of suicidality with antidepressants in adults (**Stone et al., 2009**). Outcome measures included suicidal ideation or behavior (including completed and attempted suicide, or preparatory acts). Data from 327 randomized, double-blind, placebo-controlled trials (including data from antidepressant active-comparator arms) were included in the meta-analysis (n=99,231 adults 25 years and older). Across all indications and compared to placebo, antidepressants were not associated with a risk of suicidal behavior or ideation (OR 0.85, 95% CI 0.71 – 1.02). Stratification by psychiatric and non-psychiatric indications or by antidepressant class did not find a significant association. Use of an antidepressant by patients younger than 25 years was associated with an increased suicidal behavior (OR 2.3, 1.04 – 5.09) compared to those assigned to placebo, but not with ideation (or worse) or ideation alone. Patients age 25 years and older were significantly less likely to report ideation (or worse) [OR 0.74, 0.60 – 0.90] or ideation alone [OR 0.70, 0.60 – 0.90], but not suicidal behavior [OR 0.87, 0.58, 1.29] compared to patients assigned to placebo.

Barbui et al. (2009) performed a systematic review and pooled analysis of eight observational studies that reported completed or attempted suicide in depressed patients treated with SSRIs. The risk of completed or attempted suicide was greater in patient's age 6 to 18 years (OR 1.92, 95% CI 1.51 – 2.44 with 0% (I2) heterogeneity). Paroxetine and venlafaxine had significantly higher OR in patients 18 and younger. Adult and geriatric patients (>65 years) were at a lower risk, OR 0.57 (0.47 – 0.70, I2 = 52.5%) and OR 0.46 (0.27 – 0.79, I2 = 0%), respectively. Sensitivity analyses did not alter the findings. In adult and geriatric patients, individual antidepressants did not differ in their risk.

In a retrospective cohort study of Veterans (n=887,859) receiving antidepressants treatment for depression, **Valenstein et al., (2009)** found suicide rates were highest in the first 12 weeks following hospital discharge compared to the second 12-week period (RR 1.9, 95%CI 1.5 – 2.4). The start of a new antidepressant (RR 1.8, 1.4 – 2.3); starts of "other" antidepressant, e.g., switching antidepressants, (RR 1.4, 1.1 – 1.8); any change in existing antidepressant treatment, e.g., a change in dose, (RR 1.8, 1.5 – 2.1); and any treatment event (RR 1.8, 1.6 – 2.1) were associated with higher suicide rates in the first 12-weeks of these interventions compared to the second 12-week period. These finding can be explained by indication bias rather than the medication effect. Stepping up therapy may have been indicated due to increase in depression severity. Age group was associated with suicide rate following "any" change in antidepressant regimen and in the first 12-weeks post-hospital discharge with patients age 61 to 80 years having the highest risk. The initial 12-week period following the initiation of an antidepressant or any change in antidepressant treatment appears to be a period of higher-risk for suicide among veterans.

Schneeweiss et al. (2010) A 9-year cohort study of incident use of antidepressants by British Columbia residents 18 years of age and older did not find a difference in suicide or suicide attempt rates between antidepressants or class of antidepressants. Event rates were highest in the first six months after initiation of an antidepressant.

DeRubeis et al. (2005) compared (8 week study) cognitive therapy to medication (paroxetine 10-50mg daily) treatment and placebo in 240 adults (mean age 40yrs) with moderate to severe depression. They reported 1 suicide death in the paroxetine group and none in the placebo or cognitive therapy group.

Gibbons et al. (2007) conducted a chart review of 226,866 veterans (mean age 57.6) with depression comparing suicide attempts in those started on an antidepressant to those not started on an antidepressant. They found a statistically lower incidence in those started on SSRIs as opposed to those not started on medication treatment for depression.

Gruenbaum et al. (2011) assessed adults (mean age 35.2-37.9) with MDD and either current suicidal ideation or past suicide attempt on either paroxetine or bupropion for 8 weeks with 16 week continuation for suicide events using the Columbia Suicide History Form. There were no suicide deaths.

Leon et al. (2011) conducted a 27 year observational cohort study of patients with an affective disorder chronicling symptom severity during period when unexposed or exposed to medication. The more severe the affective syndrome, the more likely an antidepressant was initiated (OR=1.16; 95% CI 1.12-1.21). Exposure to an antidepressant reduced the risk of suicide behavior by 20% (HR=0.80; 0.68-0.95). During the first 4 weeks of antidepressant exposure the risk of suicide behavior was 1% compared to 0.7% among unexposed intervals. Exposures to a mood stabilizer in the absence of antidepressant exposure resulted in a lower unadjusted rate of suicide behavior (9.7%) than during unexposed intervals (12.6%).

EVIDENCE TABLE

	Evidence	Source	LE	QE	NB	SR
1	Exposure to antidepressants by patients younger than 25 years is associated with an increased suicidal behavior but not with ideation (or worse) or ideation alone	Stone et al., 2009	I	Mod	Mod	B
2	Exposure to antidepressants does not increase the risk of suicidal ideation or behavior in adults age 25 or older	Barbui et al., 2009 DeRubeis et al., 2005 Gibbons et al., 2007 Gruenbaum, 2011 Stone et al., 2009	I/II-2	Mod	Mod	B

LE=Level of Evidence; QE=Quality of Evidence; NB=Net Benefit; SR=Strength of Recommendation (See Appendix A)

M2. Use of Antipsychotics to Prevent Suicide in a Patient with a Non-Psychotic Disorder

Closely monitor patients for changes in thoughts of suicide or suicidal behaviors after an antipsychotic is added to treatment for a mood disorder.

BACKGROUND

Atypical antipsychotics may be used as treatment augmentation in the management of MDD and treatment of bipolar depressive disorders. Aripiprazole, quetiapine, and olanzapine in combination with fluoxetine include depressive disorders in their label indications. Their labels also include the same box warning as antidepressants for an increased risk of suicidal thinking and behaviors. There is no evidence to support this increased risk in adults, albeit atypical antipsychotics have not been as extensively studied as antidepressants.

RECOMMENDATIONS

1. 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.
2. 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.
3. 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.

DISCUSSION

Berman et al. (2007) in a 6-week multicenter RCT evaluated 362 adult patients with incomplete response to antidepressants for major depression assigned to placebo and aripiprazole (mean 11.8mg/day). In this study there were no completed suicides.

Calabrese et al. (2005) in an 8 week randomized, double blind, placebo controlled trial of quetiapine for the treatment of bipolar I or II depression in 542 adults (mean age 36.6-38.3 yrs) reported 2 suicide attempt in treatment groups and none in the placebo group. There were no completed suicides.

Findings from the STEP-BD study revealed that suicidal ideation was significantly more prevalent among patients taking a second generation antipsychotic than those who were not (26% vs. 17%, p=0.048) (**Goldberg et al., 2005**).

M3. Use of Lithium for Reducing Suicide in Patients with Unipolar Depressive Disorder

Providers should consider treating patients with a unipolar depression disorder with lithium in an effort to reduce the risk of suicide.

BACKGROUND

Unipolar depressive disorder is a severe recurrent illness with high lifetime morbidity and premature mortality due to suicide. Numerous double-blind, placebo-controlled trials have shown that lithium is very effective at reducing relapses when given as maintenance therapy. It is also very effective when given as maintenance therapy after electroconvulsive therapy. There is also evidence that lithium can be effective as adjunctive treatment in those not responding to antidepressants. Long-term studies of lithium maintenance therapy show a suicide rate much lower than comparative studies in long-term follow-up of

untreated depression. The evidence showing a reduction in morbidity on lithium treatment suggests that systematic long-term lithium treatment of unipolar depression could considerably lower the suicide rate.

RECOMMENDATIONS

1. 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]
2. 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.
3. 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.

DISCUSSION

Cipriani et al. (2009) in a systematic review and meta-analysis compared lithium to antidepressants in patients with unipolar depression. The primary outcome was prevention of relapse; all-cause mortality and suicide were secondary outcomes. Suicide was only reported in 2 studies and only 2 cases were reported both in patients assigned to antidepressants. The relative risk of suicide was reduced with lithium use, however it was not significant (RR=0.31, 0.03-2.92).

Guzzetta et al. (2007) performed a meta-analysis of lithium's antisuicidal effects in patients with recurrent major depressive disorder. Data from 7 published and unpublished reports were pooled (only one was a randomized, double-blind, placebo-controlled trial). As with other meta-analyses, suicide was observed incidentally and was not the primary study outcome. Two hundred fifty-two patients had periods of lithium exposure and 205 had periods when they were not exposed (128 had exposed and unexposed periods). Mean (SD) exposure-observation periods were 4.56 (2.53) years with lithium and 6.27 (4.84) years unexposed. Lithium use was associated with an 88.5% lower risk of suicide per year, 0.17% with lithium and 1.48% without (Incidence-rate ratio 8.71; 95% CI 2.10 to 77.2; pooled Risk Ratio = 4.24, 1.49 to 12.00). Analysis of completed suicides found patients exposed to lithium to a have an 85% reduction in completed suicides per year compared to unexposed patients, 0.33% vs. 2.2%, respectively (IRR = 6.77, 1.29 to 66.8).

EVIDENCE TABLE

	Evidence	Source	LE	QE	NB	SR
1	Lithium for patients diagnosed with recurrent major depression disorder	Cipriani et al., 2009 Guzzetta et al., 2007	I II	Mod	Small	C

LE=Level of Evidence; QE=Quality of Evidence; NB=Net Benefit; SR=Strength of Recommendation (See Appendix A)

M4. Use of Lithium for Reducing Suicide in Patients with Bipolar Disorder

Providers should consider treating patients with a bipolar disorder with lithium in an effort to reduce the risk of suicide.

BACKGROUND

Observational studies and analyses of findings from randomized clinical trials conducted to evaluate other effects of lithium have led to conclusions that lithium may prevent suicide in patients with bipolar disorder. However, no adequately powered randomized clinical trials have been conducted to evaluate these effects.

The benefits of suicide reduction associated with lithium appear to be conveyed with long-term lithium use rather than when dosed acutely.

The benefits of suicide reduction with lithium are not outweighed by an increase in death from lithium toxicity.

RECOMMENDATIONS

1. 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]
2. 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.
3. 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.

See VA/DoD CPG for Management of Bipolar Disorder

DISCUSSION

Lithium vs. Valproate

Oquendo et al. (2011) randomized 98 patients with bipolar disorder and past suicide attempts to treatment with lithium or valproate; both groups were eligible for adjunctive medications per protocol. Forty-five suicide events (attempt or ideation with a plan) were identified in 35 patients. There were no suicides. Eighteen suicide attempts were made by 14 patients: 6 assigned to lithium and 8 assigned to valproate. No significant difference were found between lithium and valproate in the time to suicide attempt or suicide event. However, because the studied recruited far fewer subjects than initially proposed, it must be viewed as a failed trial rather than a negative one.

Lithium vs Placebo Augmentation

Lauterbach (2008) randomized 167 patients with depression or bipolar disorder who survived a recent suicide attempt to augmentation of enhanced usual care with lithium or placebo. There were 7 non-fatal suicide attempts among the 84 subjects randomized to lithium, and 7 non-fatal attempts and 3 fatal suicides among the 83 subjects assigned to placebo. There were no significant differences between lithium and placebo in the planned outcome, fatal or non-fatal attempts. However, because the study recruited far fewer subjects than initially proposed, it can be viewed as a failed trial rather than a negative one. In unplanned post-hoc analyses, the investigators noted that the differences between lithium and placebo in deaths from suicide may suggest effectiveness.

Lithium maintenance:

Badessarini et al. (2006) update their previous systematic review and meta-analysis by reviewing randomized-controlled and open-label trials published between 2001 and August 2009. The authors expanded their analysis to include attempted suicides, bipolar disorder vs. major affective disorders, open-label vs. randomized-controlled trials, and high vs. low quality trials. Thirty-one of the 45 trials identified were eligible for inclusion in the meta-analysis, involving a total of 85,229 person-years of risk-exposure. The risk of suicide or suicide attempts was nearly 5 times greater in patients not taking lithium (RR=4.91, 95% CI 3.82-6.31). The risk of completed suicide was lower in patients taking lithium (4.86, 3.36-7.02) as were suicide attempts (4.98, 3.56-6.96). Lithium's risk reduction for suicide was evident in patients with bipolar disorder (5.34, 3.59-7.93) and major affective or schizophrenia (4.66, 3.43-6.33).

Cipriani et al. (2005) in a systematic review of 32 randomized controlled trials of the use of lithium in bipolar, schizoaffective depressive, dysthymic and rapid cycling disorders found patients on lithium less likely to die by suicide (OR=0.26, 95% CI 0.09-0.77). Lithium use was associated with lower odds of suicide plus deliberate self-harm in 8 trials (0.21, 0.08-0.50). All-cause mortality was lower for patients assigned to lithium in 11 trials (0.42, 0.21-0.87). All-cause mortality was included in the analysis to determine if lithium was associated with other causes of death than suicide such as toxicity.

Baldessarini et al. (2003) in a pooled review of 34 studies of patients with affective disorders (16,201 patients, 64,233 person years) found risks for all suicidal behaviors to be reduced by 93% with lithium treatment compared with no lithium (3.10/100 person years without lithium vs. 0.21/100 person years with lithium vs. 0.315/100 person years for the general population). The bipolar patients had a reduction in suicidal acts of 95%. For suicide attempts, the reduction was 93% while for completed suicides, the reduction was 82%.

Muller-Oerlinghausen et al. (2003, 2005) found patients on lithium to have 8 times lower suicide risk than those off lithium.

Goodwin et al. (2003) in a review of prescription use found, after adjustment for several variables, that bipolar patients on lithium had significantly fewer suicide attempts, attempts leading to hospitalization and completed suicides than patients on valproate and also had fewer attempts than those on carbamazepine.

A meta-analysis of 5647 patients in 22 studies determined that suicide was 82% less frequent during lithium treatment (0.159 vs. 0.875 deaths/100 patient-years). The risk-ratio on/off lithium was 8.85 (95% CI 4.12-19.1, p<0.0001) (**Tonda** et al., **2001**).

Several reviews (in addition to Goodwin et al., 2003) have found no beneficial effect of the use of other maintenance medications in reduction of suicide risk in bipolar disorder, including carbamazepine and valproate (**Ernst and Goldberg, 2004**) and antidepressants (Ernst and Goldberg, 2004) but the overall data are insufficient to draw firm conclusions for these agents.

Several other cohort studies and systematic reviews have shown lithium maintenance to be associated with lower suicidal acts and deaths **(Nilsson, 1999; Schou, 1998; Oqendo et al., 2005**)

EVIDENCE TABLE

Evidence	Source	LE	QE	NB	SR
Lithium for patients diagnosed with bipolar disorder	Baldessarini et al., 2003, 2006 Cipriani et al., 2005, 2009 Ernst and Goldberg, 2004 Goodwin et al., 2003 Muller-Oerlinghausen, 2005 Oquendo et al., 2011	I	High	Mod- Sub	B

LE=Level of Evidence; QE=Quality of Evidence; NB=Net Benefit; SR=Strength of Recommendation (See Appendix A)

M5. Use of Clozapine in the Treatment of a Patient with Schizophrenia Risk for Suicide

Providers should consider treating patients with schizophrenia with clozapine who have a history of suicide attempt, high risk for suicide, or who are symptomatic after tow adequate trials with other antipsychotics.

BACKGROUND

The majority of suicides for patients with schizophrenia occur within the first 10 years after illness onset, and 50% occur within the first 2 years. Patients are at higher risk to for dying by suicide within the first few weeks or months after a hospital discharge. Approximately 50% of patients with schizophrenia or schizoaffective disorder attempt suicide, and approximately 10% die by suicide. An integrated psychosocial and pharmacological approach to managing this patient population is recommended. While results of studies suggest that antipsychotic medications may protect against suicide risk, the evidence appears to be most favorable for clozapine. In addition, treating depressive symptoms in patients with schizophrenia is an important component of suicide risk reduction.

For a comprehensive review of management of suicide in patient with schizophrenia, see Kasckow, 2011

RECOMMENDATIONS

1. 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]

DISCUSSION

Treatment with the atypical antipsychotic clozapine has been shown in a single large, multi-site, randomized controlled trial to be significantly more effective than olanzapine in preventing suicide attempts in patients with schizophrenia and schizoaffective disorder at high risk for suicide. Clozapine is an under prescribed atypical antipsychotic due to its adverse effect profile and many logistically challenging regulatory requirements including prescriber and patient registration, and compliance with weekly, bi-weekly or monthly blood draws. Clozapine is indicated for treatment refractory schizophrenia and should be considered and offered to patients who have not responded after adequate trials to two antipsychotics. Providers and patients often prefer to exhaust all available options including exceeding maximum label dose and combination antipsychotics before trying clozapine. Clozapine's adverse effect profile is not benign as it has strong anticholinergic properties, is associated with metabolic effects including weight gain and glucose intolerance, sialorrhea, agranulocytosis, and myocarditis.

Standard parameters for clozapine administration should be maintained.

The International Suicide Prevention Trial (InterSePT) is the first large-scale, prospective study designed to evaluate the potential of antipsychotic medications to reduce suicidal behaviors in patients with schizophrenia or schizoaffective disorder who are known to be at high risk for suicide. The 2-year study, comparing the risk for suicide behavior in patients with schizophrenia or schizoaffective disorder randomized to clozapine or olanzapine, found that suicidal behavior was significantly less with clozapine (HR 0.76; 0.58-0.97, p=0.03). In addition, fewer clozapine patients attempted suicide, required hospitalization or rescue interventions to prevent suicide. (**Meltzer**, et al., **2003; Alphs, 2004**).

The FIN11 study was an 11-year population-based cohort study, follow-up on mortality in patients with schizophrenia (**Tiihonen et al., 2009**). Clozapine was associated with the lowest risk of death (all-cause mortality) compared to other antipsychotics (adjusted HR 0.74, 95% CI 0.60-0.91 vs. a HR of 1 or greater for other antipsychotics individually). Clozapine also had the lowest rate of suicide of any antipsychotic (HR 0.34, 0.20-0.57). The HR for all other antipsychotics was below or above 1, but the 95% CI overlapped unity (with the exception of perphenazine which was the comparator (HR=1) and the "other" category (HR1.55, 1.07-2.25)).

A meta-analysis conducted by **Hennen and Baldessarini (2005**) found that patients taking clozapine had a lower overall risk of suicidal behaviors compared to other treatments (RR 3.3; 95% CI 1.7-6.3, p<0.0001) and a lower risk for completed suicides (RR 2.9, 1.5-5.7, p<0.002).

Modestin et al. (2005) conducted a retrospective review of clozapine's anti-suicidal properties. One hundred forty-one patients admitted to a single psychiatric unit between 1962 and 1994 and treated with clozapine for at least 6 weeks (continuous) while hospitalized were eligible. Ninety-four patients met inclusion criteria of having received pre-hospitalization psychiatric treatment for at least as long as their hospitalization, had no prior treatment with clozapine, a completely documented treatment and suicidal behavior history, and medication compliance was not in question. Typical antipsychotics were prescribed to 77% of patients during the pre-clozapine period. The mean (SD) length of hospitalization was 15 months (22). Suicidal behavior was noted in 28% (26/94) in the pre-clozapine period compared to 3% (3/94) in the clozapine period (OR=11.6, 95% CI 3.4 – 39.9). Serious suicidal behavior was noted in 12% and 1% of patients during the pre-clozapine and clozapine periods (OR=12.3, 1.6 – 97.5). The findings did not waiver when only patients who were hospitalized for the entire pre-clozapine and clozapine periods (n=89). The mean daily dose of clozapine was lower in the 3 patients with suicidal behavior, 109 mg (75 mg), than in those without suicidal behaviors, 235 mg (124 mg).

Impulsiveness and aggressiveness may be the most common behavioral correlates of central serotonergic dysfunction**. Spivak et al. (1998)** conducted a trial to determine whether clozapine affects impulsiveness and aggression. Thirty neuroleptic-resistant chronic schizophrenic patients, maintained on clozapine for 1 year, were evaluated for aggressiveness, impulsiveness, and suicidality in comparison with 30 chronic schizophrenic patients maintained on classical antipsychotic agents for the same period of time. Clozapine treatment was associated with less impulsiveness ($p < 0.05$), aggressiveness ($p < 0.01$) and fewer suicidal attempts ($p < 0.05$). Serum triglycerides and plasma NE levels were significantly higher ($p < 0.01$ and $p < 0.0001$, respectively) in the patients treated with clozapine, as compared with patients treated with classical neuroleptic drugs. The authors conclude that long-term clozapine treatment may be effective in controlling aggressive, impulsive, and suicidal behavior in neuroleptic-resistant chronic schizophrenic patients.

Sernyak et al. (2001) conducted a comparison of hospitalized patient who received clozapine while hospitalized with a matched control of patients with schizophrenia in the VA health care system. Data on death and cause of death was collected for 3 years after discharge. Although death rate among the group exposed to clozapine was lower than the control, analysis of the cause of death showed that the difference was attributed to the much lower rate of death due to respiratory disorder in the clozapine group. There were no significant differences in suicide or accidental death between the groups. The author conclusion was that in the lack of large randomized trial on the effect of clozapine on suicide, this sophisticated statistical technique of matching clozapine and control patients in a large sample (n=4,245) and the use of national databases to identify the cohort, and account for all deaths, cause of death and dropouts from treatment group failed to support the hypothesis that clozapine treatment is associated with significant fewer death due to suicide.

Quality of the Evidence

The quality and consistency of these studies is highly variable, with only one RCT of moderate quality. The RCT compared clozapine to an alternative antipsychotic, olanzapine. However, the anti-suicide properties of these two antipsychotics have not been compared to the anti-suicide properties of placebo. Furthermore, it is possible that clozapine success was more due to its rigorous administration than to any intrinsic pharmacological properties. The impact the drug on symptomatic improvement independent of suicide effect, or the impact of the attention and surveillance of clozapine monitoring had on reduced suicidal behavior are unknown. Although the RCT attempted to control for differences in administration, clozapine, in comparison to olanzapine, requires a very slow dosing schedule of administration and considerable clinical vigilance to prevent a potentially life-threatening blood disorder. Because of the significant risk, clozapine is most often used as the antipsychotic of last resort. Thus, the added, necessary

psychosocial relationship with clinicians administering clozapine may be contributing to the overall outcome in this RCT.

Clearly, clozapine's effectiveness in reducing suicide behaviors and suicide deaths requires additional research. In the specific population, of those for whom the drug is indicated in any case, the evidence may be considered sufficient with small benefit.

EVIDENCE TABLE:

	Evidence	Source	LE	QE	NB	SR
1	Clozapine has a lower overall risk of suicidal behaviors compared to other antipsychotic treatments in patients with schizophrenia	Hennen et al., 2005 Meltzer, 2003; Alps, 2004 Modestin et al., 2005 Sernyak, 2001 Spivak, 1998 Tiihonen et al., 2009	I I II-3 II-1 II-1 II-2	Mod	Small	C

LE=Level of Evidence; QE=Quality of Evidence; NB-Net Benefit; SR=Strength of Recommendation (See Appendix A)

M6. Use Antiepileptic Drugs (AEDs) and the Risk of Suicide

Closely monitor patients for changes in thoughts of suicide or suicidal behaviors after an antiepileptic drug is initiated for any indication.

BACKGROUND

In January 2008, the FDA issued an alert on an increased risk of suicide with AEDs. The alert was based on an FDA analysis of 199 placebo-controlled clinical trials of 11 AEDs in 43,892 patient's age 5 years and older. The trials were investigating AEDs role in the treatment of epilepsy, psychiatric disorders, migraine headaches, and neuropathic pain. In several trials the patients assigned to placebo remained on AEDs prescribed prior to study enrollment and randomization while others had the investigational AED added to their previous AED regimen. An increased risk for suicide was observed after one week of AED initiation and continued for at least 24 weeks. Four patients assigned an AED completed suicide compared to none assigned to placebo. The relative risk for suicidality was higher in patients with epilepsy than patients prescribed an AED for psychiatric or other conditions. The 11 AEDs were flebamate, lamotrigine, oxcarbazepine, tiagabine, zonisamide, valproate, carbamazepine, gabapentin, levetiracetam, pregabalin, and topiramate. Critics of the meta-analysis cite the lack of systematic or standardized language defining suicidal ideation and behavior across the trials as a limitation. Adding to the controversy of these findings is that patients with epilepsy have a suicide rate that is 5 times greater than the general population. A review of AEDs and suicidality (Kalinin, 2007) proposes that AEDs that have serotinergic properties may reduce the risk of suicidality.

RECOMMENDATIONS

1. Patients started or who are managed with antiepileptics should be monitored for changes in behavior and the emergence of suicidal thoughts.
2. There is no evidence that AEDs are effective in reducing the risk of suicide in patients with a mental disorder

DISCUSSION

A case-control study drawing from a cohort of more than 5 million patients in the U.K. found that the use of an AED by patients with epilepsy without depression or bipolar disorder had a lower risk for suicide-related events compared to similar patients not taking an AED (OR 0.59, 95% CI 0.35-0.98). Conversely, patients with depression-only (no epilepsy or bipolar disorder) exposed to an AED had an increased risk

for suicide-related event compared to those with depression-only not exposed to an AED (OR1.65, 1.24-2.19). No association was found with AED exposure in patients with bipolar disorder-only, epilepsy and depression, or epilepsy and bipolar disorder (**Arna et al., 2010**).

A case-control study of veterans 66 years and older who received their care from the VA examined the association of a diagnosis of suicide behavior or ideation and first use of an AED as monotherapy for the treatment of epilepsy or non-epilepsy conditions. Sixty-four cases of suicide-related behaviors were matched 768 controls over a 5-year period. The presence of an affective disorder prior to being prescribed an AED (OR 4.2, 95% CI 2.4-7.5) was associated with an increase in suicide-related behaviors. There was trend that newer AED (levetiracetam and lamotrigine) were associated with suicide-related behaviors (OR 10.2, 1.1-97.0); however few veterans were receiving either drug. No other individual AED or psychiatric co-morbidity significantly increased the odds of suicide-related behaviors (**VanCott et al., 2010**).

A third case-control study stratified AEDs into four groups: barbiturates, conventional, and a low or high potential of causing depression in order to determine their association with self-harm or suicidal behaviors over a 15 year period. AEDs with a low potential for depression were lamotrigine, gabapentin, pregabalin, and oxcarbazepine. AEDs with a high potential were levetiracetam, tiagabine, topiramate, and vigabatrin. (**Andersohn et al., 2010**)

A cohort study of new users of monotherapy AED exposure for a variety of purposes examined the risk of suicide attempted or completed suicide, or violent death. The cohort was from an integrated health care system. Fifteen AEDs were included with topiramate and carbamazepine serving as comparison AEDs. The risk of any of the three outcomes, alone or in total, was significantly increased for gabapentin, lamotrigine, oxcarbazepine, and tiagabine (**Patorno et al., 2010**).

Another cohort of 130 patients with epilepsy was followed for 5 years. No association between AED use and suicide risk was found after adjustment for psychiatric co-morbidities and other established suicide risk factors (**Machado, 2011**).

Investigators used 30 years of longitudinal data from the NIMH Collaboration Depression Study, a prospective observation trial, to evaluate the relationship between exposure to valproate, carbamazepine or lamotrigine and the risk of suicidal behavior in patients with bipolar disorder. The risk of suicidal behavior was not increased by exposure to any of the three AEDs compared to unexposed patients (HR = 0.93, 95%CI 0.45 – 1.92) (**Leon, 2012**).

An analysis of medical claims data (Gibbons, et al 2009) found that post suicide attempt rate in patients prescribed one of the 11 AEDs or decreased from the pretreatment rate (72/1000 persons-years to 13/1000 person-years), the same rate as those prescribed other drug treatments (antipsychotics, antidepressants and other AEDs).

M7. Use of Anti-anxiety Agents in Suicidal Patients

BACKGROUND

Anxiety is a significant and modifiable risk factor for suicide. The use of anti-anxiety agents may have the potential to decrease this risk.

Any one of several rapidly acting, anti-anxiety agents (e.g., clonazepam, a benzodiazepine) are candidate pharmaceuticals for use in emergency psychopharmacology for anxiety reduction in patients who exhibit suicidal behaviors. The use of any medications for this purpose must consider the risk of death from suicide versus the risk of serious adverse effects from psychopharmacology (to include disinhibition that could lead to suicide) versus the utility of various psychosocial interventions versus doing nothing.

Benzodiazepines can be effective in treating symptoms of anxiety, insomnia, hypervigilance, and other anxiety symptoms. In general, benzodiazepines are not recommended for long-term use in chronic aggression because of the potential for dependence and tolerance, resulting in an increase in impulsivity-

aggression. Benzodiazepines can occasionally disinhibit aggressive and dangerous behaviors and enhance impulsivity.

Benzodiazepines taken in excessive amounts can cause overdose and dangerous deep unconsciousness. In combination with other central nervous system depressants, such as alcohol and opiates, the potential for toxicity increases exponentially.

RECOMMENDATION

1. 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.

M8. Use of Methadone and Naloxone to Reduce Death from Opioid Overdose

BACKGROUND

The availability of naloxone at home for intranasal administration by family or others in case of intentional or accidental opioid overdose has been suggested. Intranasal naloxone [2 mg/mL; 1 mg (0.5mL) per nostril] has been shown to have efficacy comparable to intramuscular and intravenous naloxone in the pre-hospital setting when given by emergency medical personnel. Mean response times, percent with an adequate response time, need for hospitalization and adverse event frequency did not differ between routes of administration. Average increases in respiratory rate and Glasgow Coma Scale scores were similar although statistically favored the intravenous route. Need for a second, or rescue dose, was required by more patients assigned to intranasal administration. These differences may be minimized by the immediate availability of naloxone when the overdose is discovered compared to waiting for the arrival emergency medical personnel. There is no data about the impact of buprenorphine on the risk of suicidal or no suicidal overdoses.

RECOMMENDATIONS

1. 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)
2. 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.

DISCUSSION

Caplehorn et al. (1996) followed a cohort of 296 Australian methadone maintenance patients over 15 years. The relative risks of death in and out of maintenance were calculated for two age groups, 20-29 and 30-39 years. Heroin addicts in both age groups were less likely to die by heroin overdose or suicide while receiving methadone maintenance as patients not in treatment. Methadone maintenance had no measurable effect on the risk of death through nonheroin overdose, violence or trauma, or natural causes. A meta-analysis showed the reduction in overall mortality was consistent with the results of cohort studies conducted in the United States, Sweden, and Germany. The combined results of the five studies again indicated that methadone maintenance reduced addicts' risk of death to a quarter, RR 0.25 (95% CI 0.19 to 0.33).

Naloxone is safe and effective for the treatment of opioid overdose (**Boyer, 2009).** The use of naloxone is standard practice in emergency settings, where it is administered to patients with an opioid-induced coma or respiratory depression because of its rapid action as an opioid antagonist.

Kerr et al., (2009) compared the effectiveness of concentrated (2 mg/ml) intranasal naloxone to intramuscular naloxone for suspected opiate overdose in a randomized controlled trial of 172 patients who were enrolled into the study. Rates of response within 10 minutes were similar: intranasal naloxone (60/83, 72.3%) compared with intramuscular naloxone (69/89, 77.5%). No difference was observed in mean response time (8.0 vs. 7.9 minutes). Concentrated intranasal naloxone can reverse heroin overdose successfully by using intranasal route of administration as a first-line treatment for heroin overdose.

N. Electroconvulsive Therapy (ECT) in the Prevention of Suicide

Consider ECT for rapid resolution of suicidal symptoms in patients with Major Depressive Disorder, Manic episodes, Bipolar I Depression, PTSD, and Acute Schizophrenia.

Potential indications for ECT include 1. Failure of alternate treatment regimens (medication, therapy); 2.Cases in which delay of treatment response is life threatening; and 3. Patient expressed preference for treatment leading to rapid resolution. Consider the trade-off of relative risk and potential benefits in patients with co-morbid medical conditions to include recent myocardial infarction, intracerebral hemorrhage, retinal detachment, and/or currently on MAOIs. See VA/DOD Clinical Practice Guidelines based on the condition treated (MDD, PTSD, Bipolar Depressive Disorder).

BACKGROUND:

The role of ECT in the prevention of suicide remains largely a function of its rapid and efficacious resolution of symptoms of several Psychiatric disorders to include Major Depressive Disorder, Manic episodes, Depression of Bipolar I Disorder, and Acute Schizophrenia. The VA/DOD practice guidelines for MDD and PTSD also recommend it as a potential treatment in chronic, severe, medication and psychotherapy-resistant PTSD. Evidence-based indications for ECT vary by disorder and stage of disorder (acute, chronic etc.). It is beyond the scope of this CPG to provide detailed guidance for all of these disorders and their various stages.

In general, suicidal patients who have failed to respond to or have contraindications to medical or other treatments may benefit from ECT. Suicidality is often considered an indication for ECT especially when the suicidality is severe enough that a delay in treatment response is considered life threatening.

RECOMMENDATIONS:

1. 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.
2. 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.
3. 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.
4. 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.

5. ECT should be performed by experts in centers that are properly equipped and experienced in the treatment.
6. 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.
7. 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. Monamine 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.

DISCUSSION:

There is insufficient evidence to demonstrate enduring effects on suicide rates after short-term ECT. There is some evidence to suggest rapid short-term benefits in reducing suicidal ideation and intent in severe depression. Similar to the situation with antidepressant therapy, there is still very little information arising from systematically applied and evaluated long-term treatment with ECT comparable to the data available for maintenance treatment with lithium and clozapine, and it is not reasonable to expect long-term effects on suicide risk from time-limited treatment interventions of any kind.

Future research is needed to evaluate the long-term efficacy and safety of ECT, including its use as a maintenance therapy and its use in particular subgroups who may be at increased risk, (e.g., older people, young adults, and during pregnancy or short-term ECT in comparison with and in conjunction with the antipsychotic and antidepressant and mood stabilizers used in current practice.

Depression

National psychiatric associations in Great Britain and the United States (Freeman, 2000; APA, 2001) and assessments by the Canadian Agence d'Évaluation des Technologies et des Modes d'Intervention en Santé (Banken, 2002) and the U.K. National Institute for Clinical Excellence (NICE, 2002) cited the reduction of suicide risk as a justification for the use of ECT.

The vast majority of patients receive ECT because they do not respond to or tolerate antidepressant medication trials. There are no established criteria for the number or duration of unsuccessful drug trials prior to initiating ECT [NICE 2010]. Clinicians should consider ECT for patients who fail two or three antidepressant medication trials and remain severely depressed for several months.

ECT may be less risky than antidepressant and antipsychotic medication for certain patients, including those who are debilitated and elderly. Pregnant and lactating patients worried about teratogenesis and other medication side effects can also be effectively and safely treated with ECT (Anderson, 2009).

ECT is an effective and fast acute treatment for major depression. Remission occurs in 70 to 90 percent of patients who receive ECT, based upon randomized trials. ECT can rapidly relieve suicidal ideation and behavior.

Avery and Winokur (1978) assessed suicidal behavior in the 6 months following the treatment of depression in 519 patients. Suicide attempts were recorded in 0.8% of the ECT patients compared to 4.2% of those who had received "adequate" and 7% "inadequate" antidepressant medication treatment.

Rich et al. (1986) analyzed depression and suicide ratings in a study designed primarily to measure treatment response with increasing numbers of alternate day, right unilateral ECT. Suicide score, (item 1 of Hamilton Depression Rating Scale), improved maximally within 1 week and improved significantly more rapidly than measures of mood or lack of energy or interests.

Kellner et al. (2006) evaluated the change in expressed suicidal intent, as recorded in item 3 of the Hamilton depression scale, in unipolar depressed patients after response to a course of ECT. The study was part of the ongoing collaborative multicenter study by The Consortium for Research in ECT Continuation ECT (the CORE study) that is comparing the efficacy of continuation ECT and continuation pharmacotherapy in patients with depression. Of all 444 patients, enrolled in this study, 118 (26.6%) had a score 3 for having active suicidal thoughts, actions, or gestures, and 13 (2.9%) received a score of 4 for reporting a suicidal event during the current episode. These patients were treated with a standard brief-pulse ECT device with bitemporal electrode placement. Of these 131 patients (the high expressed suicidal intent group), the score of 106 patients (80.9%) ultimately dropped to 0. Among the 25 patients whose score did not resolve to 0, half dropped out before receiving an adequate course of treatment and, of the remaining 13 patients, 6 had a rating of 1 at the end of the acute course. These patients were younger than those whose ratings resolved ($p<0.02$) but were not different with respect to percent with psychosis or baseline severity of illness. The author concluded that expressed suicidal intent in depressed patients can be rapidly relieved with ECT. For patients at risk for suicide, ECT should be considered earlier than at its conventional "last resort" position. The resolution (item 3 score resolved to 0) of suicidality occurred in 38.2% (N=50) after three ECT sessions (1 week); in 61.1% (N=80) after six ECT sessions (2 weeks); and in 76.3% (N=100) after nine ECT sessions (3 weeks). The odds of having the expressed suicide intent rating resolve to 0 was 2.5 times higher for the older compared to the younger group. There was a significant relationship between the outcome and age ($p<0.03$).

The results of these studies should be interpreted with caution. Most of the studies were limited by reliance on a single item from one rating scale. In addition, assessment of the effects of ECT on suicidality was secondary to the primary goals of the studies, and any changes in suicidality associated with ECT may have been secondary to the treatment response of the depression to ECT. There is no data regarding reduction in suicide death. However, available studies indicate that acute treatment with ECT in patients with high risk (or imminent risk) of suicide is associated with frequent and rapid reductions in ideation and intent, possibly even before major improvements in other symptoms of depression.

Few other uncontrolled, retrospective clinical observations from relatively small case series have been published:

Tanney (1986) comparison of the frequency of suicides in different decades found decreased rates when ECT was the dominant treatment for mental illness.

Isometsa (1996) examination of the records of 1,397 completed suicides in Finland within a 12-month period showed only two patients having received ECT

Sharma (1999) compared their records of 45 psychiatric inpatients in a Canadian hospital who committed suicide and with an equal number of patients matched for gender, age, and admission diagnosis. The comparison showed no difference in ECT use in the two samples, finding no particular benefit for ECT.

Prudic and Sackeim (1999) examined the changes in item 3 (expressed suicidal intent) of the Hamilton Depression Rating Scale in 148 patients referred for ECT. Both suicide and mortality rates were reduced with treatment. The overall average score on item 3 was 1.8 at baseline and was reduced to 0.1 in 72 responders and to 0.9 in 76 nonresponders.

Schizophrenia

Tharyan and Adams (2009) pooled data from 26 studies (798 participants) in a Cochrane review and concluded that ECT may result in short term global improvement in patients with schizophrenia. It appears that the best outcomes combined ECT with antipsychotic medication treatment. Antipyschotic medications remain the primary treatment for Schizophrenia.

Post-Traumatic Stress:

There has been little research studying these modalities in the treatment of PTSD:

Margoob et al., (2010) open trial evaluated treatment of ECT in severe, chronic, antidepressant and CBT refractory Veterans with PTSD. The study reported 40% improvement measured by CAPS independent of depression. The VA/DoD guideline for management of PTSD recommends ECT "may be considered as an alternative in chronic, severe, medication and psychotherapy-resistant PTSD."

Bipolar depression

Mukherjee et al. (1994) reviewed multiple studies and noted 80% of patients with mania experienced clinical improvement with ECT.

Ciapparelli (2001) found rapid and robust declines in suicide score in a naturalistic study of depressed patients with medication-resistant bipolar disorder who were given ECT with pharmacotherapy.

Long-term benefits of ECT

O'Leary (2001) conducted a meta-analysis, which calculated suicide rates from published literature for patients with mood disorder who were followed naturalistically for at least 6 months after an index hospitalization, indicated a 41% decrease in suicide rates, from 1.33% to 0.770% per year, between the pre-ECT years and later years when ECT and then antidepressants were in widespread use. However, interpretation of this information for possible effects of ECT may be biased by uncertain reliability in identifying death by suicide in different eras and by the effect of new therapeutic strategies across the decades included in the study.

Risks and Contraindications

ECT is not without risk, which includes both adverse outcomes such as death in .002% and adverse side effects including temporary confusion and memory loss. Modern ECT techniques have substantially reduced the memory effects experienced by most patients. ECT death is usually the result of cardiovascular complications in patients who are already having cardiovascular compromise. Fractures are minimized by the use of muscle relaxants however teeth may still be broken during the treatment. Headaches and muscle soreness are usually relieved by NSAIDS and nausea by anti-emetics. Seventy-five percent of patients report that memory impairment is the worse side effect they experience.

Contraindications are relatively rare and most can be overcome by increased monitoring, medical preparation, and stabilization prior to ECT. Patients who need careful risk assessment and consideration prior to ECT include those with space occupying lesions, increased intracerebral pressure, recent myocardial infarctions, and hypertension. Pregnancy is not an absolute contraindication to receiving ECT.

Module D: Follow-up and Monitoring of Patient at Risk for Suicide

Among patients with high suicide risk, particularly those who have attempted suicide, immediate follow-up and continuity of care are crucial to promoting positive outcomes. Patients leaving the ED or hospital inpatient unit after a suicide attempt, or otherwise at a high acute risk for suicide, require rapid, proactive follow-up. This Module focuses on the critical steps that should be followed in the immediate and long-term follow-up of patients at high acute risk for suicide. A previous suicide attempt is one of the most important risk factors for later death by suicide. This risk is particularly high in the weeks and months following the attempt, including the period after discharge from acute care settings such as EDs and inpatient psychiatric units.

A few studies support continued contact or outreach following a crisis, as recommended in this module. Studied programs proven successful sent caring letters following hospital discharge, provided patients an emergency card to facilitate easy access, or a suicide prevention counselor coordinated care following hospital discharge. However, a review of other studies found insufficient evidence to establish clinical effectiveness for psychosocial interventions as: case management, intensive inpatient and community care, or assertive approaches. Thus, most recommendations are based on consensus of practicing clinicians informed by the results of these studies. There is still a need for further research to identify specific aspects of these interventions, in particular the populations served by the military healthcare system and the VHA.

Annotations

O. Follow-up and Monitoring

Follow patients at risk of suicide regularly and reassess risk frequently, particularly when the patient's situation changes. Follow-up should commence in the immediate period after discharge from acute care settings. The frequency of contact should be determined on an individual basis, and increased when there are increases in risk factors or indicators of suicide risk. Support should include reinforcement of the safety plan at regular intervals, including practice and, if needed, revisions. Contact and support can be helpful even when telephone, letters, or brief intervention provides it.

BACKGROUND

Suicidal behavior is a final common pathway for a wide variety of static (e.g. personality, chronic illness) and dynamic (e.g. financial or marital stress) factors. Most people who die from suicide have had contact with a healthcare professional in the weeks or months before their deaths. Many others have reached out for help but were unable to obtain it. These findings demonstrate the importance of recognizing people at risk and implementing interventions as soon as possible. However, the potential for death from suicide remains elevated long after the immediate situation. The nature of suicide risk as fluid, dynamic, and changing over time calls for an emphasis on pro-active follow up after acute interventions as part of any suicide prevention program. One cannot assume that because someone has been discharged from an inpatient unit or an emergency department that they are no longer at risk. Suicide risk often continues or is easily rekindled.

The first week, month and year following discharge from psychiatric inpatient settings is a period of increased vulnerability. The first 30 days after discharge from an inpatient psychiatric unit is considered to be the highest risk period in which someone is likely to attempt or re-attempt suicide. The risk for suicide should be reassessed frequently, particularly if the patient's situation changes. Within ambulatory care settings, patients at clinically significant risk for suicide require regular contact to provide support and to monitor them for times when they are at increased risk.

Providing ongoing follow-up and ensuring future access to care are critical elements in reducing the likelihood of suicide in any individual at risk. Patients discharged from inpatient setting or emergency department; need a prompt outpatient follow-up appointment, preferably within one week of discharge, as more suicides occur in the first week then at any other time.

Patients should be followed up by behavioral health or primary care providers who know the patient and are knowledgeable about suicide prevention. Following acute management, the care team should assure that previously suicidal patients are actively engaged in ongoing care for any mental disorders and regular health care maintenance. Patients with co-occurring conditions should continue to receive treatment for prevention of relapse or recurrence of depression, bipolar disorder, anxiety disorders, psychosis, or other conditions. For those with a history of alcohol or substance abuse, corresponding treatment can be critical to prevent relapse.

The timing of follow-up appointments should be determined on a case-by-case basis depending upon the patient’s clinical state and preferences. Follow-up can be conducted in a clinical setting, the patient’s home, or the community. It can be face-to-face, by telemedicine, by telephone, or by other modalities. Caring for patients at risk within structured programs that provide elements of care management can facilitate effective treatment. Feasibility, acceptability and outcome of different tele-health modalities (e.g. phone versus web-based chat versus email or messaging) have not been evaluated and should be a focus of future research.

RECOMMENDATIONS

Follow-Up

1. 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.
2. Patient should be re-evaluated following an inpatient or Emergency Department discharge, as soon as possible, but not later than 7 days.
3. High acute risk patient should be actively managed to assure adherence and coordinated care.
4. 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.
5. 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.
6. 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

Duration of Care Focused on Suicide Prevention

7. 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.

DISCUSSION

The importance of providing follow up services promptly after emergency department or hospital discharge is highlighted by findings of a study by the Department of Veterans Affairs which showed the period after inpatient discharge to be the time of greatest risk for suicide for depressed veterans (**Valenstein et al., 2009**). The decrease in care following discharge has been considered as contributing to the excessive suicide rate in this population; however, an alternative explanation may be that the increase is related to the reason for admission. Death by suicide in the period after discharge from inpatient psychiatric units is more frequent than at any other time during treatment (**Valenstein et al., 2009**), similarly, the period after discharge from Emergency Departments has been found to be a time of high suicide mortality (**Weis et al., 2006**). There is also reason for substantial concern in the period following discharge from residential addiction treatment (**TIP50 DHHS, 2009**).

Patients with suicidal behavior have been characterized as difficult to engage in after-treatment. **Lizardi et al., (2010)** suggests that a critical intervention point before discharge and the start of treatment is almost always unaddressed. In a review of intervention studies, van Heeringen found that compliance in routine

after-care seldom exceeds 40% **[van Heeringen et al., 1995]**. Intervention at this critical time period can help patients move from the assessment stages to being motivated to engage in and complete a successful course of treatment. Various trials of interventions offering help after discharge from hospital care or emergency department have focused on treatment accessibility and adherence to after-treatment. Incorporating different forms of contact across time as well as strategies that reach out to patients may improve treatment engagement among suicide attempters (**Lizardi et al., 2010**).

The clinical and epidemiological literature demonstrates that the probability of suicide and suicide-related behaviors can be elevated for extended periods of time after people are identified as being at risk. In this context, Fleischmann's finding that continuity of care with frequent, though brief, encounters can decrease suicide rates is an important demonstration that follow-up can be effective.

Fleischmann et al. (2008) studied the effect of brief educational intervention and periodic follow-up contacts (BIC) for suicide attempters in five culturally different sites (Campinas, Brazil; Chennai, India; Colombo, Sri Lanka; Karaj, Islamic Republic of Iran; and Yuncheng, People's Republic of China) as part of the WHO Multisite Intervention Study on Suicidal Behaviors (SUPRE-MISS). Among the 1,867 suicide attempters enrolled in the emergency departments of the participating sites, 922 (49.4%) were randomly assigned to a brief intervention and contact (BIC) group and 945 (50.6%) to a treatment as usual (TAU) group. The experimental intervention provided a one-hour educational intervention in the emergency department or as soon as possible after discharge followed by nine in-person or telephonic contacts over an 18 month period. Referrals to other agencies and services were arranged as appropriate. Although the overall number of deaths was small, the risk of death by any cause was cut in half in the treatment group compared with those who received treatment as usual. The proportion of individuals who died by suicide was also lower in the intervention group (0.2% v. 2.2%, w2 = 13.8, P<0.001).

A secondary outcome measured in this study evaluated repeated suicide attempts over the 18 months following the index attempt was reported in a second publication (**Bertolote et al., 2010**). The repeated attempts were identified by follow-up calls or visits. Overall, the proportion of subjects with repeated suicide attempts was similar in the BIC and TAU groups (7.6% vs. 7.5%, $chi^2 = 0.013$; p = .909), but there were differences in rates across the five sites. The secondary outcome in the study from the five low- and middle-income countries does not confirm the effectiveness of brief educational intervention and follow-up contacts for suicide attempters in reducing subsequent repetition of suicide attempts up to 18 months after discharge from emergency departments.

The conclusion of this study should be interpreted in caution since they were based on informant report rather than official data sources and data were not available for those lost to follow-up. The fact that the population included in this study was from low-income countries (Brazil, China, India, Iran, and Sri Lanka) calls into question whether the results are generalizable to the DoD and VA population.

Neither this study, nor the rest of the literature can address the key questions about how continuity can be achieved. Specifically, research has not yet provided clear answers to questions about:

When should care and follow-up begin?
How long should it continue?
What is the appropriate frequency of follow-up?
What is the appropriate duration of an encounter?
What should be accomplished at each follow-up encounter?
What information should be obtained from follow-up to decide when treatment plans need to be modified?

In the absence of specific evidence to answer these questions, recommendations about follow-up must be based on a consensus that is informed by the evidence.

However, when a meta-analysis of the results of trials evaluating the effect of follow-up interventions on repetition of deliberate self-harm was conducted, there was no convincing evidence of greater effectiveness compared with routine care (**Hawton *et al.* 2000; NICE, 2011**).

Finally, it is useful to consider a residual category of older studies that were conducted to evaluate counseling or psychosocial interventions that do not constitute clinical trials of manual-based psychotherapies. Whether or not the specific interventions that were tested proved to be replicable or effective, they should be considered for what they can say about the outcomes of follow-up care.

P. Reassessment and Monitoring

1. 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

Q. Adherence to Treatment and Follow-up care Strategies

BACKGROUND

Barriers to care

Patients with severe and persistent mental illness, few skills, minimal resources, and socioeconomic distress are difficult to engage in outpatient treatment. Access-to-care obstacles may become barriers to follow-up and prove overwhelming for many patients at risk for suicide. Efforts to improve follow-up, continuity of care, and prevent repetition of self-harm should target higher-risk patients prone to disengagement and non-adherence.

Table D-1. Barriers to Mental Healthcare in the General Population and Among Formerly Deployed Military Personnel (Rand 2010 p49)

General Population (Kessler, Berglund, et al., 2001)	Formerly Deployed Military Personnel (Schell and Marshall, 2008)
Lack of perceived need	Negative career repercussions
Unsure about where to go for help	Inability to receive a security clearance
Cost (too expensive)	Concerns about confidentiality
Perceived lack of effectiveness	Concerns about side effects of medications
Reliance on self (desire to solve problem on one's own or thoughts that the problem will get better)	Preferred reliance on family and friends
	Perceived lack of effectiveness

There is limited evidence that adherence to treatment will lower suicide attempt and death rates. "Outreach" generally refers to various methods of contacting the patient. Planning the outpatient program before discharge avoids unnecessary service gaps and insures continuity of care. Various forms of motivational counseling prior to discharge, next-day appointments, intensive follow-up treatment, reminders, or home visits may improve previously low adherence rates for following the recommended treatment plan. Facilitating adherence begins with the initial establishment of the physician-patient

relationship and the collaborative development of a plan of care that is attentive to the needs and preferences of the individual patient. For example, rates of keeping a first appointment may improve if prior to the appointment the patient has had personal or telephone contact with a new clinician.

When family members or other supportive individuals are involved (e.g., military command personnel or supportive roommates), they can also benefit from education and can be encouraged to play a helpful role in improving adherence.

RECOMMENDATIONS

1. 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.
2. Follow-up care should be coordinated by an interdisciplinary team and communicated with the patient through a single identified point of contact.
3. 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]

Patient Who Refuse Care

4. 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.
5. 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).
6. Consider the use of caring letters for suicide attempters who refuse treatment. [I]
7. Home visit may be considered to support re-engagement of patients at high acute risk who discontinue outpatient care. [C]

DISCUSSION

Reports from randomized clinical trials and other studies on the continuity of care and follow-up for patients at risk for suicide were divided into those that address several areas or types of interventions that include:

- Care management and related strategies
- Facilitating access to care
- Communication of Caring Messages (Mailing letters/postcards)
- Telephone contacts

- Outreach in the patient's home
- Intensive care

Q1. Case- or Care- Management Strategy

Several studies evaluated care management and related strategies provided in mental health care settings specifically to address the risk for suicide. According to the definition provided in Clarke, 2002, case management includes a needs assessment, treatment planning, arranging access to planned services, monitoring the use and quality of the services received, and long-term flexible support

Clarke et al., (2002) made the comparison between case management and treatment as usual. Adults (20+ years) presenting to Accident and Emergency Department following Deliberate Self Harm (DSH) were randomized to intervention group that involved case management combined with routine management, including medical and psychiatric assessment. The usual care group received a triage, medical and psychosocial assessment and treatment as required. There was insufficient evidence to determine if there was a clinically significant difference between nurse-led case management and standard aftercare on reducing the likelihood of people who self-harm being readmitted to hospital (RR = 0.85, 95% CI, 0.48 to 1.51). However, investigators reported that multiple re-admissions were much more common in the experimental group than the control (9 out of 220 versus 2 out of 247). At 36 months' follow-up, one suicide had occurred in each treatment group.

De Leo et al., (2007) evaluated the impact of an intensive case management follow-up of high-risk people for one year. Sixty males with a history of suicide attempts and psychiatric illness were randomly assigned to one of two conditions: Intensive Case Management (ICM) or Treatment As Usual (TAU). ICM featured weekly face-to-face contact with a community case manager and outreach telephone calls from experienced telephone counselors. TAU participants were discharged under existing hospital practices.. At the end of the twelve-month treatment phase, only 22 patients completed the final evaluation, leaving a final sample of 22 (ICM=14, TAU=8). People in the ICM condition had significant improvements in depression scores, suicide ideation, and quality of life. ICM participants reported more contacts with mental and allied health services, had better relationships with therapists, and were more satisfied with the services that they did receive. No suicides were recorded in the twelve-month follow-up period. A few participants engaged in self-harming behaviors, though there were no differences between the treatment group and control. The author conclusion was that despite the high attrition rate and subsequent low sample size, initial indications are that intensive case management may be beneficial in assisting the post-discharge phase of high-risk psychiatric patients.

EVIDENCE TABLE

	Evidence	Source	LE	QE	NB	SR
1	Case management following discharge of high risk patients	Clarke et al., 2002 De Leo et al., 2007	I	Low	None- Small	I

LE=Level of Evidence; QE=Quality of Evidence; NB=Net Benefit; SR=Strength of Recommendation (See Appendix A)

Q2. Facilitating Access to Care After Discharge

There has been interest in the UK in providing patients immediate access to help at times of acute crisis. Two studies evaluated the effect of an emergency care '*Green Card*' - a card of the size of a credit card with a telephone number that allows patients direct access to psychiatric care and/or hospitalization at the time of their suicidal crisis. A third study evaluated a similar strategy consisting of a mailed letter inviting high-risk patients to make an appointment with their family physician.

Morgan et al. (1993) offered patients (n=212) easy access to a therapist or re-admission on demand in the case of a crisis. The result after follow-up of one year was a reduction of repetition of deliberate self-harm (DSH) in the 'green card' group. There were 7 repeats in the experimental group and 15 in the control

group, however this difference was statistically non-significant. This reduction was independent of the actual use of the green card. A trend was noted towards greater use of services in the control group. The findings suggest that an offer of help which emphasis the opportunity to contact a therapist by phone or face-to-face any time needed may reduce repetition of self-harm.

Evans et al. (1999b) conducted a large 'green card' study, offering 827 patients who self harmed 24 hours telephone access for a 6-month period after the index DSH. No direct offer of face-to-face consultation was made. The study did not provide support for the initial findings by Morgan (1993), there being no difference in the rate of repetition of deliberate self-harm between the two treatment groups. A follow-up publication (**Evans et al., 2005**) evaluating the results of the intervention after one year showed similar results. There was no effect on the number of repeat episodes at 12 months and no difference between those with and without a previous history of self-harm. Time to repeat was not different between the experimental group and the control. The authors' conclusion of the follow-up study was that there was no benefit in issuing a crisis card allowing telephone consultation to all those presenting to hospital after self-harm.

A different strategy to improve access to care was evaluated by **Bennewith et al. (2002).** The practices of general practitioners (GP) (n=49) were randomly allocated to the intervention group and 49 practices to the control group. If a patient's GP was in the intervention group, their GP got written information about the DSH and a letter to forward to the patient, inviting him/her to make an appointment with the GP. The GP received guidelines for the management of DSH. The practice-based intervention did primarily focus on the assessment of risk factors following a traditional bio-medical illness model and there was neither emphasis on putting the suicide attempt into a personal life context nor on establishing a therapeutic alliance. No difference between the intervention and the control group was found.

EVIDENCE TABLE

	Evidence	Source	LE	QE	NB	SR
1	Providing contact information and facilitate access to care	Evans et al., 1999, 2006 Morgan et al., 1993	I	Mod	Small-None	I
2	Reaching out to patients through their primary care	Bennewith et al., 2002	I	Mod	None	I

LE=Level of Evidence; QE=Quality of Evidence; NB=Net Benefit; SR=Strength of Recommendation (See Appendix A)

Q3. Communication of Caring Messages (Mailing letters/postcards)

Sending caring messages to suicidal patients may reduce their suicidal behaviors. Providers can consider strategies for conveying a supportive and caring message to their suicidal patients. There is indication, based on some literature, that post-cards used in the appropriate patient population (e.g., high risk, refusal for ongoing treatment) may reduce repeat suicide rates. Coordinated mailings by the patient care team should be considered as part of a repeat mailing program. Depending on circumstances, setup, and provider comfort level, options such as sending a caring email, letter, card, and/or text message can be considered.

Historically, the evidence has supported the use of caring communication in reducing mortality rates. New evidence is currently emerging regarding the efficacy of cards to reduce lethality and increase engagement in care following discharge.

There is limited evidence supporting the use of post-cards for all patients post-discharge for suicidal ideation or attempts. In a large-scale study Moto & Bostrom (2001) demonstrated a significant reduction in suicide rates among high-risk persons who refused ongoing treatment. The participants in the study group received repeated contacts over the next 5 years. The contacts were aimed to show concern for the patients and their wellbeing and not to motivate attendance to treatment. However, in a similar study by Carter et al. (2007), a post-card intervention program demonstrated no significant reduction in the

proportion of people repeating suicide attempt. Yet, there was a significant reduction in the rate of repetition.

The large RCT that was carried out in the 1970's in San Francisco by **Motto & Bostrom (2001**) recruited people who had been admitted to a psychiatric hospital because of depressive symptoms or suicidal ideas. Patients who either refused follow-up care or had discontinued treatment following discharge were randomized to a group that received caring letters or a usual care (no-contact) condition (N = 843). Those in the caring letters condition received brief, typed, caring letters that included personal information gathered during the patient's stay or from follow-up responses. Motto emphasized the importance of not using the caring letters to gather test data or information of any kind, and to instead write letters that let patients know the staff remembered them and had positive feelings about them. Speculating that one note would not have much impact, but that the cumulative effect of repeated caring contacts would have the potential for the greatest influence (Motto, 1976), the letters were sent every month for 4 months, then every 2 months for 8 months, and finally every 3 months for 4 years. The findings indicated that number of suicides in the no-contact group was greater than twice that of the contact group for the first 2 years. Although the suicide rate curves were not significantly different when evaluated over the full 5 years, the significant differences during the first 2 years occurred when the letters were most frequent and during the time period when the highest suicide rates would be expected.

A similar strategy was used in a more recent trial in Australia (**Carter 2005-07).** Participants (772 adults) discharged from hospital after deliberate self-poisoning were randomized to receive either a series of postcards over 12 months (in addition to usual treatment) or to usual treatment alone. The postcards included a simple message of concern. The mailing of the postcards reduced the cumulative number of repeat episodes of deliberate self-poisoning both at 12 months (Incident Risk Ratio [IRR] 0.55; 95% CI, 0.35 to 0.87) and at 24 months (IRR 0.49; 95% CI, 0.33 to 0.73), but did not reduce the proportion of patients with repeat deliberate self-poisoning at either time point: intervention 15% (95% CI 11.5–18.7) v. control 17% (95% CI 13.5–21.0). At both 12 months and 24 months, subgroup analyses found that the between-group differences in cumulative number of repeat episodes of deliberate self-poisoning were largely accounted for by a small number of women in the control group with a past history of self-harm (n = 18, less than 3% of the sample).

Beautrais and colleagues (2010) report findings from a randomized controlled trial of a postcard intervention in New Zealand. The study randomized individuals aged 16 and older who were discharged from hospital following self-harm of attempted suicide into two groups. The treatment group received six postcards mailed during the 12 months following an index emergency department attendance for self-harm. The control received no mailing. Due to ongoing difficulties with recruitment procedures, with clinical staff reluctant to recruit participants to the trial, the trial was stopped after 8 months with a sample size of 327. After adjustment for prior self-harm, there were no significant differences between the control and intervention groups in the total number of self-harm re-presentations (IRR 1.07; 95% CI, 0.80 to 1.43) or total proportion of patients who re-presented for self-harm (OR 0.97; 95% CI, 0.58 to 1.62). The investigators' concluded that the postcard intervention did not reduce further self-harm. Postcard intervention may be effective only for selected subgroups.

A recent large study (n-2300) published by **Hassanian et al., 2011** tested the efficacy of a postcard intervention plus treatment as usual (TAU) versus TAU in an RCT in the large referral hospital for poisoned individuals in Tehran, Iran. The primary outcomes were suicidal ideation, suicide attempts and self-cutting (or self-mutilation). Similar to the study by Carter (2005-7), the treatment group received 8 postcards during 12 months after discharge from the hospital. Each postcard had a different message and were mailed each month for the first 4 month and every 2 month in following 8 months. A ninth postcard was sent for each participant's birthday. There was a significant reduction in suicidal ideation (RRR = 0.31, 95% CI 0.22–0.38; NNT= 7.9, 95% CI 6.10–11.5), suicide attempt (RRR = 0.42, 95% CI 0.11–0.63; NNT= 46.1, 95% CI 26.0–203.7) and number of suicide attempt events per person (IRR = 0.64, 95% CI 0.42–0.97). The investigator concluded that postcard intervention can reduce suicidal ideation and suicide attempts in a non-Western population. Sustained, brief contact by mail may reduce suicidal ideation and suicide attempts in individuals who self-poison.

EVIDENCE TABLE

	Evidence	Source	LE	QE	NB	SR
1	Mailing postcards in the immediate period after discharge in addition to usual care	Carter et al., 2005, 2007	I	Low	Small	I
2	Mailing caring letters for suicide attempters who refuse treatment	Motto & Bostrom, 2001	I	Low	Sub	I
3	Follow-up mailing for patients with high risk for suicide for extended period (> one year) can reduce suicidal and suicide attempts	Carter et al., 2005, 2007 Beautrais et al., 2010 Hassanian et al., 2011 Moto & Bostrom, 2001	I	Low	Mod	I

LE=Level of Evidence; QE=Quality of Evidence; NB=Net Benefit; SR=Strength of Recommendation (See Appendix A)

Q4. Telephone Contact

Phone follow-up interventions have been used to enhance the effectiveness of post-discharge treatment (via efforts to motivate for, and engage in treatment) and to provide brief assessment, crisis intervention, or referral as needed at the time of contact.

Telephone contact of patients in the period after discharge from acute care after attempted suicide may reduce the number of those who re-attempt suicide. Better results may be achieved if the call is done early after discharge by a trained clinician.

In the tele-help project for an elderly Italian population, regular telephone contact and access to further telephone care decreased the number of suicides significantly compared with an age-adjusted general population group (**De Leo et al., 2002**). Service users in the study group received an alarm device to remotely trigger a pre-established response network (TeleHelp). Users also received welfare monitoring and emotional support from trained and paid staff, via short and informal twice-weekly telephone interviews; users were also able to initiate calls at any time (TeleCheck). Active outreach, continuity of care and increased level of emotional support were key elements in providing protection against suicide, at least in females. The studied group was compared with the general population and not a control group of people sharing the same characteristics as the clients of the service.

In Sweden, **Cedereke et al. (2002)** investigated the impact of a randomly allocated telephone intervention with the aim of improving motivation for professional treatment. The study showed that telephone contact to patients at 4 and 8 months following hospitalization for a suicide attempt improved treatment adherence and some psychological symptoms compared to a control group. The controlled study that assessed the usefulness of telephone contact at four and eight months after suicide attempts, in addition to usual treatment, found no significant difference between the intervention and control groups in number of further suicide attempts at one year. The researchers concluded that the method was nevertheless useful because it offered patients who had never received psychiatric care before their index suicide attempt the chance of contact with health professionals.

Another study conducted in France **(Vaiva et al., 2006)** of individuals who had poisoned themselves used a telephone-based intervention in a randomized three-armed design. Participants received either telephone contact at 1 month, telephone contact at 3 months, or no telephone contact. Experienced psychiatrists made the calls. The psychiatrists reviewed existing treatments or suggested new ones, made urgent appointments at the emergency department if necessary, and provided 'psychological support'. The number of participants contacted at one month who reattempted suicide was significantly lower than that of controls (12% (13/107) v 22% (62/280) P = 0.03). This difference was seen over the first six months after telephone contact. No deaths from suicide occurred in this group. For participants contacted at

three months, the number who attempted further suicide was not significantly lower than that of controls (17% (16/95) v 22%; P = 0.27)

The author noted that telephone contact also enables the detection of people at high risk of further suicide attempts and the timely referral for emergency care. Out of 107 patients who were contacted at one month 13 were determined via the phone call by the psychiatrist to be at high risk and sent to the emergency department; 10 off them were considered being at risk and eight of these were admitted to hospital. Only one of these 13 patients reattempted suicide six months later.

EVIDENCE TABLE

	Evidence	Source	LE	QE	NB	SR
1	Contact phone follow-up for patient at high risk	Cedereke et al., 2002 De Leo et al., 2002 Vaiva et al., 2006	I II-a I	Mod	Small-None	I

LE=Level of Evidence; QE=Quality of Evidence; NB=Net Benefit; SR=Strength of Recommendation (See Appendix A)

Q5. Outreach in the Patient's Home

Five studies evaluated the impact of home visits, either by providing treatment in the home or by conducting home visits to facilitate engagement

Hawton et al. (1981) compared the delivery of brief problem-orientated counseling in flexibly timed home-based therapy (including access via telephone services to the general hospital psychiatric service) versus treatment in weekly outpatient clinics. There was no significant difference in repetition that occurred in 5 out of 48 participants in the domiciliary treatment group as compared with 7 out of 48 in the outpatient group (RR 0.71, 95% CI, 0.24 to 2.09).

One study (**Van Heeringen et al., 1995)**, evaluated the impact of a single home visit by a nurse for patients who failed to attend their initial outpatient appointment, with the aim of increasing motivation to attend. Home visits in case of noncompliance after DSH resulted in a significant increase in compliance (51.2%) compared with that of patients who were not visited if they did not attend the first treatment session (39.8%). There was also a decrease in the occurrence of repetition of DSH in the experimental treatment group (10.7% versus 17.4%), which failed to reach statistical significance after adjustment for age, marital status, and history of previous deliberate self-harm.

The **Guthrie et al. (2001)** study evaluated the use of brief psychodynamic interpersonal therapy delivered by nurses in the patient's home. Clinician furnished four 50-minute psychodynamic-interpersonal therapy sessions to suicide attempters in their home during the first four weeks after ED discharge. It was compared with routine care. The intervention resulted in a significant decrease of DSH in the intervention group. The main outcome was repetition of deliberate self-harm, this outcome being based on self-reported episodes of any type of self-harm. There was a significantly lower repetition rate at the 6 months follow-up in the psychotherapy condition (9%) compared with that in the control group (28%; difference in proportions = 19%, 95% CI 9-30%).

Welu et al. (1977) evaluated a 4-month outreach program with an initial home visit to establish a relationship followed by weekly or biweekly contacts. The program resulted in a higher treatment attendance in the intervention group than in the control group. At 4 months there was a significant reduction of DSH in the treatment group. The treatment modalities in the intervention group were not well defined and the follow-up period was only 4 months.

Gibbons et al. (1978) evaluated the efficacy of crisis-oriented, explicitly time-limited services provided by social worker in the patient's home rather than the hospital. The method used task-centered casework, which both social worker and client agree to undertake during a defined time-period (up to a maximum of three months). The intervention addressed range of problems such as personal relationships, social transitions due to losses, changes which required finding new roles, emotional distress interfering with

coping ability, problems with officials and organizations, and of inadequate resources. The trial was not comparing a treated with an untreated group. There was no significant difference in repetition of self-poisoning in the 12 months following the index attempt between experimental and control cases (13.5 per cent vs. 14.5 per cent). However, the patients in the experimental intervention by social worker at home rated the program as more satisfactory and helpful. In a third group of patients, excluded from the trial because of high severity of mental illness or immediate risk of suicide, 50 patients (36 per cent) repeated self-poisoning, in a significantly greater number (P < .001). After four months, patients in the experimental group also showed more improvement in social problems than did the control group. The investigators' conclusions was that although the method to reduce repetition of self harm is unknown, planned social work service using a task-centered approach in patients' home was more acceptable to patients and can reduce some of their most pressing difficulties in a relatively economical way.

EVIDENCE TABLE

	Evidence	Source	LE	QE	NB	SR
1	Conducting home visit to provide outpatient care	Hawton et al., 1981 Van Heeringen et al., 1995 Guthrie et al., 2001 Welu et al., 1977 Gibbons et al., 1978	I	Low	Small	I
2	Conducting home visits to facilitate re-engagement	Van heeringen et al., 1995	I	Mod	Small	C

LE=Level of Evidence; QE=Quality of Evidence; NB=Net Benefit; SR=Strength of Recommendation (See Appendix A)

Q6. Assertive Outreach

Killaspy et al., 2006 conducted a randomized controlled trial to test high-fidelity assertive community treatment (ACT) in the UK, Randomized Evaluation of Assertive Community Treatment (REACT) study. Patients with severe and enduring mental health problems who are high users of inpatient care were randomized to receive either ACT or continue with their usual care. Comparing outcome data at 36 months follow-up was available for 120 ACT and 117 CMHT. Participants showed no advantage over usual care from community mental health teams in reducing the need for inpatient care and in other clinical outcomes. There were no statistically significant differences between the ACT and CMHT participants in total in-patient days over the 36 months (median difference 0 (95% CI –50 to 56). Self-harm (including suicide) in the ACT group was 15/120 and 19/117 in the control group.

Hvid et al.,(2011) randomized 133 consenting patient to a treatment program that included six to eight assertive and motivational consultations, while a similar control group received standard care from a general practitioner. The consultations included problem solving therapy and other elements focused on outreach, adherence and continuation of care. The outcomes measured after 6 month of treatment and 6 month of follow-up included repetition of attempted suicide or suicide, and the total number of suicidal acts. The results showed a significantly lower proportion who repeated a suicide attempt in the intervention group (proportion 8.7%) than in the control group (proportion 21.9%). The number of repetitive acts was also significant lower (8 repetitions in the intervention - vs. 22 in the control group). The author concluded that there was a protective effect of the treatment program on repetition of suicide attempt and on total number of repetitions during the follow-up.

Van der Sande et al. (1997) was a randomized clinical trial comparing the efficacy an intensive psychosocial intervention with treatment as usual. Participants presenting for medical treatment after attempting suicide were randomly assigned to either intensive psychosocial treatment or 'care as usual'. The intensive psychosocial treatment consisted of brief admission to a special crisis-intervention unit and problem-solving aftercare. The results showed no differences in outcome. The probability of repeat suicide attempts in the 12-month follow-up was 0.17 for patients in the experimental group and 0.15 for

the control group. The study concluded that general implementation of an intensive in-patient and community intervention program for suicide attempters does not seem justified.

Morthorst et al. (2012) reported an RCT that assessed whether an assertive outreach intervention after suicide attempt could reduce the frequency of subsequent suicidal acts, compared with standard treatment. Participants were 243 patients admitted to regional hospitals in Copenhagen with a suicide attempt that were randomized to either Case management through assertive outreach that provided crisis intervention and flexible problem solving or treatment as usual. This approach incorporated motivational support and actively assisted patients to scheduled appointments to improve adherence with after-treatment as an add-on to standard treatment. During 12 months of follow-up, 20/123 (16%) patients in the intervention group had a subsequent suicide attempt, compared with 13/120 (11%) in the control group (odds ratio 1.60, 95% confidence interval 0.76 to 3.38; P=0.22). By contrast, self-reported data on new events showed 11/95 (12%) in the intervention group versus 13/74 (18%) in the control group (0.61, 0.26 to 1.46; P=0.27). The author concluded that assertive outreach showed no significant effect on subsequent suicide attempt. The difference in rates of events between register data and self-reported data could indicate detection bias.

EVIDENCE TABLE

	Evidence	Source	LE	QE	NB	SR
1	Assertive Community Treatment (ACT)	Killaspy et al., 2006	I	Mod	None	I
2	Assertive and motivational consultations (Brief crisis-intervention, and brief follow-up problem-solving)	Van der Sande et al., 1997 Morthorst et al., 2012 Hvid et al., 2011	I	Mod	None	I

LE=Level of Evidence; QE=Quality of Evidence; NB=Net Benefit; SR=Strength of Recommendation (See Appendix A)

Q7. Counseling and Psychosocial Interventions Other than Manual-driven Psychotherapies

Hawton et al. (1987) compared in a randomized prospective treatment study, 80 overdose patients (not requiring intensive psychiatric intervention) who received either brief out-patient counseling or were returned to the care of their general practitioners with advice on management. There was little difference in outcome between the two groups. At 12 months the proportion of repetition in the experimental group was 7.35 compared to 15.4% in the control group. However, two sub-groups of patients benefited more from out-patient counseling than from general practitioner care, these were: (a) women, and (b) patients with dyadic problems. The author concluded that counseling following overdoses should be focused on groups of patients such as these who are most likely to benefit from it.

In a Canadian study **Allard et al. (1992)** the key elements of the intervention were one home visit followed by one month of weekly office visits and eight monthly office visits thereafter. The group that received this “experimental” treatment had a 35 percent reattempt rate, which was higher than the 30 percent rate in the control group. The published report mentions that over 55 percent of the patients were unemployed, about 26 percent had fewer than 9 years of education, and 70 percent were unmarried. Only 21 out of 63 experimental subjects completed the treatment.

Mobile Treatment Outreach

Another study by **Currier et al., 2010** evaluated the impact of a **mobile treatment outreach** for following up on emergency department visits in patients at high risk for suicide. The goal of the study was to determine whether a Mobile Crisis Team (MCT) intervention would be more effective than standard referral to a hospital-based clinic as a means of improving engagement. Participants who were assessed for risk of suicide were subsequently discharged from the ED and randomized to follow-up either in the community via a MCT or at an outpatient mental health clinic. Both groups were offered the same structured array of clinical services and referral options. Successful clinical contact (attending the first

appointment) occurred in 39 of 56 (69.6%) of the MCT group compared to 19 of 64 (29.6%) of the control group. (RR = 2.35, 95% CI = 1.55–3.56, p < 0.001). However, there was no significant difference between groups in symptom or functional outcome measures, at 2 weeks or 3 months after enrollment (using intention-to-treat analyses). No data was reported on the Spectrum of Suicidal Behavior scale for suicide that was used to rate increasing risk severity from non-suicidal to serious attempt. The authors' conclusion was that Community-based mobile outreach was a highly effective method of contacting suicidal patients after discharge. However, the location of the post-discharge contact had no effect on outcome.

R. Continuity of Care

BACKGROUND

Continuity of care should be maintained when patients who are, or have been at risk for suicide, transition between care facilities, as to and from DoD and VA care facilities or between other health systems or provider organizations. Care for patients at risk for suicide must pay attention to several potential contexts where there are risks for discontinuities during transitions between care settings. These may include transitions from:

- Primary Care to Behavioral Health Specialty care;
- Emergency Departments to ambulatory services;
- Inpatient units to other setting (e.g., ambulatory services, nursing homes, rehabilitation in the community including domiciliary or other residential treatment settings as for PTSD);
- Nursing homes and residential care units to ambulatory services.

A multidisciplinary team approach to the treatment of suicidal patients maximizes providers' ability to provide optimal management and services to their patients.

Mechanisms for bridging across transitions and for providing information to new providers must be developed on a system-by-system basis. Sustaining the treatment and safety plans is enhanced during transitions of care when provider-to-provider contact and a follow-on appointment with the receiving provider are established. Transition support services (as telephone contact with contracted behavioral health providers) may further enhance transition safety should there be a delay in follow-on services.

RECOMMENDATIONS

R1. Coordination and Collaboration of Care

1. 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.
2. 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.
3. 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.

R2. Documentation of Clinical Care

4. 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.

DISCUSSION

A common factor identified by research in civilian population and in the military is the failure or breakdown in the continuity of care for mental health problems (**Schoenbaum et al., 2009**). The report by the Center for Military Health Policy Research of the RAND Corporation summarized the problem:

> *"Having a "chain of care" and "warm transfers" would prevent individuals from "falling through the cracks of the care system" and is seen as particularly important for individuals suffering from a mental health problem or experiencing suicidal ideation or intent. In the military context, it would mean ensuring smooth transitions between providers during transition times (e.g., moves, deployments, redeployment) so that there is always care available."(Ramchand et al.,, 2011. P. 47)*

Adequately addressing continuity and coordination of care is a challenge in any health care system. This is a particular problem for suicidal individuals and most detrimental example is suicidal patients who are treated in emergency departments. In this setting, patients generally don't receive adequate treatment to address underlying mental illnesses or substance use problems; nor do they leave connected with the kind of follow-up outpatient care that could expedite their recovery.

Increased occurrences of suicidal ideation or behavior appear to be associated with disruptions in patient medication access and continuity**. Moscicki (2010)** collected survey data in 3 cross-sectional cycles in 2006 (as part of the National Study of Medicaid and Medicare Psychopharmacologic Treatment Access and Continuity). The data showed that patients who experienced medication switches, discontinuations, and other access problems had 3 times the rate of suicidal ideation or behavior compared with patients with no access problems (22.0% vs 7.4%, P < .0001).

S. Monitoring after Recovery

BACKGROUND

With effective treatment, illnesses and perpetuating factors can be alleviated, protective factors and coping strategies can be fortified, and the patient's suicidality can resolve to a state of clinical recovery whereby the acute risk has resolved. Nevertheless, the risk of relapse remains. Maintenance treatment with suicidality ("disease") surveillance is warranted to provide early detection of recurrence.

Routine screening of adults in a primary care population for suicidal ideation has not been proven to be of benefit. The US Preventive Services Task Force (USPSTF) concluded that there is insufficient evidence to recommend for or against routine screening. However, in the patient who has a history of suicidal intent or behavior, and especially in the patient who has a diagnosis of a mental disorder, future monitoring and periodically re-assessing the risk for suicide may be justified.

RECOMMENDATIONS

1. Patients with a history of suicide attempt or behavior should continue to be evaluated for risk of relapse on a regular base.

APPENDICES

APPENDIX A:
Guideline Development Process

The VA/DoD Clinical Practice Guideline for Assessment and Management of Risk for Suicide was developed following the general strategy described in "Guideline for Guidelines," an internal working document of the VA/DoD Evidence Based Practice Working Group, that requires an ongoing review of guideline works in progress.

The Offices of Quality Safety and Values and Patient Care Services of the VA, and the Army Medical Command of the DoD identified clinical leaders to champion the guideline development process. During a preplanning conference meeting, the clinical leaders defined the scope of the guideline and identified a group of clinical experts from the VA and DoD to form the Assessment and Management of Risk for Suicide Working Group (WG). The WG's participants were drawn from the fields of primary care, psychiatry, psychology, pharmacology, nursing, and social work.

The WG participated in a face-to-face meeting to reach consensus about the guideline algorithm and evidence-based recommendations and to prepare a draft document. The draft continued to be revised by the Working Group through numerous conference calls and individual contributions to the document.

Recommendations for assessment of suicide s risk and management of patient at risk for suicide were derived through a rigorous methodological approach that included the following:

- Determining appropriate criteria such as effectiveness, efficacy, and patients benefit.
- Reviewing literature to determine the strength of the evidence in relation to these criteria
- Formulating the recommendations and grading the level of evidence supporting the recommendation

After orientation to the goals and scope of the guideline update, the WG developed researchable questions within the focus areas of the guideline and identified associated key terms. For this guideline, two sets of questions were developed. The First (A) addressed assessment risk factors for suicide in veterans and military population. The second set (B) focused on effectiveness of specific interventions for reducing rates of suicidal self-directed violence in military and Veteran populations. This approach ensured that the guideline development work outside of meetings focused on issues that practitioners considered important and also produced criteria for the literature search and selection of included studies that formed the body of evidence for this guideline.

All questions specified (adapted from the Evidence-Based Medicine toolbox, Center for Evidence-Based Medicine, [http://www.cebm.net]:

Population – Characteristics of the target patient population

Intervention – Exposure, diagnostic, or prognosis

Comparison – Intervention, exposure, or control used for comparison

Outcome – Outcomes of interest

These specifications served as the preliminary criteria for selecting studies. See *PICO Questions to Guide Literature Search* for a complete listing and categorization of the questions *(end of this appendix).*

Literature Search

Gaynes and colleagues, 2004 and Mann and colleagues 2005 have reviewed the body of research on suicide prevention approaches previously. Three systematic reviews were conducted of literature related to suicidal self-directed violence published since the two prior reports on the topic by Mann et al. 2005 and Gaynes et al.2004. The first was review focused on Veterans and members of the military and was conducted by the VA Evidence-based Synthesis Program and published by Shekelle et al. in 2009. The review considered studies reporting direct effects of interventions on suicide attempts or completions. Studies reporting results from any country for military or veterans were included, as were studies in Anglo/American countries with adult populations reporting interventions other than strictly mental-

health interventions. The other two reviews were conducted by the VA Evidence-based Synthesis Program to specifically address the PICO questions developed by the WG. They also focused on countries and populations of interest similar to US Veteran and military populations and included intervention studies of pharmacotherapy and psychotherapy, follow-up and referral as well as observational studies assessment of risk factors and assessment tools interventions and assessment tools, which were largely excluded from the previous report; the end search date from the Mann et al. 2005 review was used as the starting point for the current search. The two reviews of the identified evidence conducted Center were published by the VA Evidence-based Synthesis Program (ESP) in two reports (Haney et al., 2012 and O'Neil et al., 2012).

To identify relevant systematic reviews and controlled trials, the review searched PubMed, PsycINFO, the Cochrane Database of Systematic Reviews, and the Cochrane Central Register of Controlled Trials, and covered the period from January 2005 to November 18, 2011. The search strategy was similar to that used by Mann et al., 2005 and Gaynes 2004. It also included suicide and all related terms; risk assessment, screening and validity, interventions and Veteran populations as search terms. The search was limited to peer-reviewed articles involving human subjects and published in the English language that were not included in previously published systematic reviews on the topic.

To assure that our search did not miss relevant articles on suicidal self-directed violence assessment and management, additional articles were obtained from systematic reviews, reference lists of pertinent studies, reviews, editorials, and consulting experts.

Selection of Evidence

The evidence selection process was designed to identify the best available evidence to address each key question and ensure maximum coverage of studies at the top of the hierarchy of study types. Published, peer-reviewed RCTs, as well as meta-analyses and systematic reviews that included randomized controlled studies, were considered to constitute the strongest level of evidence in support of guideline recommendations. This decision was based on the judgment that RCTs provide the clearest, most scientifically sound basis for judging comparative efficacy. The WG also recognized the limitations of RCTs, particularly considerations of generalizability with respect to patient selection and treatment quality. When available, the search sought out critical appraisals already performed by others that described explicit criteria for deciding what evidence was selected and how it was determined to be valid. The sources that have already undergone rigorous critical appraisal include Cochrane Reviews, Best Evidence, Technology Assessment, AHRQ systematic evidence reports, and other published Evidence-based Clinical Practice Guidelines.

The WG also reviewed larger syntheses of the literature that are guiding work in suicide prevention nationally (Goldsmith et al., 2002), and internationally (WHO- mhGAP program on Self-harm and Suicide evidence 2008), as well as unpublished (at the time) synthesis of the literature produced by the National Institute of Health in the UK (draft self-harm clinical practice guidelines from the National Institute for Health and Clinical Excellence (NICE) 2011), and a draft of the systematic evidence review for the U.S. Preventive Services Task Force that was shared for review in progress of updating the earlier Gaynes 2004 review. These additional searches and reviews of document were done in an attempt to include any articles reporting on any strategies addressing suicidal self-directed violence as an outcome and to obtain the most comprehensive list of articles possible.

The following inclusion criteria were used to select the articles identified in the literature for possible inclusion:

- Published in United States, United Kingdom, Europe, Australia, Japan, New Zealand
- Full articles only published in English
- Study populations: age limited to adults 18 years of age or older; all races, ethnicities, and cultural groups
- Relevant outcomes able to be abstracted from the data presented in the articles
- Sample sizes appropriate for the study question addressed in the paper. RCTs were included if they were initiated with 30 or more participants

Search Result and Evidence Reports

An initial global literature search yielded 23 systematic reviews/meta-analyses and 38 eight RCTs (reported in 47 publications) addressing pharmacotherapy, psychotherapy, referral and follow-up interventions.

For studies addressing the key questions regarding risk factors and assessment tools, 30 observational studies and 14 systematic reviews (reported in 16 publications) were considered. Refinement of the review process with input from the WG members resulted in the studies being identified that met the baseline criteria for inclusion, addressed one or more of the researchable questions, and covered topic areas that had either not been addressed in the previous reviews or had been included but not fully developed. A more detailed search was conducted on each question, supplemented by hand searches and cross-referencing to search for relevant articles. The searches for these questions covered the period since the end search date of the evidence reports (between November 2011 and August, 2012).

Evidence tables were developed to demonstrate the study characteristics and results for all included studies, organized by key question and study design. The Working Group critically analyzed studies to compare their characteristics, methods, and findings, compiled a summary of findings for each key question, and drew conclusions based on qualitative synthesis of the findings.

The reports included findings as described in the prior systematic reviews by Mann et al., Gaynes et al., and the NICE 2011 draft report on self-harm in order to assess contributions of pre-2005 and non-Veteran, non-military literature to this report. Due to the differences in scope and methods in these other reports, data synthesis of their findings is limited to a narrative summary of findings.

Working Group Meetings

The WG participated in 4-day face-to-face meeting to reach consensus about the guideline algorithm and evidence-based recommendations and to prepare a draft update document. The draft continued to be revised by the Working Group through numerous conference calls and individual contributions to the document. The group was divided to several subtask groups that focused on different aspects of the guideline (i.e. recommendation for pharmacotherapy, psychotherapy, assessment, etc.)

The plenary group convened to discuss discrepancies in opinion and interpretation of the evidence when exist. In most cases, an informal consensus within the WG was sufficient to formulate recommendations based on the best evidence and o r experience of the clinical experts. . In areas where this approach did not lead to conclusion, the facilitator used a structured discussion format (i.e. a modified nominal group process) to expedite the process and reach consensus based on the collective experience of the group. Where existing literature was ambiguous, or where scientific data was lacking on an issue, the recommendations were based on the clinical experience of the working group.

Formulation of Recommendations

This Guideline is the product of many months of diligent effort and consensus building among knowledgeable individuals from the VA, DoD. An experienced moderator facilitated the multidisciplinary Working Group. The content and validity of each section was thoroughly reviewed in a series of conference calls. The final document is the product of those discussions and has been approved by all members of the Working Group. The guideline was developed, reviewed and evolved over three major iterations. The entire working group developed consensus for the scope and structure of the guideline. The Co-chairs and subject matter experts reviewed the available evidence, and collectively completed and reviewed the first draft of recommendations based on the available evidence. The Recommendations were then sent to the whole working group for comment. Comments and modifications of the text suggested by the members of the working group were integrated into a second draft that was again reviewed for clarity and consistency by the co-chairs. Suggested changes to the algorithm and annotation were discussed over conference calls until all disagreements were resolved and the entire group achieved a consensus. The second draft was then sent to stakeholders in the Veterans Health Administration, and the Departments of Army, Navy (and US Marine Corps), and Air Force for comment. These comments

were again reviewed and integrated by the co-chairs and a final review was performed to ensure consistency of recommendations with the available evidence for this guideline.

Recommendation and Quality Rating

Evidence-based practice involves integrating clinical expertise with the best available clinical evidence derived from systematic research.

The results of the searches, the evidence tables, and copies of the original studies were provided to the WG for further analysis. The clinical experts from the VA and DoD WG reviewed the results and evaluated the strength of the evidence, considering quality of the body of evidence (made up of the individual studies) and the significance of the net benefit (potential benefit minus possible harm) for each intervention.

The overall strength of each body of evidence that addresses a particular Key Question was assessed using methods adapted from the U.S. Preventive Services Task Force (Harris, 2001). To assign an overall quality [QE] (see Table A-2) of the evidence (good, fair, or poor), the number, quality, and size of the studies; consistency of results between studies; and directness of the evidence were considered. Consistent results from a number of higher-quality studies [LE] (see Table A-1) across a broad range of populations; supports with a high degree of certainty that the results of the studies are true and therefore the entire body of evidence would be considered ‘‘good” quality. A ‘‘fair” quality was assigned to the body of evidence indicating that the results could be due to true effects or to biases present across some or all of the studies. For a ‘‘poor” quality body of evidence, any conclusion is uncertain due to serious methodological shortcomings, sparse data, or inconsistent results.

The Strength of Recommendation [SR] was then determined based on the Quality of the Evidence [QE], and the clinical significance of the net benefit [NB] (see Table A-3) for each intervention, as demonstrated by the body of evidence. Thus, the grade (i.e., A, B, C, D or I) assigned to guideline recommendations reflect both variables; the Quality of the evidence and the potential clinical benefit that the intervention may provide to patients (see Table A4). For this guideline, the nature and content of each of the recommendations reflected the strength of the evidence and the consensus of the Working Group, not necessarily following the association between the strength of the evidence and the nature of the recommendations provided in Table 4. Due to the limitation in the evidence and the quality of the studies the WG preferred to grade some recommendation using a grade [I] rater than a grade [D] as a result of limited options and no alternative interventions in some cases despite the lack of demonstrated net benefit.

Table A-1: Level of Evidence (LE)	
I	At least one properly done RCT
II-1	Well-designed controlled trial without randomization
II-2	Well-designed cohort or case-control analytic study, preferably from more than one source
II-3	Multiple time series evidence with/without intervention, dramatic results of uncontrolled experiment
III	Opinion of respected authorities, descriptive studies, case reports, and expert committees

Table A-2: Overall Quality [QE]	
Good	High grade evidence (I or II-1) directly linked to health outcome
Fair	High grade evidence (I or II-1) linked to intermediate outcome; or Moderate grade evidence (II-2 or II-3) directly linked to health outcome
Poor	Level III evidence or no linkage of evidence to health outcome

Table A-3: Net Effect of the Intervention [NB]	
Substantial	More than a small relative impact on a frequent condition with a substantial burden of suffering; *or* A large impact on an infrequent condition with a significant impact on the individual patient level.
Moderate	A small relative impact on a frequent condition with a substantial burden of suffering; *or* A moderate impact on an infrequent condition with a significant impact on the individual patient level.
Small	A negligible relative impact on a frequent condition with a substantial burden of suffering; *or* A small impact on an infrequent condition with a significant impact at the individual patient level.
Zero or Negative	Negative impact on patients; *or* No relative impact on either a frequent condition with a substantial burden of suffering, or an infrequent condition with a significant impact on the individual patient level.

Table A-4: Final Grade of Recommendation [SR]				
	The Net Benefit of the Intervention			
Certainty in the Quality of Evidence	Substantial	Moderate	Small	Zero or Negative
High	A	B	C	D
Moderate	B	B	C	D
Low	I	I	I	I

Modified according to USPSTF Update (Sawaya et al.,, 2007)

Strength of Recommendation Rating [SR]

A	A strong recommendation that the clinicians provide the intervention to eligible patients. Good evidence was found that the intervention improves important health outcomes and concludes that benefits substantially outweigh harm.
B	A recommendation that clinicians provide (the service) to eligible patients. At least fair evidence was found that the intervention improves health outcomes and concludes that benefits outweigh harm.
C	No recommendation for or against the routine provision of the intervention is made. At least fair evidence was found that the intervention can improve health outcomes, but concludes that the balance of benefits and harms is too close to justify a general recommendation.
D	Recommendation is made against routinely providing the intervention to asymptomatic patients. At least fair evidence was found that the intervention is ineffective or that harms outweigh benefits.
I	The conclusion is that the evidence is insufficient to recommend for or against routinely providing the intervention. Evidence that the intervention is effective is lacking, of poor quality, or conflicting, and the balance of benefits and harms cannot be determined.

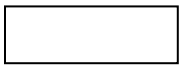
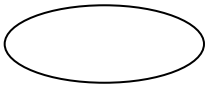
Algorithm Format

The clinical algorithm incorporates the information presented in the guideline in a format that maximally facilitates clinical decision-making. The use of the algorithmic format was chosen because of evidence showing that such a format improves data collection, facilitates diagnostic and therapeutic decision-making, and changes patterns of resource use.

The algorithmic format allows the provider to follow a linear approach to critical information needed at the major decision points in the clinical process and includes:

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

A clinical algorithm diagrams a guideline into a step-by-step decision tree. Standardized symbols are used to display each step in the algorithm (Society for Medical Decision-Making Committee, 1992). Arrows connect the numbered boxes indicating the order in which the steps should be followed.

	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. A horizontal arrow points to the next step if the answer is YES. A vertical arrow continues to the next step for a negative answer.
	Rectangles represent an action in the process of care.
	Ovals represent a link to another section within the guideline.

A letter within a box of an algorithm refers the reader to the corresponding annotation. The annotations elaborate on the recommendations and statements that are found within each box of the algorithm. Included in the annotations are brief discussions that provide the underlying rationale and specific evidence tables. Annotations indicate whether each recommendation is based on scientific data or expert opinion. A complete bibliography is included in the guideline.

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Harris RP, Helfand M, Woolf SH, Lohr KN, Mulrow CD, Teutsch SM, Atkins D; Methods Work Group, Third US Preventive Services Task Force. Current methods of the US Preventive Services Task Force: a review of the process. Am J Prev Med. 2001 Apr;20(3 Suppl):21-35.

Sawaya GF, Guirguis-Blake J, LeFevre M, Harris R, Petitti D; U.S. Preventive Services Task Force. Update on the methods of the U.S. Preventive Services Task Force: estimating certainty and magnitude of net benefit. Ann Intern Med. 2007 Dec 18;147(12):871-5.

Society for Medical Decision-Making Committee (SMDMC). Proposal for clinical algorithm standards, SMDMC on Standardization of Clinical Algorithms. Med Decis Making. 1992 Apr-Jun; 12(2):149-54.

Woolf SH. Practice guidelines, a new reality in medicine II; Methods of developing guidelines. Arch Intern Med. 1992 May; 152(5):946-52.

PICO QUESTIONS

Strategies for Suicide Prevention in Veterans (Shekelle et al., 2009)

Key Question #1. What are the new or improved suicide prevention strategies (e.g. hotlines, outreach programs, peer counseling, treatment coordination programs, and new counseling approaches) that show promise for Veterans?

Key Question #2. What solid evidence base supports the most promising strategies?

Key Question #3. What evidence is still needed to establish various strategies as the most promising (framed as research questions to guide and focus continued research to expand knowledge regarding the effectiveness of suicide prevention approaches)?

Risk Factors and Assessment Tools (Haney et al., 2012)

Key Question #1. What assessment tools are effective for assessing risk of engaging in suicidal self-directed violence in Veteran and military populations?

Key Question #2. In addition to the risk factors included by current assessment tools, what other risk factors predict suicidal self-directed violence in Veteran and military populations?

Treatment Interventions (Oneil et al., 2012)

Key Question #1. What is the effectiveness of specific interventions for reducing rates of suicidal self-directed violence in military and/or Veteran populations?

Key Question #2. What lessons can be learned from suicidal self-directed violence prevention intervention research conducted outside of Veteran or military settings that can be applied to Veteran and/or military populations?

Key Question #3. What is the effectiveness of referral and follow-up services (e.g., strategies designed to provide referrals, improve referral follow-through and attendance, etc.) for reducing rates of suicidal self-directed violence in military and/or Veteran populations?

Key Question #4. What lessons can be learned from research on suicidal self-directed violence referral and follow-up services conducted outside of Veteran or military settings that can be applied to Veteran and/or military populations?

NICE 2011 – PICO QUESTIONS

- For people who self-harm, do formal risk assessment, needs assessment and psychosocial assessment improve outcomes? (Note: impact of setting/organisational context and content of assessment to be taken into account if data available)
- What are the risk and protective factors (internal and external) amongst people who self-harm that predict outcomes (for example, suicide, non-fatal repetition, other psychological outcomes)
- For people who self-harm, do psychological and psychosocial interventions (compared with no treatment or other interventions) improve outcomes? What are the associated adverse effects?
- For people who self-harm, do pharmacological interventions (compared with no treatment or other interventions) improve outcomes? What are the associated adverse effects?
- For people who self-harm, does the provision of self-management and/or harm minimisation/ reduction strategies, compared with no treatment or treatment as usual, improve outcomes?
- Does the provision of staff training (knowledge, skills based) improve outcomes (for example, staff attitudes, user satisfaction, user engagement with services)?

APPENDIX B-1
Factors Associated with Suicide and Suicide Attempts

Summary of Evidence for Factors Associated with Suicide and Suicide Attempt

For full discussion of review of the evidence see:

Haney EM, O'Neil ME, Carson S, Low A, Peterson K, Denneson LM, Oleksiewicz C, and Kansagara D. Suicide Risk Factors and Risk Assessment Tools: A Systematic Review. VA-ESP Project #05-225; 2012

Key Question #2: What risk factors predict suicidal self-directed violence in Veteran and military populations?

Several risk factors for suicide and suicidal self-directed violence have been identified, most notably older age, male gender, physical and mental health disorders (including depression and substance use disorders), familial and genetic influences, impulsivity, poor psychosocial support, and access to firearms. (Schulberg, 2004; Lambert 2002, Lambert 1997, Martin 2009)

Several psychological autopsy studies of the events leading up to suicide have suggested the majority of individuals who die by suicide exhibit symptoms of depression or other mental health issues prior to death (Cavanagh 2003).

The relative importance of some of these traditional risk factors, as well as the influence of population-specific risk factors, may be unique among military personnel and Veterans. The prevailing male demographic, along with high rates of post-traumatic stress disorder (PTSD), substance use disorders, may especially contribute to the risk of suicidal self-directed violence in military and Veteran populations. In addition, several aspects of military experience can increase the risk for mental health and substance abuse, which in turn are risk factors for suicide (Zamorski 2011).

Other risk factors unique to the military experience could also contribute to overall suicide risk, including military rank, combat exposure, traumatic brain injury (TBI), (Brenner 2011, Teasdale 2001), habituation to violence (Joiner 2005), and deployment-related stressors (e.g., strained or long distance relationships, relocation, post-deployment adjustment) (Martin 2009, Brenner 2008).

Of course, many military and Veteran personnel will have one or more of these individual risk factors, but relatively few of them are truly at-risk for suicidal self-directed violence.

Summary of prior reviews of risk factors in non-Veteran and non-military populations

The systematic review on Repetition of Self-harm (NICE, 2011) conducted a comprehensive review and meta-analysis of risk factors. The scope of the NICE CPG is different than the scope of this CPG. It is not focused specifically on military and veterans populations and has different methodology. The NICE report included only prospective studies evaluating risk for repetition of self-harm from all countries. It included studies that were not adjusted for important confounders (other risk factors that might explain the association, e.g. mental health diagnoses). Risk factors for repeated self-harm among young people were similar to those identified for adults. Given the differences scope of the NICE review, the findings should be interpreted with some caution.

The NICE report found the following risk factors to predict non-fatal repetition of self-harm in adults:

- Prior self-harm
- Depression symptoms
- Schizophrenia and related symptoms
- Alcohol misuse
- Psychiatric history
- Unemployment and "registered sick,"
- Female gender (mixed and poor quality evidence
- Unmarried status (narrative evidence only; not predictive in pooled analysis)
- Young age

The following symptoms predicted suicide among adults with prior self-harm:

- Suicide intent/intent to die
- Male gender
- Psychiatric history
- Older age
- Violent methods of self-harm
- Physical health problems (mixed evidence)
- Alcohol abuse (mixed evidence)

Primary studies on risk factors for suicide in Veteran and military populations

We identified 26 studies that evaluated risk factors to predict suicide behavior outcomes). (Desai et al. 2005; Hartl et al. 2005; Mahon et al. 2005; Pettit et al. 2006; Tiet et al. 2006; Ilgen et al. 2007; Kaplan et al. 2007; Yerevanian et al. 2007; Yerevanian et al. 2007; Zivin et al. 2007; Belik et al. 2009; Ilgen et al. 2009; Pfeiffer et al. 2009; Valenstein, et al. 2009; Belik et al. 2010; Bell et al. 2010; Ilgen et al. 2010; Ilgen et al. 2010; Ilgen et al. 2010; Brenner, Betthauser et al. 2011; Brenner, Ignacio et al. 2011; Cox et al. 2011; Pinder et al. 2011; Roy et al. 2011; Seyfried et al. 2011; Thomsenr et al. 2011) Tables 1 and 2 list all factors identified and the studies that contributed to evidence for that factor (Table 1), and the study design, population, outcome and risk of bias for each study (Table 2).

- Studies of risk factors for suicide were longitudinal, cross-sectional and case-control in their design. Many utilized existing VA databases linked with clinical (inpatient or outpatient), administrative, or large survey databases either alone or linked with another data sources.
- The populations represented in these studies are US Veterans in 17 studies, active duty US military personnel in three studies and other military populations in six studies.
- Outcomes include death by suicide in 13 studies, suicide attempts in 11 studies, suicidal behavior assessed by chart review or clinician referral, or admission for suicide attempt.
- Risk of bias: Four studies had a high risk of bias, and therefore will not be discussed further in this report (Yerevanian, Koek et al. 2007; Pinder et al. 2011; Roy et al. 2011).
- The remaining 22 studies were rated as having unclear risk of bias based on methodological limitations such as, assessment of suicidal behavior by chart review only, use of International Classification of Diseases (ICD) codes for risk factor assessment; assessment of suicide attempts by self-report; failure to report specific details of recruitment process; failure to report on the handling of missing data; and recruitment of potentially biased study population.
- Limitations of these studies include heterogeneous populations, settings and risk factors assessments. Specifically, risk factors may differ between populations with different underlying conditions. In cases where there is discrepancy about whether a factor conveys risk, protection or is neutral (as is the case with PTSD), population differences may be part of the explanation. In addition to using different populations, studies do not assess the same risk factors. This limits the ability to either quantitatively or qualitatively compare across studies.

Suicide attempts

Eight studies of suicide attempts used longitudinal, cross-sectional and case-control analyses to assess risk factors. Suicide attempt outcomes were often self-report and occasionally objectively documented.

Factors that were significant predictors of suicide attempts were:

- Prior suicide attempt
- Depressive symptoms as measured by the BDI (Hartl et al., 2005)
- Suicide or psychiatric symptoms (a composite of variables based on multiple aspects of suicidality from the ASI)
- Alcohol and cocaine abuse (Ilgen, Harris et al. 2007)

Protective factors included:

- Involvement with the criminal justice system
- Number of days participating in substance abuse treatment program.

One study of Canadian military personnel (Belik, Stein et al. 2009; Belik, Stein et al. 2010) found significant predictors of suicide attempts among men to be:

- Having purposely injured or killed
- Toxic chemical exposure
- Life-threatening illness
- Having lived as a civilian in a place where there was ongoing terror of civilians for political, ethnic, religious or other reasons ("religious terror")

Death by suicide

Death by suicide was assessed in 17 studies. Outcome determination was most commonly performed using National Death Index (NDI) data linked with other types of registries and hospital records.

Risk factors that were associated with death by suicide in more than one study include:

- White race
- Bipolar disorder
- Substance abuse

Risk factors for death by suicide that were only significant in one study:

- Education
- Alcohol abuse
- Traumatic brain injury (TBI)
- Diabetes
- Cerebrovascular disease
- Lower Mental Component Summary (MCS) scores reflective of mental health functioning
- Severe pain
- Activity limitations

Others had mixed results, with some but not other studies finding significant association with suicide:

- Male gender
- Age
- Anxiety,
- Number of psychiatric conditions,
- Post-traumatic stress disorder (PTSD),
- Depression, anxiety,
- Schizophrenia,
- History of inpatient psychiatric hospitalization,

- Alcohol abuse
- Non-service connected Veteran status.

Admission to a nursing home was found to be protective in one study.

Combining risk factors for suicide attempts and death by suicide may give a more thorough picture of suicide risk factors; however, doing so with the studies reviewed here does not shed substantially greater light on which risk factors are most predictive. Using data from both suicide and suicide attempts, PTSD and depression, and psychiatric conditions appear to have adequate evidence to support their acceptance as a risk factor for suicide. Some of the factors determined by these studies are specific to the populations studied. For instance, Ilgen et al. 2007 found that number of treatment days was an important protective factor in their study of suicide after admission to inpatient substance use disorders program (Ilgen, Harris et al. 2007). Clearly, this protective factor is not generalizable to populations of Veterans that have not been admitted to an inpatient treatment unit. There may be other risk factors that differ substantively between populations for other less readily apparent reasons.

SUMMARY OF STUDIES EVALUATING RISK FACTORS FOR SUICIDE ATTEMPTS

Longitudinal designs

Two studies that utilized a self-reported **suicide attempt** outcome were longitudinal (Hartl, Rosen et al. 2005; Ilgen, Harris et al. 2007).

Hartl et al. 2005 enrolled male Veterans who were entering a residential treatment program for PTSD. Predictive variables were obtained at enrollment in the program and suicide attempts were assessed four months following discharge from the program. Having attempted suicide in the four months prior to enrollment was the best predictor of suicide attempt following discharge. Among those who had not attempted suicide in the four months before enrollment, suicide attempts following discharge were predicted by depressive symptoms.

Ilgen et al. 2007 reported on how the Addiction Severity Index (ASI) (McLellan, Kushner et al. 1992) administered within two weeks of entry into a VA addiction treatment program predicted suicide one year later. Factors associated with suicide attempts were: elevated suicidal/psychiatric symptoms based on the ASI, alcohol problems, and cocaine-adjusted life years; protective factors were: involvement with the criminal justice system and the number of days of participation in substance use disorder treatment. The variable, "suicidal/psychiatric symptoms," was a combination of four other positively correlated and overlapping variables: number of psychiatric problems in the 30 days prior to baseline, number of previous inpatient psychiatric treatment episodes, self reported use of psychiatric medications at baseline, and a lifetime suicidality index (derived from lifetime suicidal ideation and lifetime suicide attempts).

Cross-sectional designs

Five studies assessed self-reported suicide attempts using a cross-sectional study design and were rated as having unclear risk of bias.(Pettit, Paukert et al. 2006; Tiet, Finney et al. 2006; Belik, Stein et al. 2009; Belik, Stein et al. 2010; Thomsen, Stander et al. 2011)

Two of these used active duty military Canadian military personnel:

Belik et al. 2009 evaluating specific types of trauma and found that **suicide attempts** among men were associated with having purposely injured or killed, toxic chemical exposure, and life-threatening illness; and being a civilian in religious terror. Suicide attempts among women were associated with witnessing a man-made disaster, being a victim of child abuse or other abuse, witnessing domestic violence or being stalked. In the second study, **Belik at al. 2010** found that depressive episodes, social phobia, alcohol dependence, generalized anxiety disorder, and PTSD were associated with increased odds of suicide attempt.

Tiet et al. 2006 examined data from over 33,269 men seeking treatment for substance use disorders, psychiatric disorders or both from the VA healthcare system.(Tiet, Finney et al. 2006) In multivariate

logistic regression models of men, **suicide attempt** was significantly associated with sexual abuse (OR 2.08) and physical abuse (OR 2.38) within the past 30 days. Other condition in mental health history (prior to the past 30 days) included: Lifetime sexual abuse (OR 1.33) before the past 30 days, psychotic disorder (OR 1.48), depressive disorder (OR 2.38), PTSD (OR 1.37), other anxiety disorder (OR 1.45), and personality disorder (OR 1.74). Alcohol abuse or dependence, drug abuse or dependence, marital status, age, and lifetime physical abuse prior to the past 30 days were not significantly associated with suicide attempts in this population.(Tiet, Finney et al. 2006)

Thomsen et al. 2001 surveyed 2,116 active duty military personnel in the US Marine Corps and US Navy serving in the US, half of whom had been combat deployed, and questioned them about their behaviors: 1) as a civilian, 2) prior to combat deployment, and 3) subsequent to combat deployment. Those who reported a prior suicide attempt had significantly higher odds of a subsequent suicide attempt (adjusted OR 8.58). Marital status (being divorced, separated or widowed) was the only other significantly associated potential risk factor (OR 3.90). This model included gender, age, rank, education, and combat deployment but no variable to account for psychiatric illness.

Pettit et al. 2006 evaluated 298 men and women enrolling in an intervention trial for suicidality recruited from clinics, inpatient wards and the emergency room of a major US Army Medical Center. Negative life events were associated with self-reported suicide attempts in those with very early onset anxiety, very early onset MDD, and those without any history of very early onset psychiatric disorder. The interaction term for negative life events and very early onset bipolar disorder was significant, suggesting that very early onset bipolar disorder accounts for the association between negative life events and self-reported suicide attempts in this group.(Pettit, Paukert et al.)

Retrospective Designs

Two retrospective studies have assessed suicide attempts using an objectively measured outcome rather than self-report.[21, 23]

Brenner et al. 2011 performed a case control study using Veterans with a history of suicide identified from electronic medical records (EMR) of a VA mental health clinic and age/gender matched controls. Having chart diagnoses of both PTSD and TBI increased the odds of suicide compared with those who had TBI only (OR 3.29), and increased the odds compared to having neither PTSD nor TBI (OR=2.54). In models accounting for both PTSD and TBI, PTSD was independently associated with suicide but TBI was not. Thus, PTSD appears to be independently associated with suicide attempts, and also appears to increase the odds of a suicide attempt among patients with TBI.

Cox et al. 2011 evaluated predictors of suicide behaviors using a retrospective chart review of randomly selected medical charts from those admitted to a US Army hospital with suicidal behaviors (n=191). The study found that suicidal behavior (net suicidal ideation) was associated with three types of childhood trauma (sexual abuse, domestic violence and other trauma). However, when adjusted for “other trauma” those associations were no longer significant. This study may have unclear risk of bias because all risk factors were evaluated with chart review.

SUMMARY OF STUDIES EVALUATING RISK FACTORS FOR SUICIDE

Thirteen studies evaluated risk factors for suicide. Many of these confirmed the suicide by using the National Death Index (NDI) to identify the person and cause of death; others used military records and International Classification of Diseases, Tenth Revision (ICD) chart diagnoses.

Longitudinal studies

Eleven studies used a longitudinal analysis to assess for risk factors that contribute to death by suicide. (Desai, Dausey et al. 2005; Kaplan, Huguet et al. 2007; Zivin, Kim et al. 2007; Ilgen, Downing et al. 2009; Pfeiffer, Ganoczy et al. 2009; Valenstein, Kim et al. 2009; Ilgen, Bohnert et al. 2010; Ilgen, Conner et al. 2010; Ilgen, Zivin et al. 2010; Brenner, Ignacio et al. 2011; Seyfried, Kales et al. 2011).

Longitudinal analysis implies that the risk factor was known to occur prior to the outcome. In the case of a suicide death outcome, this will nearly always be the case, independent of whether the potential risk factors were assessed retrospectively (from charts after the time of the suicide) or prospectively (at baseline, prior to suicide). Prospective data collection contributes to lower risk of bias overall.

The studies in this group evaluated the following potential risk factors:

- PTSD
- TBI
- Psychiatric diagnoses
- Hospitalization in the 12 months prior to suicide
- Substance abuse
- Severe pain

Health services measures:

- Quality of care measures from recent psychiatric admissions
- Timing of follow-up following discharge after psychiatric admission.

Mental Disorder

Ilgen, Bohnert et al., 2010 utilized data from 3,291,891 Veterans who used VA services in fiscal year (FY) 1999 and were alive at the start of FY 2000. The study evaluated associations between psychiatric diagnoses and risk of suicide over the next six years. They found that both male and female Veterans diagnosed with any psychiatric condition were more likely to die by suicide than their counterparts who had no psychiatric diagnoses (Hazard Ratio [HR] for males: 2.50; 95% Confidence Interval [CI], 2.38 to 2.64; HR for females 5.18; 95% CI, 4.08 to 6.58). The risk of suicide was increased for those with alcohol abuse or dependence, drug abuse or dependence, bipolar disorder, depression, other anxiety, PTSD and schizophrenia. The study has unclear risk of bias based on lack of reporting of missing data and assessment of risk factors by use of ICD-9 codes.

Ilgen, Conner et al. 2010 evaluated Veterans with substance use disorders for predictors of violent compared with non-violent suicide compared to controls without suicide over four years (854 suicides and 4,228 controls). Major depression, other anxiety disorders, bipolar disorder, PTSD, schizophrenia, personality disorders, and the presence of more than one mental disorder were predictive of both violent and non-violent suicide. Alcohol, cocaine, opiate, and multiple substance use disorders were associated with a higher risk of non-violent suicides compared to violent suicides. None of the factors evaluated were significant for prediction of violent suicide compared to non-violent among those who died by suicide. This study was determined to have an unclear risk of bias based on lack of reporting of missing data and assessment of risk factors by the use of ICD-9 codes.

Ilgen, Downing et al., 2009 in a separate analysis, evaluated 887,859 patients from the VA's National Registry for Depression (NARDEP) between April 1999 and September 2004 for suicide risk factors, specifically race and substance abuse (n=1892 suicides). The study used a replication cohort to validate their findings. African Americans patients were significantly less likely to die by suicide than any other

race/ethnicity group. In African Americans with substance use disorder, no other variables were significantly associated with death from suicide. In non-African Americans (primarily white race), death from suicide was associated with having been admitted to an inpatient psychiatric ward in the 12 months prior to the suicide. In those without a substance use disorder, males had almost four times the rates of suicide compared to women.

Pfeiffer et al. 2009 used the same population of 887,859 Veterans with depression to evaluate other psychiatric diagnoses as potential risk factors for suicide. This study found that the odds of suicide were higher among patients with generalized anxiety disorder and anxiety disorder not otherwise specified, and those receiving anti-anxiety medication. Interestingly, PTSD was a predictive factor in this population and several other psychiatric diagnoses were not significantly associated with depression (social phobia, obsessive-compulsive disorder [OCD], all other anxiety disorders).

Zivin et al. 2007 used data from 807,694 Veterans (NARDEP data linked with VA Medicare data and NDI; 1,683 suicides over a 5.5 year period) to evaluate PTSD as a risk factor. Among depressed Veterans, PTSD was inversely associated with suicide in the older but not younger depressed Veterans (age ≥ 65 years HR 0.66; 95% CI, 0.44 to 0.99, age 45-64 years HR 0.80; 95% CI, 0.58 to 1.01). Other significant predictors of suicide were white race, male gender, non-Hispanic ethnicity, history of substance abuse, younger age (18-44 years), non-service connectedness, and a history of psychiatric hospitalization in the previous 12 months. This study has unclear risk of bias because of lack of information regarding missing data, and lack of reporting about coding process and blinding of raters.

Brenner Ignacio et al. 2011 evaluated data from 7,850,472 Veterans (49,626 suicides) who received care between FY 2001and 2006 for time to suicide adjusted for psychiatric comorbidities. In this population, 49,626 Veterans had traumatic brain injury (TBI), and 105 had TBI and suicide. They found that Veterans with any TBI were 1.55 more likely to die of suicide (HR 1.55; 95% CI, 1.24 to 1.92) compared to those without, after adjustment for age, gender, eight psychiatric diagnoses including substance use disorder, and Veteran Integrated Service Network. Patients with concussion or fracture were 1.98 times more likely to die of suicide; those with cerebral contusion or traumatic intracranial hemorrhage were 1.24 more likely. This study was rated as having unclear risk of bias because of lack of information regarding missing data, lack of reporting about coding process and blinding of raters.

Kaplan Huguet et al. 2007 assessed Veteran status and psychiatric diagnoses using data between 1986-94 (320,890 men followed for up to 12 years). The study demonstrated that Veterans in the US had increased risk of suicide regardless of whether they were associated with the VA. Risk factors for suicide risk among Veterans identified in this study include: white race, education level of >12 years, and having activity limitations. Interestingly, the number of chronic psychiatric conditions was not a significant predictor for this population (adjusted HR 0.41; 95% CI, 0.14 to 1.26). The study lacked information regarding missing data.

Two additional prospective studies have been published, one of VHA Veterans (Conner et al., 2013) and one of Air Force Service Members (Conner et al., 2012).

Medical conditions.

Ilgen, Zivin et al., (2010) used data on 5,082 patients (854 suicides and 4,228 who did not die by suicide) from the 1999 Large Health Survey of Veterans (LHSV). The study found that severe pain compared to moderate or less pain was associated with higher risk of death by suicide (HR 1.33; 95% CI, 1.15 to 1.54). Other predictors from multivariate models including pain were male gender, white race, smoker status, schizophrenia, bipolar disorder I or II, depression, other anxiety, diabetes, cerebrovascular disease and lower mental health functioning as measured by the Mental Component Summary.

Seyfried et al., (2011) evaluated 294,952 VA patients over age 60 with dementia drawn from national data. They found that variables associated with suicide death in this population (n=241 suicides) included: white race, depression but not other psychiatric diagnoses (OR 2.0, 95% CI, 1.5 to 2.9), history of inpatient psychiatric hospitalizations (OR 2.3, 95% CI, 1.5 to 3.5), and having filled prescriptions for either

antidepressants or anxiolytics (OR 2.1, 95% CI, 1.6 to 2.8 for antidepressants; OR 2.0, 95% CI, 1.5 to 2.7 for anxiolytics). In this population, admission to a nursing home was protective (OR 0.3, 95% CI, 0.1 to 0.8).

Health care Utilization

Desai et al., 2005 evaluated suicide risk using data from 128 psychiatric inpatient units within VA hospitals. Higher risk of suicide was predicted by shorter length of stay (<14 days, RR 1.41, p<0.04), time to readmission (>180 days, RR 0.55, p=0.0001) and poor continuity of care following discharge. Readmission within the six months following hospitalization was protective.

Valenstein et al. 2009 evaluated 887,859 Veterans with depression (NARDEP merged with NDI data) and found that suicide events were highest in the first 12 weeks following psychiatric hospitalizations compared to the second 12 weeks (RR 1.9; 95% CI, 1.5 to 2.4), and higher in the 12 weeks following changes in antidepressant regimen (new antidepressant starts, adding another antidepressant, and dose changes) compared to the second 12 weeks (RR 1.8; 95% CI, 1.5 to 2.1).

Retrospective case-control studies

Bell, Harford et al. 2010 evaluated in a retrospective study US Army soldiers who dies by suicide; the adjusted odds for suicide were higher among those with a preceding hospitalization for alcohol, injury or mental disorder. Age and male gender were also associated with increased odds of suicide. Protective factors include: time in service (years), black race, less than college education, being married, and ranks as a warrant officer or commissioned officer.

Mahon, Tobin et al., 2005 Found among Irish Defense Forces personnel, that firearm suicide was associated with psychiatric illness or a history of deliberate self-harm, performing morning duty, and a recent medical downgrading.

SUMMARY OF FINDINGS

Table 1: Risk and Protective factors associations with suicide attempts and suicides in Veterans and Military Population (for studies details, see table 2)

	Evidence for Suicide Attempt	Evidence for Suicide
Demographic Factors		
Male gender		(+) Ilgen, Downing 2009 (+) Ilgen, Zivin 2010 (+) Zivin 2007 (NS) Seyfried 2011
Age	(-) Tiet 2006 (older age protective)	(+) Zivin 2007 (18-44 years) (NS) Seyfried 2011
White race		(+) Ilgen 2009 (African American race protective) (+) Ilgen 2010 (+) Kaplan 2007 (+) Zivin 2007 (+) Seyfried 2011
Marital status	(+) Thomsen 2011 (NS) Tiet 2006	(NS) Seyfried 2011
Education	(NS) Thomsen 2011	(+) Kaplan 2007
Smoking		(+) Ilgen 2010
Psychiatric Factors		
Psychiatric Conditions	(+) Ilgen 2007 (composite variable) (+) Tiet 2006 (psychotic disorder, personality disorder) (+) Ilgen 2010 (men and women)	(+) Ilgen 2010 (personality disorder and presence of more than 1 psychiatric diagnosis) (NS) Kaplan 2007 (number of chronic psychiatric conditions.) (+) Conner 2013 (comorbid mental disorders increased risk over a single condition)
PTSD	(+) Belik 2010 (+) Brenner 2011 (+) Ilgen, Bohnert 2010 (men and women)	(+) Ilgen 2010 (-) PTSD was protective in Zivin 2007 (-) PTSD was protective in Pfeiffer 2009 (NS) Seyfried 2011 (+) Conner 2013
Depression	(+) Hartl 2005 (+) Belik 2010 (+) Tiet 2006 (+) Ilgen, Bohnert 2010	(+) Ilgen 2010 (+) Ilgen 2010 (NS) Pfeiffer 2009 (+) Seyfried 2011 (+) Conner 2013 (+) Conner 2012

	Evidence for Suicide Attempt	Evidence for Suicide
Bipolar Disorder	(+) Ilgen, Bohnert 2010 (men and women) (+) Pettit 2006 (very early onset bipolar disorder)	(+) Ilgen, Conner 2010 (+) Ilgen, Zivin 2010 (+) Conner 2013
Anxiety	(+) Tiet 2006(Tiet, Finney et al. 2006)	(+) Ilgen, Bohnert 2010(men and women) (+) Ilgen, Conner 2010 (+) Ilgen, Zivin 2010 (+/NS) Pfeiffer 2009 (some but not all anxiety conditions) (NS) Seyfried 2011 (but having an anxiolytic prescription was associated with suicide) (+) Conner (2013) (+) Conner (2012)
Schizophrenia		(+) Ilgen. Bohnert 2010 (men and women) (+) Ilgen, Conner 2010 (+) Ilgen, Zivin 2010 (NS) Seyfried 2011 (+) Conner 2013
Prior suicide attempt	(+) Hartl 2005 (+) Thomsen 2011	
Social phobia	(+) Belik 2010	
Alcohol abuse	(+) Ilgen, Harris 2007 (+) Belik 2010 (NS) Tiet 2006	(+) Ilgen Bohnert 2010 (men and women)
Substance abuse	(+) Ilgen, Harris 2007 (cocaine) (NS) Tiet 2006 (drug abuse or dependence)	(+) Ilgen Bohnert 2010 (men and women) (+) Zivin 2007
History of inpatient psychiatric hospitalization		(+) Seyfried 2011 (+) Zivin 2007 (within last 12 months)
Negative life events	(+) Pettit 2006 (among those with very early onset MDD, very early onset anxiety and no history of very early onset psychopathology)	
Trauma and Military factors		
Traumatic Brain Injury (TBI)	(NS) Brenner, Betthauser 2011	(+) Brenner. Ignacio 2011
Witnessing man-made disaster	(+) Belik 2009 (women only)	
Being a victim of child abuse or other abuse	(+) Belik 2009 (women only) (+) Cox 2011 (sexual abuse and other trauma)	

	Evidence for Suicide Attempt	Evidence for Suicide
Witnessing domestic violence	(+) Belik 2009 (women only) (+) Cox 2011 (as a child)	
Being stalked	(+) Belik 2009	
Being mugged, being kidnapped	(+) Belik 2009 (men only)	
Having purposely injured or killed	(+) Belik 2009 (men only)	
Toxic chemical exposure	(+) Belik 2009 (men only)	
Life-threatening illness	(+) Belik 2009 (men only)	
Sexual abuse	(+) Tiet 2006 (past 30 days or lifetime) (+) Cox 2011 (childhood) (+) Belik 2009 (sexual assault or rape)	
Physical abuse in past 30 days	(+) Tiet 2006 (in past 30 days) (NS) Tiet 2006 (lifetime)	
Combat deployment	(NS) Thomsen 2011	
Traumatic event happened to another	(+) Belik 2009	
Other trauma	(+) Belik 2009 (men only)	
Being a civilian in a place where there was ongoing terror of civilians for political, ethnic, religious or other reasons)	(+) Belik 2009	
Non-service connected status for Veterans		(+) Zivin 2007
VA association (vs. non-VA associated Veterans)		(NS) Kaplan 2007 (all Veterans had higher risk of suicide regardless of VA affiliation)
Other		
Diabetes		(+) Ilgen, Zivin 2010
Cerebrovascular disease		(+) Ilgen Zivin2010
Lower mental health functioning		(+) Ilgen, Zivin 2010
Admission to nursing home		(-) Protective in Seyfried 2011
Severe pain		(+) Ilgen, Zivin 2010
Activity limitations		(+) Kaplan 2007

(+) Positively associated with increase in suicide outcome (i.e., risk factor)
(-) Negatively associated with increase in suicide outcomes (i.e., protective factor)
(NS) evaluated and found not to be significantly associated with the suicide outcome

Table 2: Summary of Risk Studies

Author, Year	Study Design	Population	Outcome	Risk of Bias
Belik et al., 2009	Cross-sectional	8,441 Canadian military personnel, active military within 6 months	Self-reported suicide attempt	Unclear
Belik, Stein et al., 2010	Cross-sectional	8,441 Canadian military personnel, active military within 6 months	Self-reported suicide attempt	Unclear
Bell et al., 2010	Case control	1,873 identified suicides from Army.	Suicide	Unclear
Brenner, Betthauser et al., 2011	Case-control	Veterans receiving mental health services	EMR note of suicide attempt	Unclear
Brenner. Ignacio et al., 2011	Longitudinal	Veterans receiving mental health services	Suicide by ICD-10	Unclear
Cox et al., 2011	Cross-sectional	656 men and women admitted to the psychiatry unit of a large US Army for suicidal thoughts or behaviors	Admission for suicide attempt	Unclear
Desai et al., 2005	Longitudinal	121,933 patients discharged from US VA hospital inpatient psychiatry wards with major affective disorder, bipolar disorder, PTSD or schizophrenia (481 suicides)	Suicide identified by ICD-9/10 and NDI, 1 year after inpatient discharge	Unclear
Hartl et al., 2005	Longitudinal	630 male Veterans with PTSD	Self-reported suicide attempt after discharge from the inpatient unit	Unclear
Ilgen, Harris et al., 2007	Longitudinal	8,807 Veterans enrolled in substance abuse programs	Self-reported suicide attempt within 30 days prior to the 1 year follow-up assessment	Unclear
Ilgen, Downing et al., 2009	Longitudinal	589,825 VA patients treated for depression	Suicide confirmed by NDI	Unclear
Ilgen, Bohnert et al., 2010	Longitudinal	3,291,891 veterans (all) who used VA services during Fiscal Year (FY) 1999 and were alive at the start of FY 2000	Suicide confirmed by NDI	Unclear
Ilgen, Zivin et al., 2010	Longitudinal	260,254 US Veterans who responded to the 1999 LHSV	Suicide confirmed by NDI	Unclear

Author, Year	Study Design	Population	Outcome	Risk of Bias
Ilgen, Conner et al., 2010	Longitudinal	5,082 US Veterans who were alive at the beginning of FY 2002 (854 suicides and 4,228 who did not die by suicide)	Suicide confirmed by NDI	Unclear
Kaplan et al., 2007	Longitudinal	104,026 male US Veterans	Suicide confirmed by NDI	Unclear
Mahon et al., 2005	Case control	732 death in Irish Defense Forces	Suicide by military files and proceedings of the Courts of Inquiry	Unclear
Pettit et al., 2006	Cross-sectional	298 military-based young adults at entry to treatment for suicidality	Self-report suicide attempt	Unclear
Pfeiffer et al., 2009	Longitudinal	887,889 US Veterans with depression	Suicides from NDI and ICD-10	Unclear
Pinder et al., 2011	Cross-sectional	821 participants in military health study (UK Armed Forces)	Self-report of lifetime suicide attempt or self-harm	High
Roy et al., 2011	Case control	40 US Veterans with prior substance abuse, currently abstinent	Self-report suicide attempt	High
Seyfried et al., 2011	Longitudinal	294,952 US Veterans	Suicide by NDI and ICD-10	Low
Thomsen et al., 2011	Cross-sectional	2116 active duty military personnel serving at US Marine Corps installations	Self-report of suicide attempt	Unclear
Tiet et al., 2006	Cross-sectional	34,245 substance abuse patients from 150 US VA facilities	Self-report of suicide attempt in past 30 days by ASI	Unclear
Valenstein et al., 2009	Longitudinal	887,859 US Veterans with depression	Suicide using NDI	Unclear
Yerevanian et al., 2007 (Part 2)	Longitudinal	405 Veterans with bipolar disorder	Suicidal behavior assessed by chart review	High
Yerevanian et al., 2007 - Part 3	Longitudinal	406 Veterans with bipolar disorder	Suicidal behavior assessed by chart review	High
Zivin et al., 2007	Longitudinal	807,694 US Veterans with depression	Suicide by NDI	Unclear

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APPENDIX B-2
Summary of Factors Associated with DoD Suicides*

(2009 through 2011)

Source:

DoD Suicide Event Report (DoDSER) Calendar Year 2011

Access at: https://t2health.org/programs/dodser

* Listed factors occurring in ≥ 5% of suicides as averaged over 3 years

** CY 2011 Rate: number of suicides per 100,000 persons per year

Italicized factors are of high interest but occurred in ≤ 5% of suicides

Intra-category factors ranked-ordered by prevalence percentage

GENDER	%	Rate**
Male	(96%)	20.05
RACE		
White/Caucasian	(79%)	19.69
Black/African American	(12%)	13.41
Asian or Pacific Islander	(5%)	
AGE RANGE		
<25	(44%)	19.30
25-29	(26%)	22.79
30-34	(12%)	12.52
35-39	(11%)	18.76
40-44	(6%)	16.21
RANK		
E1-E4	(53%)	21.14
E5-E9	(40%)	19.02
Officer	(7%)	9.72
COMPONENT		
Regular	(91%)	18.03
National Guard	(6%)	16.15
EDUCATION		
High School Grad	(67%)	18.79
GED	(11%)	42.51
MARITAL STATUS		
Married	(52%)	17.85
Never Married	(37%)	16.53
Divorced	(9%)	27.65
SUICIDE EVENT LOCATION		
United States	(81%)	
Iraq	(6%)	
Afghanistan	(5%)	
SUICIDE EVENT SETTING		
Residence	(58%)	
Residence of friend or family	(9%)	
Work/Job site	(7%)	
Auto (away from residence)	(5%)	
EVENT METHOD		
Firearm, non-military issue	(46%)	
Hanging	(23%)	
Firearm, military issue	(14%)	
SUBSTANCE ABUSE DURING THE EVENT		
Alcohol Used	(21%)	
Any Drugs Used	(8%)	
COMMUNICATED INTENT		
No known communication	(71%)	
Verbal mode of communicated intent	(18%)	
Communicated intent to spouse	(10%)	
Communicated to other or unidentified	(7%)	
Multiple communications of intent	(7%)	
Communicated intent to friend	(5%)	
HISTORY		
Firearm in Immediate Living Environment	(50%)	
Hx of OIF Deployment	(29%)	
Known Prior Self-Injury	(15%)	
Hx of Direct Combat	(14%)	
Hx of OEF Deployment	(10%)	

TREATMENT HISTORY		**%**
Seen at Military Treatment Facility		(59%)
Within 90 days of suicide	(47%)	
Within 30 days of suicide	(36%)	
Outpatient Behavioral Health Care		(40%)
Within 90 days of suicide	(26%)	
Within 30 days of suicide	(20%)	
Used Substance Abuse Services		(18%)
Within 90 days of suicide	(9%)	
Within 30 days of suicide	(7%)	
Inpatient Behavioral Health	(14%)	
Within 90 days of suicide	(6%)	
Used Chaplain Services		(10%)
Within 90 days of suicide	(8%)	
Within 30 days of suicide	(7%)	
In Family Advocacy Program		(8%)
BIOLOGICAL FACTORS		
Physical Health Problem		(20%)
Within 30 days of suicide	(11%)	
Within 90 days of suicide	(14%)	
PSYCHOLOGICAL FACTORS		
Psychotropic Med Use		(25%)
Hx Substance Abuse		(24%)
Mood D/O		(21%)
1 Behavioral Health Diagnosis		(21%)
Anxiety D/O		(16%)
2 Behavioral Health Diagnoses		(13%)
3 Behavioral Health Diagnoses		(6%)
Psychotic & Personality D/O's & TBI	(each < 5%)	
SOCIAL FACTORS		
Failed Intimate Relationship		(49%)
Failed Other Relationship		(12%)
Hx of Family Behavioral Health Problem		(12%)
Hx as Perpetrator of Physical Abuse		(8%)
Hx of Death of Family Member		(7%)
Hx as Victim of Physical Abuse		(6%)
Hx as Victim of Emotional Abuse		(6%)
Hx of Family Member Suicide		(5%)
Unknown		(35%)
ADMIN & LEGAL HISTORY		
Any Admin/Legal Issue		(40%)
Hx Article 15 or Non-Judicial Punishment		(19%)
Multiple Admin/Legal Issues		(17%)
Hx of Civil Legal Problems		(13%)
Hx of Administrative Separation		(8%)
Hx of AWOL		(8%)
Hx Non-Selection for Promotion		(7%)
Hx of Medical Board		(6%)
Hx of Courts Martial		(5%)
FINANCIAL/WORKPLACE DIFFICULTIES		
Hx Job Loss/Instability		(22%)
Hx of Poor Work Evaluation		(16%)
Hx Supervisor/Coworker Issues		(12%)
Excessive Debt/Bankruptcy		(10%)

APPENDIX B-3
Drugs Associated with Suicidality

Drug	FDA Label Summary
Antidepressants	See Module C: Annotation M1
Antiepileptics	See Module C: Annotation M6
Antipsychotics	All have label warning that the possibility of a suicide attempt is inherent in psychotic illness or bipolar disorder; use with caution in high-risk patients during initiation of therapy. Antipsychotics with label indications for depressive disorders the the identical box warning as antidepressants.
Acamprosate	Attempted and completed suicides have occurred in acamprosate-treated patients; use with caution in suicidal ideation. In controlled clinical trials of acamprosate, adverse events of a suicidal nature (suicidal ideation, suicide attempts, completed suicides) were infrequent overall, but were more common in acamprosate-treated patients than in patients treated with placebo (1.4% vs. 0.5% in acamprosate studies of 6 months or less; 2.4% vs. 0.8% in year-long studies). Completed suicides occurred in 3 of 2272 (0.13%) patients in the pooled acamprosate group from all controlled studies and 2 of 1962 patients (0.10%) in the placebo group. Adverse events coded as "depression" were reported at similar rates in acamproastel-treated and placebo-treated patients. Although many of these events occurred in the context of alcohol relapse, and the interrelationship between alcohol dependence, depression and suicidality is well-recognized and complex, no consistent pattern of relationship between the clinical course of recovery from alcoholism and the emergence of suicidality was identified. Alcohol-dependent patients, including those patients being treated with acamprosate, should be monitored for the development of symptoms of depression or suicidal thinking. Families and caregivers of patients being treated with acamprosate should be alerted to the need to monitor patients for the emergence of symptoms of depression or suicidality, and to report such symptoms to the patient's health care provider.
Belimumab	Deaths due to suicide were higher in belimumab patients compared to placebo during clinical trials. New onset or worsening of existing depression, and suicide, has been reported; most patients had a history of a psychiatric disorder and were already receiving treatment. Monitor for new or worsening depression, suicidal ideation or other mood changes.
Efavirenz	Serious psychiatric side effects have been associated with use, including severe depression, suicide, paranoia, and mania; use with caution in patients with a history of mental illness/drug abuse (predisposition to psychological reactions).
Emtricitabine, Rilpivirine, and Tenofovir	May cause depression, depressed mood, dysphoria, mood changes, negative thoughts, suicide attempts, or suicidal ideation; if symptoms are noted, patients should be advised to seek professional intervention immediately; reevaluate risk versus benefit of continued combination therapy.

Interferon Alfacon-1 Peginterferon Alfa-2a Peginterferon Alfa-2b	U.S. Boxed Warning: May cause severe psychiatric adverse events (eg, depression, psychosis, mania, suicidal behavior/ideation) in patients with and without previous psychiatric symptoms; use with extreme caution in patients with a history of depression. Careful neuropsychiatric monitoring is required during therapy. Patients developing severe depression may require discontinuation of treatment. Although dose reduction or discontinuation may resolve symptoms, depression may persist; suicides have been reported after therapy with alfa interferons has been discontinued. Use with caution in patients with seizure disorders, brain metastases, or compromised CNS function.
Lithium	See Module C: Annotation M4
Metoclopramide	Mental depression has occurred, symptoms range from mild to severe (suicidal ideation and suicide); use with caution in patients with a history of mental illness.
Milnacipran	Same U.S. Boxed Warning as antidepressants
Rilpivirine	May cause depression, depressed mood, dysphoria, mood changes, negative thoughts, suicide attempts, or suicidal ideation; if changes are noted, seek professional intervention immediately; reevaluate risk versus benefit of continued rilpivirine therapy.
Sodium Oxybate	May cause confusion, psychosis, paranoia, hallucinations, agitation, depression and sleepwalking; use caution with history of depression or suicide attempt.
Tramadol	Avoid use in patients who are suicidal; use with caution in patients taking tranquilizers and/or antidepressants, or those with an emotional disturbance including depression
Varenicline	U.S. Boxed Warning: Serious neuropsychiatric events (including depression, suicidal thoughts, and suicide) have been reported with use; some cases may have been complicated by symptoms of nicotine withdrawal following smoking cessation. Smoking cessation (with or without treatment) is associated with nicotine withdrawal symptoms and the exacerbation of underlying psychiatric illness; however, some of the behavioral disturbances were reported in treated patients who continued to smoke. Neuropsychiatric symptoms (eg, mood disturbances, psychosis, hostility) have occurred in patients with and without pre-existing psychiatric disease; many cases resolved following therapy discontinuation although in some cases, symptoms persisted. Monitor all patients for behavioral changes and psychiatric symptoms (eg, agitation, depression, suicidal behavior, suicidal ideation); inform patients to discontinue treatment and contact their healthcare provider immediately if they experience any behavioral and/or mood changes.
Ziconotide	U.S Boxed Warning: Severe psychiatric symptoms and neurological impairment have been reported; interrupt or discontinue therapy if cognitive impairment, hallucinations, mood changes, or changes in consciousness occur. May cause or worsen depression and/or risk of suicide.
Zolpidem	Use with caution in patients with depression; worsening of depression, including suicide or suicidal ideation has been reported with the use of hypnotics. Intentional overdose may be an issue in this population. The minimum dose that will effectively treat the individual patient should be used. Prescriptions should be written for the smallest quantity consistent with good patient care.

APPENDIX B-4
Sleep Disturbances and Suicide Risk

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Sleep disturbances are associated with elevated risk for suicidal ideation, suicide attempts, and death by suicide, and are listed in the top 10 warning signs of suicide by the Substance Abuse and Mental Health Services Administration (SAMSHA) [for review, see 1-2]. Sleep disturbances appear to predict elevated risk for suicide, across studies diverse in design (cross-sectional, longitudinal, psychological autopsy), population (clinical, nonclinical), and assessment techniques (objective, subjective sleep measures). This includes sleep disorders as well as general sleep complaints, such as insomnia symptoms, poor self-reported sleep quality, and nightmare symptoms [3-12]. To date, few investigations have assessed EEG sleep in relation to suicide risk [11-12]; however, small sample sizes, and marked differences in the populations studied and the methods used, significantly challenge the comparability of findings.

Two methodological issues should be considered in reviewing the extant literature in this area. The first involves the quality of methods, instruments, and measures used to assess sleep disturbance and suicide risk. Early studies in this area often evaluated this relationship using a single item to assess both sleep disturbance and suicidal symptoms, drawn retrospectively, in many cases, from a brief depression inventory; yet rigorous, state-of-the-art assessment techniques exist for sleep difficulties and suicidal symptoms. The second issue involves failure to adjust for the confounding presence of existing psychopathology, particularly depression severity. Given that sleep disturbances and suicidal symptoms are diagnostic features of major depression [13]; prospective investigations that utilize validated symptom measures and adjust for existing psychopathology are necessary to identify poor sleep as an independent risk factor for suicide outcomes, versus a correlate of greater depression severity.

Multiple studies indicate that self-reported insomnia symptoms may confer risk, independent of depressed mood, for suicidal behaviors [14-20]; whereas other reports do not [21-22]. A psychological autopsy study among adolescents, controlling for most recent affective episode, indicated that suicide decedents were seven times more likely to exhibit insomnia symptoms in the week prior to death compared to community-matched controls [16]. This converges with findings from several investigations using validated assessment instruments, evaluating the unique association between disturbed sleep and elevated suicide risk. First, among a psychiatric outpatient sample (N = 176), nightmares and insomnia symptoms were cross-sectionally associated with greater suicidal ideation [14]. These findings were replicated among two large, nonclinical samples, as well as within a psychiatric inpatient sample [15, 17-18]. Next, in a longitudinal, population-based study of late-life suicide, poor subjective sleep quality at baseline predicted increased risk for death by suicide over a 10-year period [19]. Finally, using an objective assessment of sleep among 49 young adults at high risk for suicide, sleep variability uniquely predicted acute increases in suicidal ideation, controlling for baseline symptoms and depression [20].

Regarding the military relevance of these findings, clinically significant sleep problems appear overrepresented among military versus civilian samples, with rates among specific service eras

reported in the majority of cases [23-25]. Elevated rates do not appear exclusively explained by the presence of PTSD [26,27], and at least one report suggests that self-reported sleep complaints may be a stronger prospective predictor of risk for suicidal ideation and suicide attempts compared to more commonly-assessed risk factors of depression and hopelessness [28]. Sleep disturbances, which often appear resistant to efficacious treatments for PTSD and depression, furthermore predict poor prognostic outcomes for these disorders [29,30].

In summary, increasing evidence suggests that disturbed sleep is a risk factor for suicidal ideation, attempts, and death by suicide. However, gross methodological problems in this area limit findings considerably, and point to the need for greater rigor in evaluating these constructs using state-of-the-art assessment techniques and prospective study designs. Studies that meet these criteria provide preliminary evidence in support of disturbed sleep as an evidence-based independent suicide risk factor that may benefit from incorporation into standardized suicide risk assessment frameworks. Preliminary evidence from a recent open label insomnia trial additionally suggests that improvements in sleep may therapeutically impact suicide risk specifically [31,32]. Current treatment trials evaluating the efficacy of an insomnia treatment for suicide prevention, among civilians and military personnel, are currently underway, and may further inform the use of sleep treatment in the prevention of suicide.

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APPENDIX C:
Special Population – Older Adults

BACKGROUND

Older adults are the fastest growing segment of the U.S. population. VHA defines older adult as being 65 years of age or older. According to a recent report, *Older Americans 2010*, published by the Federal Interagency Forum on Aging-Related Statistics, adults 65 years and older made up 13 percent of the total population in 2008, and the older adult population will grow to almost 20 percent of the population as we approach 2030. A high proportion of veterans are older adults, and the vast majority of whom are men. Census 2000 found that there were 9.7 million Veterans aged 65 years and older in the U.S. and Puerto Rico. In fact, two of three men age 65 and older were Veterans (U.S. Census Bureau, 2010).

Older adult men have a higher rate of suicide than other segments of the population. This fact, plus other characteristics of suicidal behavior that distinguish older adults from younger and middle aged people, pose special challenges for the VA. In this annotation, we examine issues in each topic area for which special consideration should be given to older adults.

KEY POINTS

Risk Factors

- Among elderly men, rates of suicide increase with aging. No one can be considered past the age of risk.
- Among the mental health conditions, depression may be a more specific risk factor in late life. The risk associated with depression appears to extend beyond major depression to include other types of clinically significant depression.
- Other sources of risk can include social isolation, accumulating disabilities, concerns about being a burden to others, and the lack of a sense of meaning in life
- Substance use may be less common. However, alcohol use as a risk factor remains important.
    - Older individuals are more sensitive to the effects of alcohol as a result of age-related changes in both the liver and the brain
    - Misuse of prescribed medications may be important as a risk factor for suicide
- Although individuals with severe dementia may be at decreased risk for suicide, there is need to include evaluations for depression and the risk of suicide when older patients complain about memory loss, when mild cognitive impairment is recognized, when dementia is diagnosed, and when disability increases.
- A past history of suicide attempts is less common than at younger ages, but when present represents substantially elevated risk for death by suicide.
- Medical illness is associated with increased risk for suicide as well, but high base rates of illness in later life make its utility as a signal.
- Older adults are, in general, receiving multiple medications for multiple conditions. Provider should review and reconcile medications on a regular basis to identify potential drug-drug and drug-disease interactions that may contribute to the risk for suicide, and to identify and ensure safe management of medications that may be dangerous in overdosage.
- Functional impairment and pain are other common factors in older adults that are associated with increased risk for suicide. When disability leads to a loss of autonomy and an increased dependence on others, the risks may be increased.
- Social isolation, loss, and bereavement are common risk factors
    - Part of the care of older Veterans must include evaluations of their support systems and recognition that suicide risk may be increased when care needs are not being met.

Assessment and Treatment Planning

- Suicide risk is more difficult to assess in older adults than younger people, requiring greater vigilance by providers.
    - Older adults are less likely to report depressive symptoms and suicidal ideation
    - Because older individuals may be less likely to complain of depression and express suicidal ideation, information from family-members and friends can be useful in identifying individuals at risk for suicide.
    - A smaller proportion of older adults who take their own lives have a past history of suicide attempts
    - Older adults are less likely to seek care from a mental health provider, but more likely to see a primary care provider
    - It may be difficult to evaluate the significance of thoughts about death in older people; they may reflect a normal developmental processes or a signal about increased risk for suicide. Thoughts of death may be adaptive and appropriate to the life-stage, and may not be indicators of the risk of suicide. Conversely, plans or intent must always be viewed as clinically significant.
    - The association of suicide with depressive disorders is stronger in older adults than younger people.
        - Systematic screening for depression should be conducted with older adult patients in primary care. When the screening leads to positive findings, they should be followed with an evaluation of the risk for suicide
        - Depression should be treated aggressively, whether or not suicide ideation or other risk factors are present.
    - The risk of suicide following a suicide attempt is greater in older adults than younger people. An older person who attempts suicide should always be referred for specialty mental health care.
    - Non-fatal suicide attempts are uncommon in the elderly. Therefore, any attempts must be viewed as indicators of serious risk. Conversely, observations of indirect life-threatening behavior, including non-adherence with medical symptoms, motor vehicle accidents, and what may appear to be accidental overdoses, should prompt evaluation for depression, and for suicide plans and intent.

Management and Treatment

- Recognizing and treating late life depression must be viewed as an important component of suicide prevention in late life.
    - Interventions for depression in late life should not be limited to pharmacological treatment. The full spectrum of array of psychotherapeutic, psychosocial, and somatic treatments should be used when appropriate.
    - Symptoms of depression, death ideation, and suicidal ideation may be manifestations of physical illness, indicating the need for comprehensive medical evaluations.
    - Stepped, collaborative care models have been shown effective in reducing suicide risk in older adults with depression.
    - Multi-modal interventions that combine psychological, pharmacological, and social/environmental components are an important approach.
    - Engaging family members and friends as partners in care is important, both as sources of information and as resources for alleviating isolation.
- Clinicians should encourage older Veterans to be as actively engaged in their treatment planning, management, and care processes as possible, helping them to identify and capitalize on existing strengths and coping mechanisms.
- Interventions that serve to increase social connections and engagement in communities should be emphasized in the care of older adults at risk. It may be useful to engage in problem-solving about how to maintain connections and engagement in spite of disability

- Antidepressants should be considered for older adults with depression, with or without overt suicide risk. Recent concerns about the risk of suicide with antidepressant medications in adolescents and young adults are not relevant to the elderly.
- Providers should consider psychotherapy for treatment of depression in older adult patients at risk for suicide. Interpersonal therapy may have advantages over other approaches. Problem solving therapy and cognitive behavior therapy may also be beneficial

Safety planning

- Older men who take their own lives are more likely than younger ones to utilize firearms. It is especially important to determine if an older adult at risk has access to a firearm and, if present, to arrange for safe storage. This is true, even if the patient denies intent to use a firearm to end his or her life. The safe storage of firearms remains an important component of safety planning in the elderly.

Follow-up/Continuity

- Because multiple, interacting conditions are common in late life, communication and coordination between all providers is important.
- It is important to recognize that most older Veterans are Medicare eligible, and that they may receive services from community providers as well as VA
- Continuity of care across care settings is important in late life
- In additions to the transitions that are important throughout the lifespan, it is important to recognize and intervene to minimize risks for older Veterans entering or being discharged from Community Living Centers or nursing homes, and from rehabilitation services.

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APPENDIX D:
Acronym List

AHCPR	Agency for Healthcare Policy and Research
APA	American Psychiatric Association
AUDIT	Alcohol Use Disorders Identification Test
BDI-II	Beck Depression Inventory II
BHS	Beck Hopelessness Scale
BPD	Borderline Personality Disorder
C-CASA	Columbia Classification Algorithm of Suicide Assessment
C-SSRS	Columbia Suicide Severity Rating Scale
CAMS	Collaborative Assessment and Management of Suicidality
CBT	Cognitive Behavioral Therapy
CDC	Center for Disease Control and Prevention
CDR	Commander
CI	Confidence interval;
CT	Cognitive Therapy
DBT	Dialectical Behavioral Therapy
DCoE	Defense Centers of Excellence
DoD	Department of Defense
DoDSER	Department of Defense Suicide Event Reports
DSM-IV	Diagnostic and Statistical Manual of Mental Disorders (4th ed.)
DSM-IV-TR	Diagnostic and Statistical Manual of Mental Disorders
dx	Diagnosis
EBM	Evidence-based medicine
ECT	Electroconvulsive therapy
ED	Emergency Department;
EtoH	Ethanol
FDA	U. S. Food and Drug Administration
IPT	Interpersonal Therapy
ITT	Intention to Treat
LGB	Lesbian, Gay, Bisexual
MAOIs	Monoamine oxidase inhibitors
MBT	Mentalization Based Therapy
MDD	Major Depressive Disorder

MH	Mental Health
MIRECC	Mental Illness Research Education and Clinical Center
MMSE	Mini-Mental State Examination
OEF	Operation Enduring Freedom
OIF	Operation Iraqi Freedom
OTC	Over-the-counter
PCL	Posttraumatic Stress Disorder Checklist;
PCP	Primary Care Provider
PE	Physical examination
PST	Problem Solving Therapy
PTSD	Posttraumatic stress disorder;
QE	Quality of evidence
RCT	Randomized controlled trial
SAFEVET	Safety Planning Intervention for Veterans
SAMHSA	Substance Abuse and Mental Health Services Administration
SDV	Self-Directed Violence
SM	Service member
SPRC	Suicide Prevention Resource Center
SR	Strength of recommendation
SSI	Scale for Suicide Ideation
SSRIs	Selective Serotonin Reuptake Inhibitors
SUD	Substance Use Disorder
TAU	Treatment as Usual
TBI	Traumatic Brain Injury
TCAs	Tricyclic Antidepressants
Tx or RX	Treatment
USPSTF	U.S. Preventive Service Task Force
VA	Veterans Affairs
VAMC	Veterans Affairs Medical Center
Vets	Veterans
VHA	Veterans Health Administration

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APPENDIX F:
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