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Current Status of Suicide-Focused Assessment and Treatment

An Online Resource for Clinicians

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Foreword

I have been in the field of suicide prevention since 1982 when I was a first-year graduate student at American University where I was mentored by the prominent suicidologist Dr. Alan Berman. My first-ever professional presentation was based on my master thesis study of psychological autopsies and Dr. Robert Litman was my discussant. In the first row at my professional debut were Drs. Jerome Motto and Norman Farberow. After somehow surviving my first conference talk, I was warmly congratulated by these famed founding fathers of suicidology, and Bob and Norm invited me to visit the Los Angeles Suicide Prevention Center where I met suicidology icon Dr. Edwin Shneidman. Needless to say, this was an auspicious entry into the field. And for me the die was cast, and I have been immersed in suicidology ever since. I am now a professor of psychology at The Catholic University of America and as the Director of the Suicide Prevention Lab, I have mentored dozens of students in suicidology over three decades. I am also the creator and treatment developer of the Collaborative Assessment and Management of Suicidality (CAMS) which is a suicide-focused clinical intervention supported by multiple randomized controlled trials. I have thus been engaged in clinical research, professional training, systems-level evaluation and intervention, suicide-focused public health, and legislative policy efforts. I have worked extensively within the American Association of Suicidology (AAS) and more recently in the American Foundation for Suicide Prevention (AFSP). Given this exposure, it is fair to say that my decades of work in suicide prevention affords me some measure of perspective on the present resource at hand entitled: “Current Status of Suicide-Focused Assessment and Treatment: An Online Resource for Clinicians.”

To this end, this remarkable online resource that has been painstakingly and expertly created by Drs. Douglas Jacobs and Marci Klein-Benheim is a truly unique and distinctive contribution to the field of suicide prevention in general and clinical suicidology in particular. While some excellent comprehensive textbooks on suicidology have been published over the years, this online effort is special in that it is not static text but *dynamic* online document. Moreover, there is no resource that I know that has more breadth and depth than this particular online document. It expertly traverses virtually every domain of the field from theory, research, to clinical practice. I have been honored to serve on the Advisory Panel along with luminaries across the field who have served as contributors to this document that eloquently covers every major aspect of the field of clinical suicide intervention. Having fully reviewed every nook and cranny of this work I especially appreciate the multidisciplinary approach exhibited throughout this extraordinary contribution to the field. I am satisfied that Drs. Jacobs and Klein-Benheim have turned over every stone to helping us understand, assess, manage, as well as effectively treat patients who struggle with suicidal thoughts and behaviors. This online resource is a virtual cornucopia of information covering additional topics ranging from risk to protective factors, the full range of innovations in assessment including implicit approaches to neurobiological markers. The full spectrum of theoretical approaches is thoughtfully covered from psychodynamic to behavioral to biological approaches. Suicide postvention and special populations round out this comprehensive review of the extant knowledge base.

Admittedly, clinical assessment and treatment of suicidal risk is wrought with challenges; predicting prospective suicidal behavior is elusive and our clinical treatments can too often miss the mark. And yet, progress is being made which is reflected in this remarkable resource. I would argue that changes and innovations of the last decade rival the combined efforts of the previous fifty years. It is not hyperbolic to observe that the field of suicide prevention is exploding, and this burgeoning knowledgebase is fully and faithfully covered and described in this amazing online resource. Moreover, because this resource is online it can and will be updated periodically with our newest innovations and findings that by definition make this resource genuinely unique and valuable. For my part, this document is stored on my laptop as a reliable and definitive resource on the cutting-edge of our field. In this way, it eclipses the many books arrayed on the shelves of my study. And while I have written and love books dedicated to suicidology, this new resource will be my go-to in the years ahead to optimally inform my clinical practice, research, and policy work that is dedicated to saving lives and decreasing suicide-related suffering in all its forms.

— **David A. Jobes, Ph.D., ABPP**
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Preface

This online resource was developed with the mission of providing clinicians with information regarding the current status of suicide-focused assessment and treatment. The information has been compiled from a review of available evidence from existing literature and supplemented by clinical consensus, though it is not to be construed as the standard of care.

This online resource is intended to be a free resource, periodically updated. The references identified are available as links to articles that are publicly available or can be accessed through one's institutional affiliation. Interested readers are welcome to make suggestions as to sections that may need to be extended, amplified, and/or revised based upon advances in our field. Suggestions can be sent to reception@djacobsmid.com.

Many clinicians and researchers have contributed to this body of information. Our advisors have given so graciously of their time and expertise, greatly improving this resource. We want to specially thank Dr. Ross Baldessarini, Dr. Madelyn Gould, Dr. David Jobes, and Dr. Christine Moutier for serving on our advisory panel. Their knowledge and experience have been invaluable in bringing this project to fruition. We also want to acknowledge important contributors who have served as topic experts, reviewing and commenting on specific sections. We could not have created this online resource without all of their excellent input. We would also like to thank Talia Benheim, who provided important research and technical support throughout this endeavor.

Some of the material in this resource comes from the 2020 National Stop A Suicide Today Town Hall, an event we hosted in collaboration with the American Psychiatric Association, the American Foundation for Suicide Prevention, and McLean Hospital. The town hall addressed the rising suicide rate in our country, with specific attention to why people die by suicide, who is at risk, and what can be done to help mitigate suicide risk. We would like to thank our co-directors, Dr. Tristan Gorrindo and Dr. Christine Moutier, as well as Dr. Jeffrey Geller and all the other speakers who shared their experiences and helped make the 2020 event possible.

Additional material in this resource comes from a 5-hour workshop we recently conducted titled "Suicide-Focused Assessment and Treatment: An Update for Professionals." The workshop was co-hosted by McLean Hospital and the Stanford Department of Psychiatry and Behavioral Medicine and included speakers from these and other institutions across the United States. I would like to thank my co-director, Dr. Alan Schatzberg, the expert panel, and the respective staffs at McLean and Stanford for all the time and effort they put into making the 2021 inaugural event both successful and informative.

— **Douglas Jacobs, M.D. and Marci Klein-Benheim, Ph.D.**

Statement of Intent

The information in this online resource is not to be construed or to serve as the standard of care. Standards of psychiatric care are determined on the basis of all clinical data available for an individual patient and are subject to clinical change as scientific knowledge and technology advance and practice patterns evolve. Adherence to the information presented will not ensure a successful outcome for every individual. Moreover, this online resource does not include all proper methods of assessment/treatment and may exclude other acceptable methods aimed at the same results. The ultimate judgment regarding a particular suicide assessment, treatment plan, or clinical procedure must be made by the clinician, treatment team, and consultant (if indicated) in light of clinical data presented by the patient and the diagnostic and treatment options available at the time of evaluation.

Adapted from [APA, 2003](#)



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Understanding Suicide



"The pathologic processes that lead to suicide travel on many roads. Like the diseases of everyday concerns to the internist, surgeons and pediatricians, the event itself is seldom simply determined...suicide is the final common pathway of diverse circumstance, of an interdependent network rather than an isolated cause, a knot of circumstances tightening around a single time and place, with the result, sign, symptom, trait, or act."

Leston L. Havens, M.D.

The Anatomy of a Suicide ([1965](#))

Facts and Figures

Suicide is when people intentionally act self-destructively with an intent to kill themselves, and they die because of their actions. In the past 20 years, there has been a 30% increase in the rate of suicide deaths in the United States, with the rate increasing more rapidly in rural counties than in large metropolitan areas ([Ehlman et al., 2022](#); [Garnett et al., 2022](#)). In 2020, there were 45,979 recorded suicides in the U.S. ([CDC, 2022](#)). There is no single explanation for the surge, though some may be “deaths of despair” ([Case & Deaton, 2020](#)). Among contributing factors to this phenomenon are the economic crisis, the opioid epidemic, farm bankruptcies, social media, better reporting and tracking of suicides, and decreased access to mental health and medical care. Higher numbers of veteran deaths may also play a role.

In 2020, suicide was the 12th leading cause of death among persons of all ages. Suicide was the 10th leading cause of death in 2019, but fell to 12th in 2020 due to decreases in suicides along with increases in deaths from COVID-19 and cirrhosis/chronic liver disease ([Garnett et al., 2022](#)). While the number of suicide deaths have declined from an all-time high in 2018, the number of persons reporting suicidal ideation has continued to rise in each of the past two years. 12.2 million adults (4.9% of those 18 years or older) and 3 million adolescents (12% of those aged 12 to 17) reported having had serious thoughts of suicide in 2020 ([SAMHSA, 2021](#)). Moreover, provisional data from 2021 suggests that the absolute number of suicides has increased again in the U.S. ([Ahmad et al., 2022](#)).

The 2020 National Survey on Drug Use and Health asked adults who reported suicidal ideation in the fourth quarter of 2020 if they had these suicidal thoughts or plans because of the COVID-19 pandemic. Approximately one out of every 5 adults (21.1%) who reported serious thoughts of suicide in the fourth quarter of 2020 reported these thoughts were because of COVID-19 ([SAMHSA, 2021](#)).

CDC findings indicate that the highest rates of suicide in 2020 occurred among males, non-Hispanic American Indian or Alaska Natives, and persons aged 85 and older ([Ehlman et al., 2022](#)). Firearms remain the most common means of suicide in the US, with 53% of all suicides in 2020 involving a gun ([CDC, 2022](#)). The most common precipitants for suicide are relationship problems, interpersonal conflicts and recent crises ([Parks et al., 2014](#)).

Previous studies found that 90%-95% of persons who die by suicide have a psychiatric illness ([Litman, 1989](#); [Mościcki, 2001](#); [Schreiber & Culpepper, 2020](#)), though there has been some recent questioning of the universality of these findings. More recent data from the CDC show that a mental disorder diagnosis was not known in 54% of all suicide cases in 2015 ([Stone et al., 2018](#)), thus highlighting the need to pay careful attention to those who are experiencing intolerable mental or psychic pain, whether or not they meet full criteria for a psychiatric diagnosis ([Pompili, 2020](#)).

One in five (19%) suicide decedents had seen a mental health care clinician within the past month ([Luoma et al., 2002](#)). Mental health clinicians are tasked with conducting suicide risk assessments. Factors which increase as well as decrease the likelihood of suicide have been identified ([APA, 2003, Table 4](#)). However, knowledge of these factors does not allow suicide or suicidal behavior to be predicted. It is important to acknowledge that “suicides can and do occur in clinical practice despite the best efforts at suicide assessment and treatment” ([APA,](#)

[2003, p. 69](#)). Ultimately, the suicide assessment is the quintessential clinical judgment ([APA, 2003](#); [Fochtmann & Jacobs, 2015](#)).

Messaging Around Suicide

The way we talk about suicide has changed in recent years (see [Harkavy-Friedman, 2020, 02:55](#)). Clinicians and researchers are encouraged not to say that someone “tried to commit suicide” or “committed suicide” because the word “commit” has negative connotations. Similarly, suicide attempts are no longer referred to as “failed,” “unsuccessful,” or “successful.” Instead, clinicians and researchers are encouraged to say that someone has “attempted suicide,” “made a suicide attempt,” or “died by suicide.” The words we choose when talking about suicide matter.

Uniform Suicide Terminology

The following definitions are adapted from the U.S. Center for Disease Control and Prevention (CDC), Division of Violence Prevention ([Crosby et al., 2011](#)) and the American Psychiatric Association’s Practice Guidelines for the Psychiatric Evaluation of Adults ([APA, 2016](#)). They define common terms regarding suicide.

Aborted or self-interrupted attempt: When a person begins to make steps towards making a suicide attempt but stops before the actual act or behavior.

Affected by Suicide: All those who feel the impact of suicidal behaviors, including those bereaved by suicide, friends, community, or celebrities.

Bereaved by Suicide: Family members, friends, co-workers, others affected by the suicide of a loved one. Can be referred to as survivors of suicide loss.

Interrupted Attempt: When a person is interrupted by another person or outside circumstances from carrying out a self-destructive act after making preparations and/or taking steps in furtherance of the attempt.

Means/Methods: The instrument, material, or method used to engage in self-inflicted injurious behavior, presumed to be suicidal if there is evidence of any intent to die as a result of the behavior.

Non-Suicidal Self Injury (NSSI): The intentional injury of one’s own body tissue without suicidal intent and for purposes not socially sanctioned, such as carving, cutting, or burning oneself, banging or punching objects or oneself, and embedding objects under the skin. Tattooing and piercing are not considered NSSI because they are considered to be culturally sanctioned forms of expression.

Protective Factors: Factors that make it less likely that an individual will engage in suicidal behavior.

Risk Factors: Factors that make it more likely an individual will engage in suicidal behaviors.

Safety Plan: A collaborative plan between patient and clinician that contains a written list of warning signs, coping responses, supports (both lay and professional), and emergency contacts that an individual may use to avert thoughts, feelings or impulses or behaviors related to suicide, including restriction of access to lethal means.

Suicidal Behaviors or Preparatory Actions: Acts or preparation toward making a suicide attempt that includes any evidence of intent to die.

Suicidal Ideation: Thoughts of engaging in suicidal behaviors or serving as the agent of one's own death (active ideation), or preoccupation with death or being dead (passive ideation).

Suicidal Intent: Expectation and desire for a self-injurious act to end in death. Evidence that at the time of injury the individual intended to kill self and understood the consequences of relevant actions.

Suicidal Plan: Delineation of the method, means, time, place, or other details for engaging in self-inflicted injurious behavior with any intent to die as a result of the behavior.

Suicidal Thoughts: General nonspecific thoughts of wanting to end one's life (either active or passive).

Suicide: Death caused by intentional self-directed injurious behavior with any intent to die. Instead of "committed" or "completed," it is currently recommended to use the phrase, "died by suicide."

Suicide Attempt: A non-fatal, self-directed, potentially injurious behavior with any intent to die as a result of the behavior with or without injuries.

Assessment



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The purpose of the suicide risk assessment is to determine the level of suicide risk by identifying factors that may increase or decrease risk. The suicide assessment also helps to determine the treatment setting, develop a treatment plan, and address immediate safety needs, including suicide precautions. The extensiveness of the suicide assessment varies, depending on the patient's clinical presentation, the patient's capacity or willingness to provide information, the patient's mental state, the clinician and treatment team's previous experience with the patient, the clinical setting, and other such factors. The goal of identifying risk and protective factors in a suicide assessment is not prediction, but rather to make a clinical judgment as to the level of suicide risk so as to determine the next steps and to plan more informed interventions ([APA, 2016](#)).

The Issue of Prediction

In 2019, the suicide rate in the United States was 14.2 per 100,000 people ([CDC, 2020](#)). Even though there has been a recent increase in the suicide rate, it is still a rare event even among high-risk populations. This statistical rarity of suicide contributes to the impossibility of predicting suicide for an individual based on the presence of risk factors, alone or in combination. A recent comprehensive review found that the ability to predict if someone will attempt to take his or her own life is no better than chance and has not significantly improved over the past 50 years ([APA, 2016](#); [Franklin et al., 2017](#)). The goal of identifying risk and protective factors in a suicide assessment is not prediction, but rather to determine the level of suicide risk (low, medium, or high) and to plan more informed interventions. For example, some risk factors are potentially modifiable, such as treating psychiatric disorders and symptoms, involving social supports (when available), and reducing access to lethal means ([APA, 2003](#)).

"Suicide cannot be predicted and in some cases cannot be prevented, but an individual's suicide risk can be assessed and a treatment plan can be designed with the goal of reducing the risk." ([Jacobs & Brewer, 2004, p. 380](#))

Clinical Situations That May Warrant a Suicide Assessment

Examples of clinical situations that warrant a suicide assessment include:

- Emergency department or crisis evaluations
- Intake evaluations for all patients, particularly those with serious mental illness
- Patients with depression anticipating or experiencing significant loss or stress (relationship difficulties, financial loss, humiliation, legal difficulties)
- Patients with certain physical illnesses (particularly if life threatening, disfiguring, or associated with severe pain or loss of function)
- Pertinent clinical change (increase in suicide ideation, suicidal behavior, change in mental status, unstable mood, impulsiveness, experience of loss, trauma victimization)
- In inpatient settings, when there is a change in privilege level (or before granting a pass), when there is a deterioration in mental status, and before discharge

Common Warning Signs

Warning signs are verbal expressions, changes in behavior, or new behaviors that indicate that a person may be suicidal. A meta-analysis found that at least half of people considering suicide give some indication of their intent ([Pompili et al., 2016](#)).

Adult Warning Signs

- Verbal suicide threats
- Expressions of hopelessness and helplessness
- Talking about great guilt or shame
- Talking about being a burden to others
- Increasing use of alcohol or drugs
- Daring or risk-taking behavior
- Experiencing severe mental pain
- Depression
- Severe anxiety, panic attacks
- Inability to sleep
- Showing rage or talking about seeking revenge
- Giving away prized possessions
- Saying a final goodbye to family and friends
- Putting affairs in order
- Lack of interest in future plans¹

While none of these signs in isolation is indicative of imminent suicide risk,² the presence of multiple signs may signal that the person is in a suicidal crisis and in need of careful assessment and intervention.

¹ Don't be misled by the presence of future thinking in that a person can be planning ahead and suicidal at the same time due to the phenomenon of ambivalence.

² Determining the imminency of suicide risk is a major clinical challenge. However, some attempts have been made to address this important issue. For example, a new diagnostic entity, known as Acute Suicidal Affective Disturbance (ASAD) has been proposed to potentially identify suicidal risk in the shorter term. ASAD has four diagnostic criteria ([Stanley et al., 2016, p. 98](#)):

- “(1) a geometric increase in suicidal intent over the course of hours or days (as opposed to weeks or months)
- (2) one (or both) of the following: marked social alienation (e.g., severe social withdrawal, disgust with others, perception that one is a liability on others), and/or marked self- alienation (e.g., views that one's selfhood is a burden, self- disgust)
- (3) perceptions that the foregoing are hopelessly intractable
- (4) Two or more manifestations of overarousal (e.g., insomnia, nightmares, agitation, irritability).”

For a more detailed discussion of this new construct, see: [Tucker et al., 2016](#); [Stanley et al., 2016](#).

Youth Warning Signs

- Talking about or making plans for suicide
- Expressing hopelessness about the future
- Displaying severe/overwhelming emotional pain or distress
- Showing worrisome behavioral cues or marked changes in behavior, particularly in the presence of the above warning signs. Specifically, this includes significant:
 - Withdrawal from or change in social connections/situations, including extracurricular activities and school performance
 - Changes in sleep (increased or decreased)
 - Anger or hostility that seems out of character or out of context
 - Recent increased agitation or irritability
 - Risk-taking behavior or alcohol/drug use

Risk is greater if the warning sign is:

- new
- has increased
- related to an anticipated or actual painful event, loss, or change
- associated with the acute onset of mental illness

The presence of more than one of these warning signs may increase a youth's risk for engaging in suicidal behaviors in the near future (adapted from [Youth Suicide Warning Signs](#)). For further discussion on this topic, please see the "Children, Adolescents, and Young Adults Section" under "Special Populations."

SAFE-T: Suicide Assessment Five-Step Evaluation and Triage

The SAFE-T is an assessment protocol originally conceived by Douglas Jacobs, M.D., consistent with the American Psychiatric Association's (2003) Practice Guidelines for the Assessment and Treatment of Patients with Suicidal Behaviors. The SAFE-T protocol outlines steps clinicians can take to estimate suicide risk, which they can then use to assist in developing an appropriate intervention.

[SAFE-T](#) (Suicide Assessment Five-step Evaluation and Triage):

1. Identify risk factors, noting those that can be modified to reduce risk
2. Identify protective factors, noting those that can be enhanced
3. Conduct a suicide inquiry. Ask specifically about suicidal thoughts, plans, behavior, and intent
4. Determine level of risk. Choose appropriate intervention to address and reduce risk
5. Document the assessment of risk, rationale, intervention, and follow-up instructions

Dr. Jacobs spoke about the SAFE-T during [a course he co-directed in 2021](#) on the current status of suicide-focused assessment and treatment. He now recommends beginning with step #3—that is, the suicide inquiry. He emphasized that asking about suicide is a therapeutic interaction in and of itself as it can make the person feel understood, accepted, and connected with.

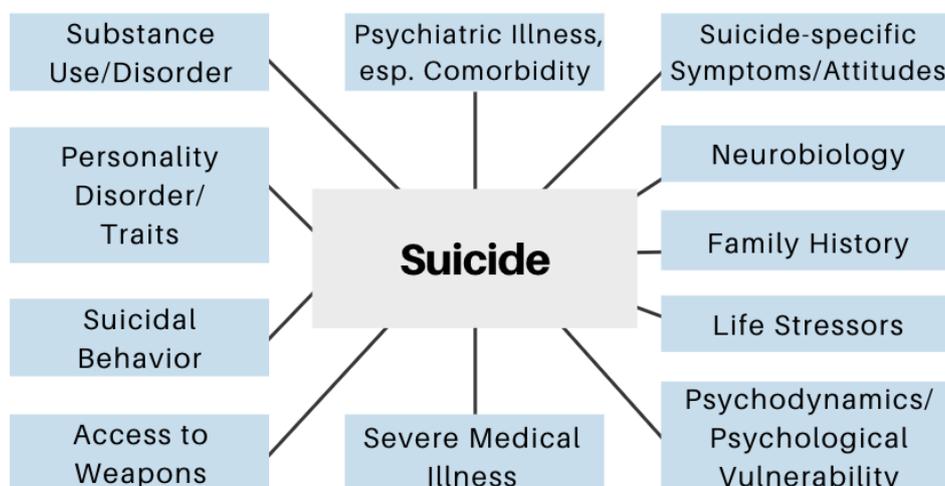
During the presentation, Dr. Jacobs also highlighted the importance of identifying suicide-specific symptoms and attitudes known to be associated with heightened suicide risk. These suicide-specific symptoms and attitudes include:

- Intolerable mental pain
- Shame
- Feeling like a burden
- Social disconnectedness
- Loss of fear of death
- Global insomnia
- Severe anxiety
- Lack of remorse following a suicide attempt

Risk Factors for Suicide

One of the objectives of the suicide assessment is to identify risk factors for suicide. Although research has shown that multiple factors can increase one's risk for suicide, there is no study indicating that there is one single factor or set of factors that are predictive of suicide.

The factors that have been correlated with (but not causative of) increased suicide risk include demographics, psychiatric illness and comorbidity, suicide-specific symptoms and attitudes, family history, personality disorder/traits, substance use/abuse, severe medical illness, life stressors, suicidal behavior, psychological vulnerability, and access to weapons.



Demographic and Other Static Risk Factors

- U.S. males are 3.7 times more likely than females to die by suicide, but females are more likely to make suicide attempts than males ([Hedegaard et al., 2020](#); [APA, 2017](#)). Over the past two decades, the ratio of male-to-female suicides has decreased from 4.4 male suicides per female suicide, largely driven by an increase in the lethality of female suicide attempts. Between 2000 and 2016, the rate of female suicides increased by a staggering 50%, while the rate of male suicides increased by 21% ([Hedegaard et al., 2018](#)).
- Single, widowed, or divorced people are twice as likely to die by suicide as married people, but married persons still die by suicide at high rates and married people account for a larger number of the total suicides each year ([Curtin & Tejada-Vera, 2019](#)).
- Suicide thoughts, plans, and attempts are 3 to 6 times more common among those who identify as lesbian, gay, or bisexual than those who identify as heterosexual ([Ramchand et al., 2021](#); [Youth Risk Behavior Survey, 2017](#)).
- The U.S. suicide rate is highest among American Indian/Alaskan Native populations ([Ehlman et al., 2022](#); [SAMHSA, 2010](#); [SPRC, 2020](#)).
- While the overall suicide rate of those identifying as black is lower than that for other racial/ethnic groups, suicide attempts among black adolescents have increased significantly over the past few decades ([Lindsey et al., 2019](#)).
- Certain occupational groups, such as construction workers and health care professionals (including physicians, dentists, and veterinarians), have relatively high rates of suicide ([Hawton et al., 2011](#); [Tomasi et al., 2019](#)).
- However, being unemployed, under financial strain, or homeless is also associated with substantially higher risk of suicide ([SPRC, 2012](#)).

Suicidal Ideation

Suicidal ideation is defined as having thoughts about killing oneself. These thoughts may include thinking that life is not worth living or suicide plans. These thoughts can be short-lived and fleeting, completely preoccupying, or chronic. They can be active (e.g., thoughts about being the active agent of killing oneself) or passive (e.g., wishing one were dead or would go to sleep and never wake up).

Suicidal ideation is a significant clinical phenomenon in the United States, and is on the rise. According to 2019 data from the National Survey on Drug Use and Health, approximately 12 million adults in the U.S. had thought seriously about killing themselves in the past year. The percentage of adults who have thought seriously about killing themselves has increased from 3.8% to 4.9% over the last decade. This percentage has especially increased among young adults aged 18 through 25, where the prevalence rose from 6.6% in 2010 to 11.3% in 2020 ([SAMHSA, 2012](#); [SAMHSA, 2021](#)).

Although prediction is not possible, it is known that suicidal ideation can progress from thoughts to plans to attempts.³ Of the 12.2 million adults who experience suicidal ideation each year in the U.S., approximately 3.2 million will go on to make a plan, and 1.2 million will go on to make a non-fatal suicide attempt ([SAMHSA, 2021](#)). Data suggest that 60% of the transitions from thoughts to plans and plans to attempts occur within a year after first onset of ideation ([Schreiber & Culpepper, 2021](#)). Though males account for most suicide deaths, the prevalence of suicidal thoughts, plans, and attempts is higher among females, as well as 18- to 39-year-olds, noncollege graduates, those who never married, and those with incomes below the federal poverty threshold ([Ivey-Stephenson et al., 2022](#)).

While the majority of individuals who experience suicidal ideation do not go on to take their lives, persistent and severe suicidal ideation is associated with significant misery and puts one at statistically increased risk of a suicide attempt and suicide death (e.g., [Zuromski et al., 2019](#)). Suicidal ideation is seen as an essential intervention target in and of itself ([Jobes & Joiner, 2019](#)). Regardless of whether or not there is an underlying psychiatric disorder ([Pompili, 2020](#)), when there is evidence of mental pain it may be indicated for clinicians to ask patients whether they are experiencing suicidal thoughts or engaging in suicidal behaviors, including asking about the presence or absence of a plan and about other psychosocial risk factors. Those who experience suicidal ideation in the absence of other risk factors may be at lower risk for suicide than those who experience ideation in the presence of other risk factors. For example, research has shown that the relationship between suicidal ideation and attempts in adolescents is mediated by exposure to psychosocial risk factors ([Centre for Excellence in Youth Mental Health, 2009](#); [Jacobs, 1999](#)). However, the determination of level of suicide risk, whether there are few or multiple risk factors present, is a matter of clinical judgment ([Fochtmann & Jacobs, 2015](#)).

Moreover, despite the seriousness of having such thoughts, fewer than half of individuals who experience suicidal ideation receive mental health services ([Schreiber & Culpepper, 2021](#)). Jobes and Joiner ([2019](#)) recently wrote an editorial regarding the pressing need for more attention to be focused on suicidal ideation due to the profound morbidity and “misery” associated with it. As the authors argue, “suicidal ideation must become an essential intervention target in and of itself. Indeed, it can be argued that better identification and more effective treatment of suicidal ideation upstream would invariably lead to many fewer suicide attempts and many fewer suicide deaths downstream...” To view this editorial, [click here](#).

Suicidal and Non-Suicidal Self-Injury

Past suicide attempts: Most people who make an unsuccessful suicide attempt do not ultimately die by suicide ([Bostwick et al., 2016](#)). However, the history of prior suicide attempts is an important factor to consider. A recent suicide attempt can be a short-term risk factor for suicide. A remote attempt is a statistical risk factor for suicide. Studies have found an increased risk of suicide within the first year following an attempt ([Isometsa, 1998](#)) as well

³ For a theory of suicide explaining how suicidal ideation may progress to suicide attempts, see Klonsky & May ([2015](#)).

as one year after the attempt ([Fawcett, 1990](#)). Aborted/interrupted attempts are actual suicide attempts, and are assessed accordingly.

It is important to inquire about methods used or considered in past attempts as studies show that most persons who die by suicide will use the same method as they did at the index attempt ([Runeson et al., 2010](#)). Other factors to consider when assessing the significance of a past attempt are the intent and lethality of the attempt, and any acts in furtherance of a self-destructive act. Violent past attempts are associated with greater risk of suicide ([Giner et al., 2014](#)).

A recent national study, with a sample of nearly half a million adults, found that past-year suicide attempts increased in the US from 481.2 per 100,000 in 2008 to 563.9 per 100,000 in 2019. This increase was particularly notable for women, young adults (18- to 25-years-old), the unemployed, the never married, and those who use substances. Yet despite the significant increase in past-year suicide attempts over the past decade, there was unfortunately no significant change in the likelihood of receiving treatment during this time period. The authors point out an urgent need to expand service accessibility and/or acceptability. Their data indicate that 38.4%-45.5% of persons with past suicide attempts who reported a need for services still did not receive such services ([Bommersbach et al., 2022](#)).

A suicide attempt is considered one of the strongest correlates of suicide death, with risk significantly increased in the first year following an attempt ([Bostwick et al., 2016](#)). The findings above emphasize the need for clinicians, particularly those working in emergency settings, to encourage suicide attempters and their significant others to pursue follow-up care, regardless of the severity of the attempt.

Non-suicidal self injury (NSSI): Non-suicidal self-injury (NSSI) is the “intentional destruction of one’s own body tissue without suicidal intent and for purposes not socially sanctioned” ([Klonsky et al., 2014](#)). NSSI includes behaviors, such as carving, cutting, or burning oneself, banging or punching objects or oneself, and embedding objects under the skin. Tattooing and piercing are not considered NSSI because they are considered to be culturally sanctioned forms of expression ([Klonsky et al., 2014](#)).

Approximately 15% to 20% of adolescents and young adults engage in self-injury at least once. NSSI is far less common in adults, with about 6% of adults reporting self-injury. NSSI presents differently in males and females. Females are more likely to engage in cutting, whereas males are more likely to self-injure by hitting or burning. Nevertheless, NSSI can be a risk factor for suicide, regardless of the person’s age or the degree of destruction ([Klonsky, 2011](#); [Klonsky et al., 2014](#)).

Genetics and Neurobiology

Family History: Those who have first-degree relatives who died by suicide are at significantly increased risk of suicide compared to those who do not have relatives who died by suicide ([Egeland & Sussex, 1985](#); [Qin et al., 2002](#); [Rostila et al., 2013](#)). Twin studies indicate a higher concordance of suicidal behavior between identical twins than between fraternal twins ([Egeland & Sussex, 1985](#); [Roy et al., 1991](#); [APA, 2003](#)). Adoption studies

show a greater risk of suicide among biologic relatives than among adoptive relatives ([Brent & Melhem, 2008](#)).

Studies indicate that suicide itself is inheritable, independent of any psychiatric disorder ([Brent & Melhem, 2008](#); [Offord, 2020](#)). However, the link between family history and suicide is not solely genetic. Environment also plays a role, as having an unrelated spouse or relative who dies by suicide has also been shown to increase suicide risk ([Agerbo, 2003](#); [APA, 2003](#)). Psychologically, the phenomenon of suicide in a family communicates to family members that suicide is permissible or a solution to a problem.

Having a family history of abuse, violence, or other self-destructive behaviors also places individuals at increased risk for suicide. Histories of childhood physical abuse and sexual abuse, as well as parental neglect and separations, have been associated with suicide and a variety of self-destructive behaviors in adulthood ([Lopez-Castroman et al., 2014](#)).

Genetics: The International Suicide Genetics Consortium recently published results from a study that sheds light on the biology underlying suicide attempts. This study is the largest genetic study of suicide attempts to date. The DNA samples came from nearly 550,000 individuals; of these, 29,782 had a history of suicide attempt and 519,961 were controls. The study identified two loci significantly associated with suicide attempt: an *intergenic locus on chromosome 7* and the *major histocompatibility complex* ([Mullins et al., 2021](#)).

Of the two loci, the intergenic locus on chromosome 7 was found to be the more strongly associated with suicide attempt. DNA variations in this region had previously been linked with risk-taking behavior, insomnia, and smoking ([Mullins et al., 2021](#)). In the current study, suicide attempt was genetically correlated with smoking, pain, risk-taking behavior, insomnia, lower educational attainment, age at first live birth, lower SES, and poorer general health ([Mullins et al., 2021](#)). These genetic findings are consistent with findings from epidemiological and other studies of suicide attempts (e.g., [Agerbo et al., 2002](#); [Bernert & Nadorff, 2015](#); [Bishop et al., 2020](#); [Harrison et al., 2020](#); [Lorant et al., 2018](#); [Mullins et al., 2021](#); [Pigeon et al., 2012](#); [Poorolajal & Darvishi, 2016](#); [Qin et al., 2003](#); [Woznica et al., 2015](#)).

The major histocompatibility complex, which is also known as the human leukocyte antigen (HLA), is a gene complex that has been implicated in risk for a variety of neuropsychiatric disorders, including schizophrenia and bipolar disorder (e.g., [Debnath et al., 2018](#)). Researchers have also linked specific HLA profiles with increased and decreased risk of suicidal behavior (e.g., [Matei et al., 2019](#)). The consortium study also identified the major histocompatibility complex as a locus associated with suicide attempt. There was strong genetic correlation between suicide attempt and psychiatric disorders in the study. While the genetic overlap was strongest for major depressive disorder, there were moderate correlations between suicide attempt and other psychiatric disorders, including PTSD, ADHD, schizophrenia, bipolar disorder, and alcohol dependence ([Mullins et al., 2021](#)).

Moreover, the consortium study found that the association between the intergenic locus on chromosome 7 and suicide attempt remained significant, even after applying the statistical conditioning technique on psychiatric disorder ([Mullins et al., 2021](#)). In other words, after controlling for the genetic effects on psychiatric disorders, the genetic correlations between suicide attempt and psychiatric disorders decreased, whereas the genetic correlations with these other nonpsychiatric traits persisted. This finding was replicated in the Million Veteran

Research Project, which had a sample of over 14,000 veterans with a history of suicide attempt ([Million Veteran Program, 2021](#); [Mullins et al., 2021](#); [U.S. Department of Veterans Affairs, 2021](#)).

While we have known for a long time that both suicide and suicide attempt are heritable, this finding from the consortium is a significant advance, in that it shows that a significant proportion of the heritability is independent of psychiatric diagnosis. It confirms what we are seeing in the field—i.e., that suicide attempts are not just driven by underlying psychiatric disease, but also by shared biology or genetic architecture with other known, non-psychiatric, risk factors ([Mullins et al., 2021](#)).

Neurobiology: Specific neurotransmitter systems have been linked to suicidal behaviors. For example, studies have found reduced serotonin or serotonin turnover, disruptions in serotonergic signaling, and lower levels of the serotonin transporter SERT in brain regions of suicide decedents. The reduction in serotonergic activity occurs regardless of psychiatric diagnosis or method of suicide. Lower CSF 5-HIAA levels, the main metabolite of serotonin, have been associated with suicide and suicide attempts, as has increased 5-HT₂ receptor density in the amygdala. There is also evidence that reduced noradrenergic function can be associated with suicide ([Mann & Arango, 1999](#); [Offord, 2020](#)).

Studies also suggest that the hypothalamic-pituitary-adrenal (HPA) axis, the pathway that controls the body's response to stress, may be linked to suicide. Postmortem brain samples show that those who died by suicide have higher levels of corticotropin-releasing hormone (CRH), which causes the release of the stress hormone cortisol and other glucocorticoids. They are also more likely to have enlarged adrenal glands, which produce cortisol ([Offord, 2020](#)). Research using the dexamethasone suppression test (DST) indicates that higher levels of cortisol may be correlated with suicidality ([Coryell & Schlessler, 2001](#)). However, the studies did not control for mood disorders, so it is not known whether these differences are specific to suicide or not ([Offord, 2020](#)).

Researchers are increasingly viewing suicide risk using a *stress-diathesis model*. These models propose that suicide results from an interaction between predispositional factors (e.g., family history, genetics) and precipitating risk factors (e.g., stressful life events, psychosocial crises, psychiatric disorders). The question is why certain individuals with depression and other psychiatric disorders become suicidal, while others do not. Cognitive and personality traits, such as impulsivity, aggression, hopelessness, pessimism, and increased sensitivity to disapproval, likely play a role ([Heeringen, 2012](#); [Mann et al., 1999](#)). There is also evidence that both serotonin signaling and HPA axis function can be affected by childhood adversity via epigenetic changes ([Offord, 2020](#)).

Psychiatric Disorders

Studies have found that 90%-95% of persons who die by suicide have a psychiatric illness ([Litman, 1989](#); [Mościcki, 2001](#); [Schreiber & Culpepper, 2020](#)), though there has been some recent questioning of the universality of these findings. The CDC found that a mental disorder diagnosis was not known in 54% of all suicide cases in 2015, *thus highlighting the need to pay careful attention to those who are experiencing intolerable mental or psychic*

pain, whether or not they meet full criteria for a psychiatric diagnosis (Pompili, 2020). Moreover, recent research using machine learning methods has shown that functional impairment from psychiatric disorders, specifically “feeling downhearted,” “doing activities less carefully,” or “accomplishing less because of emotional problems,” may be independent risk factors for suicide attempts in general population samples (Garcia de la Garza, 2021).

The psychiatric disorders most commonly associated with suicide are severe depression, bipolar disorder, substance use/alcohol use disorder, and schizophrenia (Edwards et al., 2020; Nordentoft et al., 2011; Olfson et al., 2021; Tidemalm et al., 2008). The severity of the psychiatric illness can increase risk, as can comorbidity (e.g., depression with an anxiety disorder, psychotic symptoms, personality disorder, and abuse of alcohol or other substances).

Suicidal symptoms may look different between mental health disorders. For example, with psychotic disorders, there may be auditory command hallucinations to die. With personality disorders, there may be abrupt suicidal behavior following a perceived interpersonal conflict. Suicides in persons with substance use disorders is often a stress-reaction or reckless risk-taking. Moreover, in those without a diagnosed mental health condition, suicide is often a response to loss of identity or security (Connery, 2021).

Studies have found that patients who have recently been discharged from an inpatient psychiatric facility are at increased risk for both suicide attempts and suicides. While the overwhelming majority of patients discharged from a psychiatric unit/hospital do not die by suicide within 12 months of discharge, a recent comprehensive review found that 26.4% of suicidal acts occur within the first month after discharge, 40.8% within 3 months, and 73.2% within one year (Forte et al., 2019). As a result, efforts have been made to develop ways to better determine which psychiatric inpatients present the most risk post discharge. The Suicide Crisis Inventory (SCI), for example, shows promising results for improving the identification of risk of suicidal behavior within the first two months of discharge (Galynker et al., 2016). Adequate and immediate follow-up care has also been demonstrated to reduce the risk of subsequent attempts and suicides following inpatient care (Forte et al., 2019).

Mental Health Conditions Associated with Suicide Risk

- Depression
- Bipolar Disorder
- Schizophrenia
- Personality Disorders
- Post-traumatic stress disorder
- Alcohol or other substance use disorder (especially polysubstance use)
- Traumatic brain injury
- Delirium
- ADHD

High Risk Profiles for Mental Health Conditions Associated with Suicide:

Affective Disorders:

- Suicide occurs early in the course of illness
- Suicide almost always in depressed or mixed phase/state
- Psychic anxiety or panic symptoms

- Moderate alcohol abuse
- Hospitalized for affective disorder secondary to suicidality
- Risk for men is 4x as high as for women, except in bipolar disorder, where women are equally at risk

Schizophrenia:

- First decade of illness (but rate remains elevated throughout lifetime)
- Good premorbid functioning
- Significant depressive symptoms/hopelessness
- Current substance use
- Recent hospital discharge
- Male gender
- Previous suicide attempt(s)
- Recognition of loss of previous abilities

Borderline Personality Disorder (BPD; [Davis et al., 1999](#); [Stone et al., 1987](#)):

- Lifetime rate of suicide: 8.5%
- With alcohol problems: 19%
- With alcohol problems and major affective disorder: 38%
- Comorbid condition in over 30% of suicides
- Nearly 75% of BPD patients have made at least one suicide attempt

Antisocial Personality Disorder:

- Suicide is associated with narcissistic injury/impulsivity

Alcohol and Substance Use:

- Suicide occurs later in the course of illness; communications of suicidal intent last several years
- Higher rates of alcohol use in men who die by suicide, higher rates of drug use in women
- Increased number of substances used, rather than the type
- Most have comorbid psychiatric disorders (BPD in females)
- Recent or impending interpersonal loss
- Comorbid depression

Posttraumatic Stress Disorder (PTSD):

- PTSD is associated with an increased suicide risk among active military personnel, veterans, and general population samples ([Gradus, 2018](#))
- The suicide rate among Army soldiers with PTSD was 6x the rate of suicide among soldiers without PTSD ([Bachynski et al., 2012](#); [Gradus, 2018](#))
- Studies find gender disparities ([Ilgen et al., 2010](#); [Gradus, 2018](#))

- Males veterans with PTSD had 1.8 times the rate of suicide as male veterans without PTSD
- Female veterans with PTSD had 3.5 times the rate of suicide as female veterans without PTSD
- General population samples using the Danish health registry found that those with PTSD had 13x the rate of suicide as those without PTSD after adjusting for demographics and other psychiatric comorbidity ([Gradus et al., 2015](#); [Gradus, 2018](#))
- Comorbid psychiatric diagnoses (e.g., depression, substance use, anxiety) may confound, modify, or mediate the association between PTSD and suicide ([Gradus, 2018](#)).

Physical Illness

Certain medical conditions have also been associated with an increased risk for suicide. Chronic or terminal illness places patients at higher risk. For example, having chronic pain doubles the risk of dying by suicide ([Racine, 2018](#); [Schreiber & Culpepper, 2020](#); [Tang & Crane, 2006](#)). Functional impairment also increases risk.

Moreover, patients with pain and an [opioid use](#) disorder can be at particularly high risk of suicide. An unexpected finding is that the number of firearm suicides in this population is even greater than the number of overdose suicides ([Oquendo & Volkow, 2018](#)).

Physical Health Conditions Associated with Suicide Risk

- Asthma
- Cancer
- Chronic pain
- COPD
- Coronary artery disease
- Diabetes
- [Parkinson's Disease](#)
- Spinal disc disorders
- Stroke
- Traumatic brain injury

Access to Firearms

Firearms account for approximately half of all suicides in the U.S. ([CDC, 2020](#)). Over the past decade, the rate of suicide by firearm has increased by 13% ([CDC WONDER, 2020](#); [Everytown Research & Policy, 2021](#)). Nearly 90% of suicide attempts with a firearm are fatal ([Conner et al., 2019](#)).

Studies suggest that individuals who live in a household with a firearm have at least a 3-fold increased risk of suicide ([Anglemyer et al., 2014](#)). Yet, studies show that there are no significant differences in rates of depression, substance use disorders, or suicidal ideation between those living in homes with firearms and those living in homes without them ([Ilgin et al., 2008](#); [Harvard T.H. Chan, n.d.](#)).

Moreover, this heightened risk of suicide by firearm applies not only to the gun owner, but also to others in the home, such as spouses and children. In 82% of youth firearm suicides, the gun belonged to another household member ([Johnson et al., 2010](#); [Knopov et al., 2019](#)). Parents may not be aware of this danger. According to a recent study, 40% of parents who

owned firearms mistakenly believed that their children did not know where their guns were stored, and 22% mistakenly believed that their children had never handled these guns ([Parikh et al., 2017](#)).

The statistical risk of suicide by firearm is increased among certain groups. Eighty-six percent of firearm suicides occur in men ([CDC WONDER, 2020](#); [Everytown Research & Policy, 2021](#)). The rate is particularly high among males 65 and older. However, among women, the rate is highest in those between the ages of 40 and 60 ([Everytown Research & Policy, 2021](#)). Most female handgun owners who died by suicide used their own handgun to kill themselves ([Studdert et al., 2020](#)).

Most firearm suicides involve guns purchased years earlier ([Mann & Michel, 2016](#)). Although new handgun owners are at higher risk of dying by suicide immediately after the purchase, a recent study shows that over half of all firearm suicides take place a year or more after the purchase ([Studdert et al., 2020](#)). The takeaway is that having a handgun increased risk, even if the handgun was not originally purchased with the intention to die by suicide.

Eighty-five percent of firearm suicides occur in White individuals, though American Indians and Alaskan Natives also have a disproportionately high suicide rate by firearm compared to other racial and ethnic groups ([CDC WONDER, 2020](#); [Everytown Research & Policy, 2021](#)). The rate of suicide by firearm is higher in rural areas than urban areas. This discrepancy exists even though people in rural areas do not show higher rates of depression than those living in urban areas ([Harvard T.H. Chan, n.d.](#); [Wang, 2004](#)).

Unfortunately, many of the groups most likely to use a firearm for their suicide attempt (e.g., older adult males, active-duty military and veterans, law enforcement) are also the same groups found to be most likely to underutilize mental health resources and underreport suicidal ideation. This complicates their identification and potential intervention by traditional suicide assessment methods ([Jin et al., 2016](#)).

"Whether or not a plan is present, if a patient has acknowledged suicidal ideation, there should be a specific inquiry about the presence or absence of a firearm in the home or workplace" ([APA, 2003, p. 11](#)).

Psychological and Cognitive Risk Factors

Some factors, such as personality traits, thinking styles, and coping skills have also been associated with increased risk of suicide ([APA, 2003](#)). These psychological factors include:

- Thought constriction
- Polarized (either-or) thinking
- Perfectionism
- Impulsivity
- Hopelessness
- Incapacity for reality testing
- Inability to tolerate rejection
- Subjective loneliness
- Intolerable mental pain
- Feeling like a burden

Psychosocial Risk Factors

The sociological perspective of suicide is primarily based on the theories of Emile Durkheim. According to Durkheim (1897), there are four types of suicides:

- **Altruistic:** Occurs among individuals with excessive connections to social groupings, resulting in loss of individuality (e.g., suicide bombers)
- **Egoistic:** Occurs among individuals with few connections to social groupings of any kind (e.g., single people are more likely to commit suicide than married people)
- **Anomic:** Occurs when there is an abrupt shift in an individual's circumstances that remove them from membership in what had been a well-integrated group (e.g., divorce)
- **Fatalistic:** Occurs among individuals who feel that they cannot escape from oppressive external forces, such the values and norms of society or persecution.

Durkheim's theories are supported by data on suicide. For example, persons who are single, divorced, or widowed are at higher risk for suicide ([Curtin & Tejada-Vera, 2019](#)). A more modern analysis expands on the theory that suicides are caused by social disconnectedness, proposing that “the need to belong is so powerful that, when satisfied, it can prevent suicide even when other powerful risk factors are operative” ([Joiner et al., 2006, p. 179](#)). For a more complete discussion of Joiner’s theory of the relationship between “pulling together” and suicide, see: [Joiner et al., 2006](#).

Other social factors that can influence suicide risk include:

- Acute psychosocial crises and chronic psychosocial stressors, especially triggering events leading to humiliation, shame, or despair
- History of abuse or neglect
- Employment status
- Living situation
- Presence or absence of external social supports
- Family constellation
- Quality of relationships
- Cultural or religious beliefs about death or suicide

*"Nothing is fixed, forever and forever and forever, it is not fixed; the Earth is always shifting, the light is always changing, the sea does not cease to grind down rock. Generations do not cease to be born, and we are responsible to them because we are the only witnesses they have. The sea rises, the light fails, lovers cling to each other, and children cling to us. The moment we cease to hold each other, the moment we break faith with one another, the sea engulfs us and the light goes out." (James Baldwin, *Nothing Personal*, 1964)*

Promising New Methods for Assessing Suicide Risk

The assessment of suicide risk is challenging for several reasons (e.g., [Ballard et al., 2021](#)). For one, suicidal thoughts are often transient in nature and/or intermittent. They may not be present during a clinical interview, but can resurface with deadly intent later ([Nock & Banaji, 2007](#)). Moreover, some suicidal individuals will intentionally deny or hide suicidal plans because they want to avoid hospitalization or unwanted intervention ([Glenn et al., 2017](#); [Nock et al., 2010](#); [Nock & Banaji, 2007](#)). Whereas studies have found that most persons who die by suicide (50%-69%, depending on the study) had communicated their intention to others in some way and at some point ([Coombs et al., 1992](#); [Pompili et al., 2016](#); [Robins et al., 1959](#)), others indicate that nearly 80% of those on inpatient units had explicitly denied suicidal intent the last time they were asked ([Busch et al., 2003](#)). Suicidal individuals may also unintentionally conceal suicidal risk; they may have poor insight or they may not report their past suicide attempts if they did not consider them to be serious ([Busch et al., 2003](#); [Chung, 2015](#); [Ploderl et al., 2011](#)). Because the instruments and methods we currently use to assess suicide risk rely heavily on self-report, and are, therefore, subject to all the limitations of self-report measures, researchers have been working on identifying more objective behavioral and biological markers of suicide risk (for a recent review, see [Ballard et al., 2021](#)). Although none of these measures are ready for clinical use at this time, it is important for clinicians to be aware of their findings and the future directions of the field.

Ecological Momentary Assessment (EMA)

One relatively new method researchers have begun using to help understand and account for the transient nature of suicidal thoughts is known as ecological momentary assessment (EMA), which is an experience-sampling method that gathers data in real time using digital tools, such as mobile phone apps ([Morgieve et al., 2020](#)). A benefit of EMA is that it can enable one to monitor a behavioral, physiological, or psychological process outside of a laboratory or clinical setting ([Nock et al., 2009](#)).

It has been demonstrated that suicidal ideation comes and goes. Suicidal thoughts can surface quickly ([Kleiman et al., 2017](#)) and last for relatively short periods of time (e.g., less than an hour) ([Nock et al., 2009](#)). Suicide attempts can occur in response to a rapid increase in suicidal thoughts ([Kleiman et al., 2017](#), [Kleiman et al., 2018](#); [Millner et al., 2017](#)). Findings such as these complicate clinical decision-making, which has traditionally relied upon intermittent assessment of risk for such judgments as to when a suicidal patient may be ready for an increase in privileges or even hospital discharge ([Morgieve et al., 2020](#)). EMA enables changes in suicidal thoughts and behaviors to be studied and monitored in real-time, outside the lab, the clinic, or mental health providers' office ([Ballard et al., 2021](#); [Nock et al., 2009](#)). By definition, EMA assessments are recurrent. Thus, they have the ability to gather information with respect to fluctuations in suicidal ideation and other symptoms, which is harder to obtain using less frequent traditional assessment methods ([Ballard et al., 2021](#)).

Research on EMA is helping us better understand suicidal thoughts and behaviors and how they vary over short periods. For example, Kleiman and colleagues (2017) recently conducted two EMA studies of suicidal ideation. They found that suicidal ideation varies dramatically over the course of most days. Responses given a few hours apart often differed by more than a standard deviation (Kleiman et al., 2017).

Nock and colleagues (2009) demonstrated the feasibility of using EMA methods to examine suicidal thoughts and behaviors in a sample of adolescents and young adults. The study found that suicidal thoughts were less frequent, but lasted longer than thoughts of non-suicidal self-injury (NSSI). Also, suicidal thoughts and thoughts of NSSI rarely co-occurred in this study, corroborating other evidence that suicidal thoughts and behaviors and NSSI are distinct from each other.

At this time, the process of assessment of imminent risk is still very challenging. The hope is that a frequent, real-time assessment method, such as EMA, could be combined with traditional techniques to help clinicians better identify individuals who may be at a heightened risk for imminent suicide and who, therefore, may require a more rapid intervention (Bagge et al., 2017; Morgieve et al., 2020). Real-time data collection methods have advantages, such as increased reliability and ecological validity, as well as decreased susceptibility to recall biases. However, EMA methods are still based on self-report and, therefore, are still prone to the many well-known limitations of self-report data (Nock et al., 2009).

Digital Phenotyping

Digital Phenotyping is way of analyzing large EMA and other real-time monitoring data sets. The digital phenotyping method involves identifying patterns in data derived from EMA or other real-time monitoring sources (e.g., mobile devices, GPS, speech samples, internet and social activity, keyboard activity) (Ballard et al., 2021).

For example, a recent study using digital phenotyping looked at whether there are subtypes of suicidal thinking. Researchers used smartphone-based real time monitoring to assess suicidal thoughts 4 times a day in two samples. The first sample recruited adults who had attempted suicide in the past year from online forums; the second sample included psychiatric inpatients with recent SI or attempts. Across both samples, five distinct phenotypes of suicidal thinking emerged, primarily differing on the intensity and variability of suicidal ideation. The profile of those most likely to have made a recent suicide attempt was characterized by more severe and more persistent suicidal thoughts (e.g., higher mean and lower variability around the mean). This study has aided our understanding of suicidal thinking as suicidal thinking has historically been understood to be a homogenous construct. The study raises questions for future research, such as how these phenotypes may prospectively relate to future suicidal behaviors (Kleiman et al., 2018).

Researchers have noted that suicidal individuals can lack insight into the thoughts and feelings that drive their suicidal behavior and, thus, unable to tell others about them (Nock & Banaji, 2007). One advantage of digital phenotyping is that it potentially allows for the detection of changes in suicidal thinking that occur outside of conscious awareness (e.g.,

smartphone movement, ambient light, text messages). However, there are also some ethical concerns related to this novel method. Digital phenotyping relies on the use of passively collected data, thereby raising concerns not only about privacy, but also about the security of the data being collected and its potential to be inappropriately used in clinical and/or forensic settings. More research is needed before digital phenotyping is ready for clinical use ([Ballard et al., 2021](#)). Recently, a panel of experts, including individuals with lived experience, was convened to produce a consensus statement on best practices related to ethical and safety concerns in digital monitoring studies ([Nock et al., 2020](#)). To view their findings, [click here](#).

Cognitive and Implicit Bias Measures

Implicit Cognition: Because individuals may be reluctant or unable to report suicide-related intentions, researchers are studying whether measures of implicit cognition could detect suicide risk beyond traditional self-report measures. Measures of implicit cognition have the potential to improve clinical assessment and may be able to help explain why some individuals with the same risk factors will cope with difficult circumstances and extreme distress with adaptive methods, whereas others will choose maladaptive suicidal behavior as a means of escape ([Nock et al., 2010](#)).

One such measure is the Implicit Association Task (IAT). In this task, participants' reaction times are measured as they classify words into categories (e.g., "self" or "other") to measure the relative strength of their mental associations between various concepts. In the Suicide IAT (S-IAT), Nock and colleagues adapted the IAT to measure associations between self/other and death/life ([Ballard et al., 2021](#); [Nock & Banaji, 2007](#); [Nock et al., 2010](#)). In the Self-Injury IAT (SI-IAT), associations are measured between self/other and images related to self-injury. In Nock and Banaji's (2007) study of 89 adolescents, the SI-IAT was able to differentiate non-suicidal individuals, suicide ideators, and suicide attempters. S-IAT performance has also been found to predict future suicide attempts, exceeding the predictive validity of other suicide risk factors, such as history of depression or suicide attempt ([Nock et al., 2010](#)). These findings have been replicated in emergency department, veteran, and internet samples ([Ballard et al., 2020](#); [Barnes et al., 2017](#); [Glenn et al., 2017](#); [Randall et al., 2013](#)).

Building on earlier studies about the specificity of self-harm related implicit cognition, Glenn and colleagues (2017) randomly assigned participants to one of three self-harm IATs: self/other and cutting; self/other and suicide, or self/other and death. Self-harm associations were stronger among individuals with a history of suicide attempt and non-suicidal self-injury compared to those without. Furthermore, results show that the implicit associations were sensitive to recency and severity of self-harm history.

Future work will be needed before the S-IAT and SI-IAT are used to make clinical interpretations. However, if employed in combination with other assessment tools, the S-IAT and SI-IAT may be able to increase the accuracy of suicide risk assessments. For example, given that the IAT seems to be more resistant to dishonesty than traditional self-report measures, these tools could potentially be used in the future prior to making decisions about patient discharge for high-risk suicidal patients ([Glenn et al., 2017](#)).

Emotional/Suicide Stroop Task: The Stroop Task is a popular neuropsychological test that is used to measure selective attention, cognitive flexibility, processing speed, and executive function. The Stroop Task measures how easily a person can suppress automatic responses when presented with incongruent stimuli. There are several versions of the Stroop Task. To help improve suicide risk assessment, researchers have been studying attentional biases toward suicide-related stimuli with an adapted version of Stroop Task known as the Suicide Stroop Task ([Wilson et al., 2019](#)).

Suicide-specific attentional bias is conceptually linked with a cognitive model of suicide ([Wenzel & Beck, 2008](#)), which posits that suicidal individuals have difficulty disengaging from suicide-related thoughts because their attention is fixated on suicide-relevant information. The Suicide Stroop Task is adapted from the Emotional Stroop Task. In the Suicide Stroop Task, individuals are asked to name the font color of suicide-related, emotionally valenced, and neutral words as quickly as possible ([Wilson et al., 2019](#)). The assumption is that suicidal individuals will be preoccupied by the suicide stimuli and that this will interfere with their naming of the color of the font. In other words, they will be slower to name the suicide-related words than the neutral or emotional words.

In an early study, Cha and colleagues ([2010](#)) used the Emotional Stroop Task to explore suicide-specific attentional bias in a sample of patients in a psychiatric emergency department. They found that the ED patients who had a history of suicide attempt had an attentional bias to suicide-related words (as opposed to neutral words) compared to the ED patients who never made a suicide attempt. The attentional bias was strongest for those who had a suicide attempt within the past six months. In addition, the researchers found that this suicide-specific attentional bias assessed by the Emotional Stroop Task added significantly to the prediction of who would make a subsequent suicide attempt during the following 6-month follow-up period, when the instrument was used along with other clinical measures.

Chung ([2015](#)) examined the concurrent and predictive validity of the Emotional Stroop Task as a behavioral marker for suicidal behaviors in a college population. In this study, 820 college students were asked to perform on the EST and to respond to suicide-related self-report measures. The same 820 students were followed up 18 months later. Results indicated that the students in the sample who had a history of past suicide attempts had longer response latencies to the word “suicide” on the Emotional Stroop Task, compared those students who did not have a history of an attempt. Furthermore, the students with attentional bias toward suicide-related words at baselines were more likely to report suicidal behaviors during the follow-up period.

The Chung ([2015](#)) study examined whether latencies on the Emotional Stroop Task might be affected by the ethnicity of the student. This is an interesting question as the traditional suicide risk assessment were not developed or standardized using culturally or ethnically diverse samples and there is concern that persons from various ethnic/cultural groups may interpret questions during the assessment differently or may be reluctant to report suicidal symptoms for a variety of reasons (e.g., fear of discrimination). Chung ([2015](#)) found that that performance on the Emotional Stroop Task, which does not rely on self-report, was not at all affected by ethnicity. However, a possible gender effect was noted. In a 2015 paper, [Chung & Jeglic](#) found that females who had made a past attempt showed more delayed response on the EST when their most recent attempt was within the past year.

Another important issue in suicide risk assessment is differentiating suicide ideators from suicide attempters. To study this question, Stewart and colleagues (2017) administered the Suicide Stroop Task to a sample of adolescent ideators and adolescent attempters recruited from a residential treatment center. Results indicated that suicide attempters showed greater interference for suicide and positive stimuli than suicide ideators.

The benefits of these Stroop tasks are not only that they do not necessitate direct self-report of suicide related symptoms, but also that they are relatively quick to administer and low-cost. However, there have been concerns regarding their reliability and validity as measures of suicide risk (Wilson et al., 2019), and there is little evidence that these tasks, in their current forms, outperform traditional self-report measures (Chung & Jeglic, 2015). Moreover, findings using the Suicide Stroop Task have been less consistent than those using the suicide-specific Implicit Association Task (SI-IAT) (e.g., Ballard et al., 2021; Richard-Devantoy et al., 2016), discussed above. In a recent article, Wilson and colleagues (2019) explain some of the problems with the Suicide Stroop in its current form and suggest several concrete ways the Suicide Stroop could be improved upon in the future. The hope is that with these improvements, the Suicide Stroop could potentially be used alongside other evidence-based assessment methods to better identify individuals at high risk for suicide attempt and completion.

Impaired Decision Making

Iowa Gambling Test: Decision-making deficits have been associated with suicidal behavior in both adults and adolescents. Jollant and colleagues (2005) were the first to report a specific impairment in decision-making in suicide attempters. They found that suicide attempters scored lower on the Iowa Gambling Test (IGT) than healthy comparison subjects. Other studies have since confirmed these findings with a variety of samples, including adults with bipolar disorder (Maloy-Diniz et al., 2009) and youth with psychiatric conditions (Bridge et al., 2012). Suicide attempters seem to have difficulty learning an advantageous decision-making strategy from feedback over the course of the task. Other studies have shown that suicide attempters are less responsive to reward/punishment feedback (Dombrovski et al., 2011). These converging findings suggest that impaired decision-making and cognitive flexibility may be a component of suicidal behavior. In the future, clinicians may be able to incorporate more objective measures of impaired decision-making and cognitive inflexibility into their suicide risk assessments.

Delay Discounting: The tendency to devalue outcomes over the course of a delay, also known as *delay discounting*, is a specific type of decision-making that may be linked to suicide risk. Individuals with higher rates of delay discounting exhibit a preference for smaller, immediate rewards over larger, delayed ones. There are several ways to measure delay discounting. All of them involve asking individuals to make choices between smaller, immediate rewards and larger, delayed ones. Thus, researchers are examining whether this more objective measure of impulsive choice can be valuable in the assessment of suicide risk.

Dougherty and colleagues (2009) studied delay discounting in adolescents who engaged in non-suicidal self-injury (NSSI) with or without a history of suicide attempts. Adolescents who had history of a suicide attempt were more likely to choose the smaller, immediate

rewards over the larger delayed one, consistent with the notion that impulsivity is a risk factor for suicide in youth.

Dombrowski and colleagues (2011) found that older adults who had contemplated suicide or made low-lethality suicide attempts had higher rates of delay discounting than non-suicidal control subjects, consistent with Dougherty and colleagues' (2009) findings in adolescents. However, interestingly, those who made high-lethality/high-planning suicide attempts had significantly *lower* rates of delay discounting than those who made low-lethality attempts and non-suicidal subjects. While impulsivity is a known risk factor for suicide, these findings suggest that suicidal individuals who think more about the future and plan out their attempts may also be heightened risk of dying by suicide. Thus, both low and high rates of delay discounting may be of concern to clinicians and further refine suicide risk assessments.

Neurobiological Markers

Neuroimaging studies show that specific brain regions are implicated in suicidal thoughts and behavior. Suicidal ideation and behavior are accompanied by local as well as long-range brain network changes. Structural and functional connectivity disturbances have been found in the ventral prefrontal cortex, insula, anterior cingulate, amygdala, hippocampus, and ventral striatum (Ballard et al., 2020). For a review of these studies, see Ballard et al., 2021.

However, most neuroimaging studies to date have used “lifetime history of suicide attempt” to characterize suicide risk. These attempts could have happened recently, or they could have happened years ago. Only a few studies have examined the neurobiology of suicidal thoughts in real-time. In one study, Ballard and colleagues (2020) used the suicide implicit association test (IAT) to examine the electrophysiological correlates of the implicit association between self/life and self/death. The study found that gamma activity increased in the amygdala and anterior insula. Furthermore, connectivity estimates between the early visual cortex, anterior insula, and amygdala distinguished individuals with a recent suicide crisis from healthy volunteers with 77-82% sensitivity and 80-85% specificity. While replication in larger samples is needed, these findings show promising implications of such methods for suicide evaluation.

Another group of researchers, Hazlett and colleagues (2016), examined whether startle amplitude during unpleasant pictures is greater in those with a history of multiple suicide attempts, as well as whether it was predictive of a future suicide attempt. Startle amplitude was measured using electromyography. Multiple attempters showed greater startle amplitude during unpleasant pictures than passive ideators, active ideators, and single attempters. In this study, startle amplitude also predicted future suicide attempt at a 12-month follow-up. The study underscores the potential value in identifying biological processes (e.g., an overactive amygdala) that may contribute to suicide risk (Hazlett et al., 2016).

Just and colleagues (2017) used functional MRI to measure neural activity in response to positive, negative, and death-related concepts. Their sample was composed of both suicidal and non-suicidal youth. They then developed a machine learning algorithm, which used neural representations of these concepts to differentiate between the suicide ideators and controls with 91% accuracy. Moreover, the algorithm could differentiate between the ideators

who had made a suicide attempt and the ideators who did not make a suicide attempt with 94% accuracy. Although this is just one study with a very small sample size, the findings were impressive, and suggest that machine learning methods may be able to improve upon traditional clinical assessment methods.

Jollant and colleagues (2011) conducted a literature review of neuroimaging and neuropsychological studies related to suicidal behavior. Studies supported the idea that there are alterations in the brain in persons with suicidal behaviors and that the alterations among those with suicidal behavior differ from those with comorbid conditions without a history of suicidal behavior. In addition, these findings, taken together with findings from neuropsychological studies mentioned above (e.g., that suicide attempters have impaired decision-making, lower problem-solving abilities, less cognitive flexibility, and higher attention to specific negative emotional stimuli) support the notion that neurocognitive dysfunctions may facilitate suicidal crises among vulnerable individuals.

Lipid Levels: In their search for potential biomarkers for suicide and suicidal behaviors, researchers have been studying lipid levels (Kulak-Bejda et al., 2021).

The link between lipid levels and suicidality has biologic plausibility. Cholesterol plays an important role in the function of cellular membranes, and specifically in the function of the 5-HT1A serotonin receptor. One theory is that “lower cholesterol levels may decrease membrane fluidity and cause an increase in the order of the membrane lipid bilayer” which can lead to a reduction in serotonergic transmission (Kulak-Bejda et al., 2021). Lipid levels appear to affect both the serotonin metabolite 5-HIAA as well as the dopamine metabolite homovanillic acid. The consequent imbalance between serotonin and dopamine is hypothesized to exacerbate suicide risk (Reuter et al., 2017). Other mechanisms have also been proposed (e.g., Segoviano-Mendoza et al., 2018).

Studies have found an association between lower cholesterol levels and suicidality in various patient populations, including depressed patients (e.g., Ma et al., 2019; Messaoud et al., 2017; Park et al., 2014), psychotic patients (e.g., Shrivastava et al., 2017), and those with a history of impulsive or violent behavior. For example, Segoviano-Mendoza et al. (2018) found lower total cholesterol, LDL-cholesterol, VLDL-cholesterol, and triglyceride serum levels in patients with major depressive disorder and suicide attempts compared to those without suicidal behavior (Kulak-Bejda et al., 2021). Aguglia and colleagues (2019; 2020) found that those who had made high lethality suicide attempts and those who made repeat suicide attempts had lower cholesterol levels than other attempters in their sample of 632 attempters (Kulak-Bejda et al., 2021).

A study was also conducted on 128 veterans who had had either suicidal ideation, attempt, or had died by suicide between 2009 and 2015. The study found that those veterans with total cholesterol levels below 168 mg/dl had a greater risk of dying by suicide than those with higher total cholesterol levels. The cholesterol level of the suicidal group (who reported suicidal ideation or an suicide attempt at a visit) was also significantly lower than the cholesterol level of the non-suicidal group (who reported neither suicidal ideation nor attempt at a visit) (Kulak-Bejda et al., 2021; Reuter et al., 2017).

A recent meta-analysis of 65 epidemiological studies found an 85% increased risk of suicide death and a 123% increased risk of suicide attempt in persons with lower serum cholesterol levels (Wu et al., 2016). Lower cholesterol in the recent past has been associated with greater

risk of suicide death, according to a study by Chen and colleagues of 41 suicide deaths and 205 matched controls in Japan ([Chen et al., 2019](#)). They found that suicide risk was increased in those with lower serum total cholesterol levels in the three years preceding death ([Chen et al., 2019](#)). Specifically, those in the lowest tertile of serum cholesterol had a three to four-fold greater risk of dying by suicide compared to those in the highest tertile of total serum cholesterol. Each decrease of 10 mg/dl in total serum cholesterol was associated with an 18% increased risk of suicide death in the study ([Chen et al., 2019](#)).

However, not all studies have found an association between lipid level (i.e., total cholesterol, LDL, triglycerides) and suicidal behavior or death (e.g., [Bartoli et al., 2017a](#); [2017b](#)) and some studies have even found an association in the opposite direction (i.e., that high cholesterol levels are associated with greater risk) (see e.g., [Kulak-Bejda et al., 2021](#); [Svensson et al., 2017](#)). While it is appealing to imagine that we might be able to someday add something as simple and inexpensive as monitoring lipid levels to our clinical repertoire to help screen and perhaps treat suicide risk, the science is not yet there. Additional research, especially longitudinal studies on larger and more diverse patient samples, is needed before any conclusion can be made as to whether one's lipid level is actually a biological marker for suicide and to develop clinical applications from these findings ([De Barardis et al., 2012](#)).

Conclusion

It is impossible to predict suicide in an individual. No study has ever shown that risk factors, either alone or in combination, can predict who will attempt or die by suicide, or when it might happen ([APA, 2003](#); [Franklin et al., 2017](#)). However, knowing the particular risk factors and [drivers of suicide](#) for an individual can help the clinician devise a tailored treatment plan, such as medication, psychotherapy, and treatment setting (including hospitalization).

Moreover, there is a growing body of literature examining cognitive and biological markers of suicidal ideation and behavior, which may provide more objective measures of suicide risk than traditional self-report measures (e.g., [Ballard et al., 2021](#); [Chung, 2015](#); [Hamedi et al., 2019](#); [Nock et al., 2009](#); [Nock et al., 2010](#)). In addition, researchers are currently studying whether machine learning algorithms, which can combine and weigh risk factors, might support assessment of suicidal risk with greater accuracy than current approaches ([American Psychological Association, 2016](#); [Franklin et al., 2017](#); [Just et al., 2017](#); [McCoy et al., 2016](#)).

Summary of Risk Factors for Suicide

- **Demographic:** male; widowed, divorced, or single marital status, particularly for men; LGBTQ+; American Indian/Alaskan Native; Non-Hispanic White; 45-54 years old; unemployment; occupational status.
- **Suicidal history:** current suicidal ideation, intent, plan, or attempt; history of prior suicide attempts, aborted/interrupted suicide attempts or self-injurious behavior.
- **Family history and neurobiology:** family history of suicide, attempts or Axis I psychiatric disorders, especially if they required hospitalization; history of sexual/physical abuse, neglect, parental loss; childhood adversity; neurobiology.
- **Precipitants/stressors/interpersonal:** triggering events leading to humiliation, shame or despair (e.g., loss of relationship, financial or health status—real or anticipated); intoxication; family turmoil/chaos.
- **Current and past psychiatric disorders:** especially mood disorders, psychotic disorders, alcohol/substance abuse, ADHD, TBI, PTSD, Cluster B personality disorders, conduct disorders (antisocial behavior, aggression, impulsivity); co-morbidity and recent onset of illness increase risk.
- **Key symptoms:** anhedonia, impulsivity, hopelessness, psychic pain, severe anxiety or panic, global insomnia, command auditory hallucinations.
- **Change in treatment:** discharge from psychiatric hospital, clinician or treatment change.
- **Physical illness:** especially those with pain and functional impairment.
- Access to firearms and other lethal means
- **Psychological/cognitive dimensions:** thought constriction, polarized thinking, perfectionism, incapacity for reality testing, inability to tolerate rejection, decreased self-esteem, psychological turmoil, intolerable mental pain, burdensomeness.
- **Behavioral dimensions:** impulsivity, aggression, severe anxiety, panic attacks, agitation, intoxication, prior suicide attempt.
- **Psychosocial situation:** social isolation/disconnectedness, severe interpersonal crises, acute change in financial situation, living in a remote location.

(Adapted from [SAFE-T, 2009](#))

Protective Factors

Protective Factors

- Children in the home
- Sense of responsibility to family
- Pregnancy
- Religiosity
- Life satisfaction
- Reality testing ability
- Positive coping skills
- Positive problem-solving skills
- Positive social support
- Positive therapeutic relationship

([APA, 2003](#))

Protective factors are those factors that decrease the likelihood of suicide. Some protective factors for suicide are listed in the box to the left.

Connection to significant others is a protective factor. These significant others can be loved ones, friends, or family. Unfortunately, a patient's support system can also be paradoxical, and may also be the cause of stress.⁴

Researchers have examined the concept of resiliency with respect to suicidality. Resiliency in regards to suicidality has been defined as “the ability, perception or set of beliefs which buffers individuals from the development of suicidality in the face of risk factors or stressors” ([Johnson](#)

[et al., 2011, p. 564](#)). Resiliency has also been defined as a positive outcome in the face of adversity. Lundman et al. ([2007](#)) identified five characteristics of resilient individuals; a balanced perspective of life, a sense of purpose in life, the ability to keep going despite setbacks, the belief in one’s self and capabilities, and a recognition of one’s unique path and the acceptance of one’s life.

Protective factors may buffer individuals from suicidal thoughts and behaviors. However, it must be emphasized that protective factors have not been studied as rigorously as risk factors and, even if present, may not counteract acute suicide risk ([CDC, 2019](#); [SAFE-T](#)).

Suicide Screening Instruments and Rating Scales

The words “screening” and “assessment” are not synonymous nor interchangeable. “Screening” is a method for identifying those who may be at increased risk for a specific condition or disorder (which in this case would be suicide attempts or completion) and who could benefit from further evaluation and/or intervention. Screening is generally brief and

⁴ In fact, a recent study of suicide risk in US Army soldiers found that while some participants identified their romantic relationship as a reason for living, others identified it as a reason for dying, and still others identified it as both a reason for living and dying. The authors state that this latter finding “indicates the ambivalent nature of suicidal thinking where romantic relationships can serve as both trigger for suicide risk as well as a deterrent to suicide” ([Chalker et al., 2022, p. 5](#)).

narrow in scope. An “assessment,” on the other hand, is more comprehensive than a screening. An assessment provides a more complete clinical picture of an individual, aiding in the development of a diagnosis and a treatment plan. Assessments may include screening instruments, but these screening measures and rating scales are used in conjunction with other information from the assessment, so that there is a broader context for interpreting the results.

There are a number of rating scales, both self-reported and clinician-administered, that are purported to measure suicidal thoughts, behaviors, and/or symptoms. In 2003, the APA Work Group analyzed a few of these rating scales (e.g., Scale for Suicide Ideation, Suicide Behavior Questionnaire, Suicide Intent Scale, Reasons for Living Inventory) and found them to be reliable and to have adequate concurrent validity. However, the general impression was that although the rating scales that were available at that time may have application in research settings, their usefulness and generalizability to clinical settings was limited to such things as tracking clinical symptoms over time or assisting clinicians in the development of a more thorough line of questioning regarding suicidality ([APA, 2003](#)).

In the past ten years, some new rating scales have been developed, the most notable of which is the Columbia Suicide Severity Rating Scale (C-SSRS) ([Posner et al., 2011](#)). The authors sought to develop a single standardized measure that assesses both suicidal ideation and behavior for clinical trials, an instrument that had been lacking in the field to date. The C-SSRS was specifically designed to differentiate suicidal ideation from various suicidal behaviors. Four constructs are measured: 1) severity of ideation; 2) intensity of ideation; 3) suicidal behavior (actual, aborted, and interrupted attempts; preparatory behavior; and non-suicidal self-injury); and 4) lethality (actual and potential). The inclusion of both interrupted attempts (not just actual attempts) and preparatory behavior in the C-SSRS scale was based on studies showing both to be associated with, but not predictive of, subsequent suicides ([Posner et al., 2011](#)).

In a 2011 paper, Posner and colleagues discussed the C-SSRS’s convergent validity, divergent validity, predictive validity, sensitivity, specificity, sensitivity to change, and the internal consistency of its intensity subscale. The team points out that other indices of reliability could not be examined because of the study design, but that the C-SSRS’s interrater reliability has been demonstrated in previous studies (e.g., [Mundt et al., 2010](#)). Posner’s team concludes in the article that the C-SSRS is suitable for the assessment of suicidal ideation and behavior in both clinical and research settings. In 2012, the Food and Drug Administration made the C-SSRS the “gold standard” for the assessment of suicidal ideation and behavior in clinical trials.

Currently some hospitals and healthcare facilities are using the C-SSRS as a risk assessment tool in making decisions about admission and level of privileges. However, clinical decisions about level of risk, privileges, and appropriate treatment setting can be complicated in that there are high risk patients that can present without suicidal ideation or behavior, or their level of ideation and/or behavior would not reach critical thresholds identified in the C-SSRS. Thus, a suicide risk assessment that includes other risk factors can increase the likelihood that false negatives will be minimized and that the quintessential judgment of suicide risk will be the ultimate determinate for clinical decision making ([Fochtman & Jacobs, 2015](#); [Mournet et al., 2021](#)).

As of July 2019, the Joint Commission, which certifies and accredits healthcare organizations and programs in the United States, requires all patients age 12 or above who are being evaluated or treated for behavioral health conditions in an accredited facility be screened for suicidal ideation using a validated screening tool. They do not require universal screening nor a specific instrument ([Joint Commission, 2019](#)). Their list of examples of [validated, evidence-based suicide risk screening tools](#) includes the C-SSRS, ED Safe Secondary Screener, the PHQ-9, the Patient Safety Screener, the TASR Adolescent Screener, and the ASQ Suicide Risk Screening Tool. It should be noted that the ASQ suicide risk screening tool may have the advantage of being validated on both adults and youth (aged 10-21) in addition to adult medical inpatients ([Horowitz et al., 2020](#)).

The Joint Commission requires using an evidence-based process to conduct a suicide risk assessment of individuals who have screened positive for suicidal ideation by directly asking about suicidal ideation, plan, intent, suicidal or self-harm behaviors, risk factors, and protective factors. While the use of validated tools is strongly encouraged by the Joint Commission, they state that “it is acceptable for organizations to modify questions to use language that is more appropriate for their patient population... Organizations are also not required to use a checklist of risk factors and protective factors that are part of some assessment tools; this can be evaluated as part of the usual clinical evaluation.” ([Joint Commission, 2019](#)). Their list of examples of [validated, evidence-based assessment tools](#) includes the [SAFE-T protocol with the C-SSRS](#).

The Veteran Health Administration’s newly released guidelines recommend screening for suicide risk, but they do not recommend a specific instrument, as their review of the evidence did not identify a specific instrument or method that could reliably determine risk level. They recommend instead that clinicians use several methods to evaluate suicide risk—e.g., self-report measures combined with clinical interviews ([Sall et al., 2019](#); [USVA & DOD, 2019](#)).

Examples of Suicide Screening and Assessment Instruments

- Suicide Assessment Five-Step Evaluation and Triage ([SAFE-T](#))
- Columbia Suicide Severity Rating Scale ([C-SSRS](#))
- Ask Suicide Screening Questions Screening Tool ([ASQ](#); [validated for youth aged 10-21 as well as adults](#))
- Beck Scale for Suicidal Ideation ([Beck et al., 1988](#))
- Risk-Rescue Rating Scale ([RRRS](#))
- [ED-SAFE](#) Patient Safety Screener ([PSS-3](#); [for Emergency Department use](#))

The Suicide Inquiry

The suicide inquiry begins with questions that address the patient’s thoughts and feelings about living and dying. Depending upon the responses to these questions, they may lead to specific questions about suicidal thoughts, plans, behaviors, and intent. Again, if there are

affirmative responses to suicidal thoughts, understanding the frequency, intensity, and duration of suicidal thinking in the last 48 hours—as well as the worst or most intense ideation ever experienced, including lethal ideation (e.g., jumping, hanging, or shooting)—can be useful in determining the patient’s propensity towards suicide.

It is known that asking about suicidal ideation does not ensure that accurate or complete information will be received. Busch and colleagues ([2003](#)) found in a study of 76 inpatient hospital suicides that 78% denied suicidal ideation at their last communication with staff. If the clinical presentation seems inconsistent with an initial denial of suicidal thoughts (e.g., if depressive symptoms—especially anhedonia, anxiety, and insomnia—are severe and still present), then additional questioning as to why the patient does not feel suicidal may be indicated. Asking additional questions about the client’s reasons for living and what has changed or improved ([Linehan et al., 1983](#)), as well as questions regarding the patient’s past experience with suicidal ideation and what change in conditions would lead them to feel suicidal, can be useful.

If suicidal ideation is present, asking about the specific plans for suicide and whether any steps have been taken to enact the plans or prepare for death, can help determine the severity of suicidal ideation. Inquiry about the timing, location, and lethality of the plan as well as the availability of means, particularly firearms, can add additional information. The clinician can assess the extent to which the client expects to carry out the plan and whether the client believes the plan to be lethal as opposed to self-injurious.

In recent years, there has been increasing attention to understanding the suicidal individual’s reasons for dying, in addition to their reasons for living. Not surprisingly, highly suicidal individuals are more likely to report reasons for dying than reasons for living. A recent prospective study of suicide attempters found that baseline depression, baseline suicidal ideation, along with the number of reasons for dying were correlated with repeat suicide attempts up to 12 months later ([Brüderl et al., 2018](#)), which highlights the importance of probing for reasons why one wants to end one’s life and using their specific responses to guide assessment and treatment.

Studies show that the severity of suicidal ideation at its worst point can also have clinical relevance. These findings suggest that it can be valuable for clinicians to ask patients about the severity of past suicidal ideation, in addition to the current level of suicidal ideation ([Beck et al., 1999](#)).

In addition, if there is a history of past attempts, understanding the precipitants, timing, intent, method, and consequences of these suicidal behaviors and actions, can help determine the seriousness of a patient’s suicidality. Suicidal behaviors and/or ideation occur in the context of one’s life, and awareness of that context can be helpful when assessing for risk and determining a treatment plan.

In terms of alcohol and substance use, understanding whether or not the suicidality occurred in association with intoxication or acute/chronic use of alcohol or other substances can be significant. Studies have shown that individuals with alcohol dependence have a nine-fold increased risk of suicide, and that acute use of alcohol in the final hours of life confers an even greater risk for suicide attempt and suicide than the risk attributable to chronic alcohol use alone. Alcohol has been found in the blood of 25-50% of suicide victims ([APA, 2003](#)). In

another sample, 24% of male and 17% of female suicide decedents were found to be intoxicated at the time of death ([Kaplan et al., 2013](#)).

The American Psychiatric Association's ([2003](#)) *Practice Guideline for the Assessment and Treatment of Patients With Suicidal Behaviors* compiled a list of questions that may be helpful when inquiring about specific aspects of suicidal thoughts, plans, or behaviors. Table 3 from the APA Guideline is reproduced below. Additional areas of inquiry can include questions about feeling like a burden, lack of fear of death, and psychic pain.

Table 3. Questions That May Be Helpful in Inquiring About Specific Aspects of Suicidal Thoughts, Plans, and Behaviors

Begin with questions that address the patient's feelings about living

- Have you ever felt that life was not worth living?
- Did you ever wish you could go to sleep and just not wake up?

Follow up with specific questions that ask about thoughts of death, self-harm, or suicide

- Is death something you've thought about recently?
- Have things ever reached the point that you've thought of harming yourself?

For individuals who have thoughts of self-harm or suicide:

- When did you first notice such thoughts?
- What led up to the thoughts (e.g., interpersonal and psychosocial precipitants, including real or imagined losses; specific symptoms such as mood changes, anhedonia, hopelessness, anxiety, agitation, psychosis)?
- How often have those thoughts occurred (including frequency, obsessional quality, controllability)?
- How close have you come to acting on those thoughts?
- How likely do you think it is that you will act on them in the future?
- Have you ever started to harm (or kill) yourself but stopped before doing something (e.g., holding knife or gun to your body but stopping before acting, going to edge of bridge but not jumping)?
- What do you envision happening if you actually killed yourself (e.g., escape, reunion with significant other, rebirth, reactions of others)?
- Have you made a specific plan to harm or kill yourself? (If so, what does the plan include?)
- Do you have guns or other weapons available to you?
- Have you made any particular preparations (e.g., purchasing specific items, writing a note or a will, making financial arrangements, taking steps to avoid discovery, rehearsing the plan)?
- Have you spoken to anyone about your plans?
- How does the future look to you?
- What things would lead you to feel more (or less) hopeful about the future (e.g., treatment, reconciliation of relationship, resolution of stressors)?
- What things would make it more (or less) likely that you would try to kill yourself?

- What things in your life would lead you to want to escape from life or be dead?
- What things in your life make you want to go on living?
- If you began to have thoughts of harming or killing yourself again, what would you do?

For individuals who have attempted suicide or engaged in self-damaging action(s), parallel questions to those in the previous section can address the prior attempt(s). Additional questions can be asked in general terms or can refer to the specific method used and may include:

- Can you describe what happened (e.g., circumstances, precipitants, view of future, use of alcohol or other substances, method, intent, seriousness of injury)?
- What thoughts were you having beforehand that led up to the attempt?
- What did you think would happen (e.g., going to sleep versus injury versus dying, getting a reaction out of a particular person)?
- Were other people present at the time?
- Did you seek help afterward yourself, or did someone get help for you?
- Had you planned to be discovered, or were you found accidentally?
- How did you feel afterward (e.g., relief versus regret at being alive)?
- Did you receive treatment afterward (e.g., medical versus psychiatric, emergency department versus inpatient versus outpatient)?
- Has your view of things changed, or is anything different for you since the attempt?
- Are there other times in the past when you've tried to harm (or kill) yourself?

For individuals with repeated suicidal thoughts or attempts

- About how often have you tried to harm (or kill) yourself?
- When was the most recent time?
- Can you describe your thoughts at the time that you were thinking most seriously about suicide?
- When was your most serious attempt at harming or killing yourself?
- What led up to it, and what happened afterward?

For individuals with psychosis, ask specifically about hallucinations and delusions

- Can you describe the voices (e.g., single versus multiple, male versus female, internal versus external, recognizable versus nonrecognizable)?
- What do the voices say (e.g., positive remarks versus negative remarks versus threats)? (If the remarks are commands, determine if they are for harmless versus harmful acts; ask for examples)?
- How do you cope with (or respond to) the voices?
- Have you ever done what the voices ask you to do? (What led you to obey the voices? If you tried to resist them, what made it difficult?)
- Have there been times when the voices told you to hurt or kill yourself? (How often? What happened?)

- Are you worried about having a serious illness or that your body is rotting?
- Are you concerned about your financial situation even when others tell you there's nothing to worry about?
- Are there things that you've been feeling guilty about or blaming yourself for?

Consider assessing the patient's potential to harm others in addition to him- or herself

- Are there others who you think may be responsible for what you're experiencing (e.g., persecutory ideas, passivity experiences)?
- Are you having any thoughts of harming them?
- Are there other people you would want to die with you?
- Are there others who you think would be unable to go on without you?

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Suicide Safety Assessment: Lessons Learned from the National Suicide Prevention Lifeline

One of the most difficult challenges is to make an assessment of suicide risk via telephone contact, chat, or text, when one cannot observe the individual's appearance or other behaviors. Perhaps even more challenging is assessing suicide risk and safety when someone is not calling on their own behalf, but out of concern for another person. Questions are often raised about how to improve the quality of such risk assessments. This issue has become particularly relevant given the rise in telephone and telehealth contacts during the COVID-19 pandemic.

The National Suicide Prevention Lifeline grew out of a network of crisis call centers established by the Substance Abuse and Mental Health Services Administration (SAMHSA) in 2001. One of its many goals has always been to ensure a high quality of service to callers in order to better assess suicide risk and provide crisis intervention ([Joiner et al., 2007](#)). A number of studies have been conducted on the effectiveness of the National Suicide Prevention Lifeline. Research projects led by Gould and Kalafat, for example, have shown that by the end of the call, the majority of Lifeline callers feel less emotional stress and less suicidal. Data from nearly 3000 callers shows that intent to die, hopelessness, and psychological pain were significantly reduced by the end of the call ([Gould et al., 2007](#); [Kalafat et al., 2007](#)).

A certification and training subcommittee reviewed research and field practices to assess the quality of the National Suicide Prevention Lifeline. Gould and colleagues ([2013](#)) examined data from 1507 monitored calls to the Lifeline, focusing on crisis counselors' training and practices across the network. The results showed that callers felt significantly more hopeful and less depressed, less suicidal, and less overwhelmed by the end of calls handled by Lifeline counselors who had been trained in the LivingWorks' Applied Suicide Intervention Skills Training ([ASIST](#)).

In 2013, the Lifeline established a chat line to supplement its telephone service. The thought was that young people may be more comfortable discussing suicidal feelings via text. A large study of 13,130 individuals who used the chat line found that two-thirds of chatters reported that the chat intervention was helpful and nearly half (45%) reported that they felt less suicidal at the end of the chat ([Gould et al., 2021](#)).

From empirical research such as this, Joiner and colleagues ([2007](#)) identified the most important data to collect during a telephone or other crisis contact. This information includes: 1) suicidal desire, 2) suicidal capability, 3) suicidal intent, and 4) buffers against suicide (referred to elsewhere as protective factors). Each of these areas will be discussed in turn below.

Suicidal Desire

- Suicidal ideation with or without homicidal ideation
- Psychological pain
- Hopelessness
- Helplessness
- Perceived burden on others
- Feeling trapped
- Feeling intolerably alone

(Joiner et al., 2007)

Suicidal Desire

In addition to wanting to kill self, suicidal desire could include feelings such as wanting to kill others, intense psychological pain, hopelessness, helplessness, feeling like a burden on others, feeling trapped, and feeling intolerably alone. Suicidal desire is more common in the general population than appreciated, not just those calling suicide hotlines (Kessler et al., 2005; Joiner et al., 1997; Joiner et al., 2007). It becomes more concerning when it occurs in combination with suicidal capability and intent (Joiner et al., 2007).

Suicidal Capability

Suicidal capability is comprised of a number of components, as listed in the table below. Joiner et al (2007) summarizes them as follows “a sense of fearlessness to make an attempt; a sense of competence to make an attempt, availability of means to and opportunity for an attempt; specificity of plan for attempt, and preparations for attempt.” (p. 358). Of these components, “fearlessness” regarding suicide is perhaps most alarming and can increase risk substantially. “Serious suicidal behavior is by definition fearsome and is often painful; many studies show that it is this fearsomeness that prevents many people from acting on suicidal ideas” (Joiner et al., 2007, p. 358).

Suicidal Capability

- History of suicide attempts
- History of/current violence to others
- Exposure to someone else’s death by suicide
- Availability of means of suicide
- Current intoxication or tendency toward future intoxication
- Substance abuse
- Acute symptoms of mental illness*

* *Recent dramatic mood change; out of touch with reality, extreme rage, increased agitation, decreased sleep*

(Joiner et al., 2007)

Suicidal Intent

- Attempt in progress
- Plan to kill self/other (method unknown or any method)
- Preparatory behaviors
- Expressed intent to die

([Joiner et al., 2007](#))

Suicidal Intent

Suicidal intent also consists of various components, including plan or attempt in progress, preparatory behavior, and expressed intent to die. One of the clearest indicators of intent is a plan or attempt in progress, as it means that the attempt is already underway. Preparatory behaviors are “behavioral expressions of imminent plans” and include giving away possessions and obtaining the means ([Joiner et al., 2007](#)). Intent to die is correlated with increased lethality ([Brown et al., 2002](#); [Joiner et al., 2007](#)). In

fact, as noted earlier, “intent to die” assessed at the end of the Lifeline call was frequently found to be associated with subsequent suicidality ([Gould et al., 2007](#); [Kalafat et al., 2007](#)).

Buffers/Protective Factors

However, even in those with intent to die, there is almost always a will to live. Edwin Shneidman, the founder of the field of suicidology and one of the founders of the first suicide crisis center (the Los Angeles Suicide Prevention Center), refers to this as “ambivalence” ([Shneidman, 1985](#)). It is this will to live, that along with other such buffers, can help mitigate against the likelihood of a suicide attempt. Clinically, acknowledging the side that wants to die, but allying with the side that wants to live, can be therapeutically beneficial ([Jacobs, 1989](#)).

Buffers against suicide and protective factors are listed in the table below. These buffers include not only ambivalence, but also social support, reasons for living (e.g., children, future plans, life goals), and other measures of connectedness. It must be stressed, however, that people die by suicide even in the presence of protective factors. Thus, it is important to keep in mind that *callers can be at high risk for suicide regardless of whether or not there are buffers present, if there is desire, capability, and intent* ([Joiner et al., 2007](#)).

Joiner and colleagues ([2007](#)) also list “engagement with a helper” (e.g., telephone worker) as a potential buffer. In a recent study, Gould and colleagues ([2017](#)) looked at the benefits of the SAMHSA-funded initiative to provide follow-up calls to Lifeline callers who reported suicidal ideation or “desire.” Many of those who received the calls reported that the follow up intervention stopped them from killing themselves and kept them safe. Callers said the follow up gave them hope, made them feel cared about, and helped them connect to further mental health resources. Those who were assessed at higher risk of suicide at the time of their calls to the Lifeline found the follow-up intervention to be more valuable than those deemed to be at lower risk.

Buffers/Protective Factors

- Ambivalence for living/dying
- Immediate supports
- Social supports
- Planning for the future
- Engagement with helper
- Core values/beliefs
- Sense of purpose

([Joiner et al., 2007](#))

A suicide risk assessment that covers all four of these facets cannot always be conducted, nor is it even appropriate for some callers or patients. However, asking about current suicidal desire is a useful stand-alone topic of inquiry. And if the caller denies current suicidal desire, clinicians can ask about recent suicidal ideation and previous suicide attempts. Asking about previous suicidal attempts also allows the clinician to engage the caller in a discussion about what happened before, during, and after previous attempts, which can shed light on the caller's coping skills, reasons for living, and awareness of resources available ([Joiner et al., 2007](#)).

Psychodynamic Perspective

The psychodynamic assessment of suicide risk is primarily based on the theories of Stekel, Freud, and Menninger, who viewed suicide in the following ways:

- Stekel: No one kills himself who has not harbored murderous wishes against another (Stekel, 1910)
- Freud: A death wish against others redirected towards self; anger turned inward (Litman, 1970)
- Menninger: Interplay of three internal motives ([Menninger, 1938](#)):
 - Wish to kill (murder-suicide)
 - Wish to be killed (guilt)
 - Wish to die (escape)

Psychodynamic thinking regarding suicide is also based on the theory that suicide is a wish to escape from unbearable, intolerable mental pain (e.g., [Hendin et al., 2004](#); [Maltzberger, 1988](#); [2004](#); [Maltzberger et al., 2011](#); [Michel et al., 1994](#); [Orbach et al., 2003](#); M. Schechter, personal communication, July 18, 2021; [Shneidman, 1993](#)). A significant amount of research supports this view (e.g., [Hendin et al., 2004](#); [Michel et al., 1994](#)).⁵ A recent article based on 2015 data from the CDC includes admonitions for clinicians to pay careful attention to expressions of psychological pain, regardless of whether or not the patient meets full criteria for a psychiatric diagnosis ([Pompili, 2020](#)).

"Clinicians must keep as careful track of their response to the patient as they do of his to them. The patient may not look depressed; indeed, he may state that he is happy and content. But we notice a lagging of our own mood in his presence, a little despair or turning away. Perhaps it is late in the afternoon, or perhaps we are running behind in our appointments, but perhaps it is none of these things. Feelings are contagious. The clue of our own response may be the only clue to depression and should be enough to energize the search in other areas, and to review more carefully the patient's recent experience, the state of his relationships, or disappointments in life and work." ([Havens, 1999, p. 217](#))

⁵ The "inescapable affective experience" that drives suicides has been described in the literature by a variety of terms, including: "desperation," "anguish," "mental pain," "psychache," and "annihilation anxiety" (M. Schechter, personal communication, July 18, 2021).

Personality Structure and Development

Psychodynamic theory also sees suicide as intimately bound with the development of the self and self-esteem. Low self-esteem is associated with suicide, whereas personality strength/resilience—including the ability to "bounce back" from disappointment and the ability to tolerate depressive/painful affects—is protective against suicide.

The late John Mack, M.D., Professor of Psychiatry at Harvard Medical School, Chief of the Department of Psychiatry at Cambridge Hospital, and an expert on teenage suicide, wrote that loss of the "ego-ideal" could be a cause of suicide.

In a 1981 book, [*Vivienne: The Life and Suicide of an Adolescent Girl*](#), Mack and Hickler wrote:

"Ego-ideal—a crucial agency in the regulation of self-esteem, which takes form in early adolescence...The ideal is always a great strain to live up to. Some consider the loss of it a cause for suicide. A structure in the personality that connects the self with other human beings and provides a link between self and society. We may repair or redeem early hurts and disappointments if we can create a world for ourselves which approximates a model of the vision contained in the ego-ideal."

"When I set myself the task of bringing to light what human beings keep hidden within them, not by the compelling power of hypnosis, but by observing what they say and they show, I thought the task was a harder one than it really is. He that has eyes and ears to hear may convince himself that no mortal can keep a secret. If his lips are silent, he chatters with his fingertips; betrayal oozes out of him at every pore. And thus the task of making conscious the most hidden recesses of the mind is one which it is quite possible to accomplish." (Freud, 1905)

Psychodynamic Assessment of Suicide Risk

By Glen O. Gabbard, M.D.

The psychodynamic assessment of suicide risk includes a detailed search into current relationships, stressors in the environment, losses, and injuries to one's self-esteem ([Gabbard, 2014](#)). Specific psychodynamic themes involved with suicidality can be considered. Is their anger turned inward? Does the patient feel that destructiveness or greed have harmed others who are loved? Is there a strong perfectionistic streak that leaves the patient feeling hopeless about achieving some impossible goals? Is there an unrelenting superego that makes them feel they are never able to perform at their best level? Have they experienced a painful loss of someone who was loved? Have they experienced a recent narcissistic injury that is extraordinarily shame-inducing? Is there someone the patient wants to "get back at" associated with intense grievances ([Menninger, 1933](#))?

Clinicians can empathize with the painfulness of the patient while also enlisting the patient's help in a collaborative search for its underlying causes. Careful listening and empathizing are strategies that facilitate important connection ([Havens, 1965](#)).

In addition to listening, the professional who is assessing patients for suicide can also look for nonverbal indicators of suicidality. For example, how a patient answers the question, "Are you thinking about suicide?" may provide highly relevant information. If there is a long pause, and the patient finally responds with a succinct "no," further inquiry may be needed. Conversely, if the patient is too vigorous in denying any risk, one can probe further into what may be an automatic denial. A straightforward confrontation, such as "Are you really telling me the truth?" can sometimes be powerful and lead to an acknowledgment that there is more to the story.

Countertransference is a common issue in evaluations of suicidality ([Maltzberger & Buie, 1974](#)). Clinicians who are aware of their own internal state as they are monitoring the patient's condition can reduce a potential barrier to the challenging task of the assessment of suicide risk.

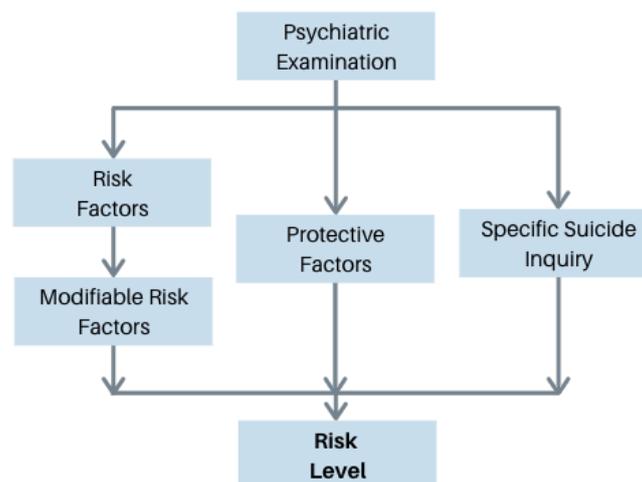
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Determination of Risk Level and Intervention

Mental health clinicians use clinical judgment to determine a patient’s level of suicide risk and the corresponding intervention.

Persons who may be considered to be at high risk for suicide include those who have made a potentially lethal suicide attempt and/or who have a strong intent to die. High risk patients usually have one or more psychiatric disorders or may have experienced an acute precipitating event. In contrast, those deemed to be at low risk for suicide may have thoughts of death, but no plan, intent, or self-injurious behavior. Low risk patients often have modifiable risk factors, strong protective factors, and are engaged in ongoing treatment (Jacobs, 2016).

Clinical judgment regarding the overall level of risk and appropriate intervention also includes assessing the patient’s cognitive capacity and reasoning, ability to control impulses, and willingness to accept and adhere to treatment. The clinician may take into account the acuteness or chronicity of the patient’s suicidal status and their ability to sustain or form a therapeutic alliance (Jacobs et al., 1999). A recent systematic review has shown that a strong therapeutic alliance is associated with fewer suicidal thoughts and self-harming behaviors (Dunster-Page et al., 2017).



Through his research on the National Suicide Prevention Lifeline, Joiner and colleagues (2007) identified key factors for determining risk level through telephone contact. In their framework, risk level is based on the presence or absence of four factors – suicidal desire, suicidal capability, suicidal intent, and the presence or absence of buffers/protective factors:

High Risk	Moderate to High Risk	Moderate to Low Risk
All three core factors are present.	Desire paired with intent or capability.	Any core factor presenting alone.
<i>Risk remains high despite absence/presence of protective factors.</i>	Absence/presence of buffers may raise or lower risk.	Absence/presence of buffers may raise or lower risk.

Documentation

The final step in a suicide assessment is *documentation*. Although documentation is usually thought of as a risk management issue, it allows communication about a patient's clinical status between shifts and to other disciplines. It also allows communication of changes in a patient's risk level that can inform the treatment plan.

When to Document Suicide Risk Assessments

- At first psychiatric assessment or admission
- With the occurrence of any suicidal behavior or ideation
- Whenever there is any noteworthy clinical change
- Before increasing privilege level
- Before giving passes
- Before discharge

The Joint Commission, an independent, non-profit agency which accredits health care programs and organizations throughout the United States, views documentation as a means to improve patient safety. In 2018, they published a 262-page “Go-To Guide” titled “[Documentation of Care, Treatment or Services in Behavioral Health Care: Your Go-To Guide](#).” To view a sample of this guide, [click here](#). It is important to note that the Joint Commission does not require nor recommend that facilities under their purview use any specific format for suicide risk assessments ([Joint Commission, 2021](#)).

Treatment Setting and Hospitalization

This section discusses selecting a treatment setting for at-risk patients, including situations where hospital admission may be warranted. The information is from Table 8 of the American Psychiatric Association's *Practice Guideline for the Assessment and Treatment of Patients with Suicidal Behaviors* (APA, 2003).

Admission is generally indicated...

...after a suicide attempt or aborted/interrupted attempt if:

- Patient is psychotic
- Attempt was violent
- Precautions were taken to avoid rescue or discovery
- Persistent plan and/or intent is present
- Distress is increased or patient regrets surviving
- Patient is male, older than 45 years, especially with new onset of psychiatric illness or suicidal thinking
- Patient has limited family and/or social support, including lack of stable living situation
- Current impulsive behavior, severe agitation, poor judgment, or refusal of help is evident

...in the presence of suicidal ideation with:

- Specific plan with high lethality
- High suicidal intent

Admission may be necessary...

...after a suicide attempt or aborted/interrupted attempt, except in circumstances for which admission is generally indicated.

...in the presence of suicidal ideation with:

- Psychosis
- Major psychiatric disorder
- Past attempts, particularly if medically serious
- Lack of response to or inability to cooperate with partial hospital or outpatient treatment
- Need for supervised setting for medication trial or ECT
- Need for skilled observation, clinical tests, or diagnostic assessments that require a structured setting
- Limited family and/or social support, including lack of stable living situation

- Lack of an ongoing clinician-patient relationship or lack of access to timely outpatient follow-up

...in the absence of suicide attempts or reported suicidal ideation/plan/intent, but evidence from the psychiatric evaluation and/or history from others suggest a high level of suicide risk and a recent acute increase in risk.

Outpatient treatment may be more beneficial than hospitalization...

...if patient has chronic suicidal ideation and/or self-injury without prior medically serious attempts, and if a safe and supportive living situation is available and outpatient psychiatric care is ongoing.

Immediate Safety Needs of Hospitalized Patients

Hospitals have their own procedures for applying these principles of suicide assessment and determining the safety needs of their patients. Typically, once a patient is admitted to the hospital for suicidality, an initial psychiatric evaluation with a suicide risk assessment will determine the observation level. The monitoring of the suicidal patient includes a range of frequency of observation from continuous observation (1:1) to 5-, 15-, or 30-minute checks. In the hospital setting, there are also different categories of restriction, such as supervised bathroom use, restriction to the unit or to public areas, supervised sharps, and placement in hospital clothing. The levels of observation and restriction depend upon the level of risk assessed at the time and is subject to change based upon the clinical condition of the patient ([Jacobs, 2007](#)).

The initial level of observation/restrictions and changes in the level require a physician order. The order may be verbal and is signed within a certain period of time. Nursing staff may institute 1:1 observation when there are clinical indications (e.g., overt or covert expressions of suicidal ideation, actions, or aggressive behavior). Reduction of 1:1 usually occurs after evaluation by a physician. The attending/covering physician is notified and an order is issued.

Patient monitoring on a psychiatric unit involves conducting checks or observations at a clinically appropriate frequency, restricting the patient to safe areas when indicated, and supervising potentially dangerous activities (e.g., shaving, eating with utensils), again, when clinically indicated.

Treatment



Photo credit: Rudamese/Pixabay

Current evidence-based treatments for reducing suicide risk include medication, brain stimulation techniques, and psychotherapy. Some newer treatments can be very helpful for those who have been struggling with depression that has not responded to other treatments or who need rapid treatment intervention. As all treatments can have side effects, clinicians use a risk-benefit estimation to inform treatment.

Medication

Antidepressants

The FDA has approved many medicines for treatment of depression, notably the antidepressants. Antidepressants can reduce suicidal thoughts in patients as depression improves, but they require time to take effect. Most patients experience significant improvement within three months of antidepressant treatment, usually with some benefit within the first month. Antidepressants must be taken consistently and at adequate doses.

Common Reasons Patients May Not Experience Improvement with Antidepressant Treatment

- The drug was not suited for this person, who needs a different kind of medication
- Not taking the medication at the right time or doses
- An additional therapy is required (e.g., psychotherapy, ECT, rTMS, ketamine, lithium, or antipsychotic).

The currently most frequently prescribed antidepressants are selective serotonin reuptake inhibitors (SSRIs). They are effective, have a favorable side-effect profile, and are unlikely to be lethal on overdose. Examples include citalopram (Celexa), escitalopram (Lexapro), fluoxetine (Prozac), paroxetine (Paxil), and sertraline (Zoloft).

Other types of antidepressants include serotonin and noradrenaline reuptake inhibitors (SNRIs; e.g., duloxetine, levo-milnacipran, and venlafaxine), tricyclics (e.g., amitriptyline, desipramine, imipramine, and nortriptyline), monoamine oxidase inhibitors (MAOIs; such as

phenelzine and tranylcypromine) and some with other action mechanisms (e.g., bupropion and mirtazapine).

There is inconsistent evidence about effects of antidepressant treatment and suicidal risks. One would expect that treatments that are effective for depression should reduce suicidal risk. However, compelling evidence of reduction of rates of suicide attempt and suicide during antidepressant treatment is lacking, although suicidal ideation typically decreases, usually along with improvement of other symptoms of depression ([Gibbons et al., 2012](#)).

Moreover, the FDA requires all antidepressants to carry a black-box (severe) warning that persons under age 25 years may experience new or increased thoughts of suicide, especially when first starting treatment. Monitoring of suicidal status in patients taking an antidepressant is important, not only to detect early clinical changes that may include increased suicidal risk, but also because antidepressants can unmask previously undiagnosed bipolar disorder, which requires a different treatment approach. Patients and, when indicated, parents/significant others, are apprised of this warning when this communication is documented. The warning applies to any medication approved as an antidepressant [e.g., quetiapine (Seroquel), cariprazine (Vraylar)].

Antianxiety Agents

Since anxiety is a modifiable risk factor for suicide, use of antianxiety agents may decrease this risk. More specifically, in the presence of depression, acute suicidal risk may be associated with psychic anxiety, panic attacks, agitation, and insomnia ([Fawcett et al., 1990](#)). These symptoms might be reduced by short-term benzodiazepine treatment (1–4 weeks). However, research on suicide risk with antianxiety treatment is very limited, and findings from randomized, controlled trials are lacking. To minimize severe recurrent or rebound anxiety or agitation, long-acting benzodiazepines may be preferable to short-acting ones, although long-acting benzodiazepines are more likely to cause daytime sedation. Persistent, severe insomnia is also a modifiable risk factor for suicide and can be addressed with the use of a benzodiazepine, a sedating second-generation antipsychotic ([Londborg et al., 2000](#); [Smith et al., 2002](#); [Smith et al., 1998](#)), or a sedating antidepressant, such as mirtazapine ([APA, 2003](#)).

In treating potentially suicidal patients, benzodiazepines are sometimes avoided because of concerns about their potential for inducing dependency ([Salzman, 1998](#)), respiratory depression, or behavioral disinhibition. Such adverse responses have occurred among patients with borderline personality disorder or cognitive dysfunction ([Cowdry & Gardner, 1988](#); [Dietch & Jennings, 1988](#); [Gardner & Cowdry, 1985](#); [Kalachnik et al., 2002](#); [O'Sullivan et al., 1994](#)). Nevertheless, the risk of such adverse effects appears to be small ([Rothschild et al., 2000](#)). Since benzodiazepines can limit psychic distress in depressed patients and improve sleep, they can potentiate clinical benefits of antidepressant treatment ([Londborg et al., 2000](#); [Joughin et al., 1991](#); [Smith et al., 1998](#); [Smith et al., 2002](#)). In general, decisions about initiating or continuing benzodiazepines in suicidal patients will address the preceding potential risks and benefits as they relate to individual patients ([APA, 2003](#)).

In short, providing treatments aimed at reducing anxiety, psychic distress, agitation, and insomnia, regardless of the primary diagnosis, can reduce suicide risk. Antianxiety agents may have a useful empirical role in such situations, when employed with due regard to their risk of disinhibiting impulsive or aggressive behavior ([APA, 2003](#); [Fawcett, 1988](#)).

Lithium

Researchers have found that long-term maintenance treatment with lithium reduces suicide risk in patients with bipolar I disorder, bipolar II disorder, and possibly unipolar depressive disorder. In bipolar disorder patients, suicide risk during lithium treatment maintenance therapy became similar to that in the general population in one study ([Tondo & Baldessarini, 2009](#)). Lithium may provide this benefit by reducing dysphoric-agitated symptoms, aggression, and impulsivity. Lithium is given cautiously because amounts that are three or more times the typical or standard dose can be toxic or even lethal.

There also is evidence that lithium may be superior to other mood stabilizing agents in reducing suicide attempts in bipolar disorder patients, notably compared to carbamazepine or valproate ([Baldessarini & Tondo, 2009](#); [Fazel & Runeson, 2020](#); [Song et al., 2017](#)). A recent study found that juveniles being treated with lithium had half as many suicide attempts,

improved depressive symptoms, less psychosocial impairment, and less aggression ([Hafeman et al., 2019](#)). [Click here](#) for additional references on the topic of lithium and suicide risk.

Other Mood-Stabilizing Agents

Evidence for a protective effect against suicide of “mood-stabilizing” agents other than lithium is limited. Studies show that patients have fewer suicide attempts and suicides when treated for bipolar disorder with lithium than with carbamazepine (e.g., Tegretol) and divalproex (e.g., Depakote), neither of which is approved as effective for long-term, maintenance treatment of bipolar disorder patients. Goodwin and colleagues ([2003](#)) found, for example, that the risk of suicide was 2.7 times higher when treated with these two medicines than with lithium, after controlling for potential confounds. The risk of suicide attempts resulting in emergency department care was 1.7 times higher for patients treated with these two anticonvulsants than with lithium ([APA, 2003](#); [Goodwin et al., 2003](#)).

There is even more limited information on risks of suicide and suicide attempts during treatment with other mood-stabilizing agents aside from lithium, notably carbamazepine, and divalproex. This is despite the growing use of anticonvulsants and some second-generation antipsychotics for the treatment of bipolar disorder because of their relative simplicity of use as well as rapid efficacy in treating mania. Thus, when weighing the risks and benefits of various medications for bipolar disorder, the efficacy of lithium in decreasing suicidal behavior is taken into consideration when indicated ([APA, 2003](#)).

Ketamine⁶

Originally synthesized as a cyclohexylamine anesthetic in the 1960’s ([Domino, 2010](#)), evolving research over the past 20 years has yielded unexpected utility for ketamine in psychiatry. The preponderance of evidence, at the time of this writing, centers on ketamine’s clinical utility in select patients struggling with depression and suicidality ([McIntyre et al., 2021](#)); its potential role in other psychiatric disorders is less well established, with an abundance of questions and unknowns that require systematic, rigorous investigation.

Generic ketamine is composed of esketamine and its mirror image, arketamine. When administered intravenously at sub-anesthetic doses for the treatment of depression, this “racemic” mixture is generally given. Spravato, the sole “ketamine” that is FDA approved ([Office of the Commissioner, 2019](#)) for the treatment of any psychiatric illness, is composed of esketamine only, and is administered intranasally. In clinical practice within this subspecialty of psychopharmacology, both treatments are often found.

⁶ We would like to thank Dr. Robert Meisner, Medical Director of the McLean Hospital ketamine Service, for his significant contributions to this section.

Racemic Ketamine

Subanesthetic doses of racemic ketamine, responsibly administered, have demonstrated robust anti-suicidal and anti-depressant properties ([Sing et al., 2016](#)). While a single infusion can, in some patients, produce a decrease in general symptoms of depression within several hours of administration, the response tends to last only for several days ([Kishimoto et al., 2016](#)). Other work has demonstrated that the anti-depressant effect can be prolonged through carefully controlled, repeated administrations. Phillips et al ([2019](#)), for example, demonstrated that serial infusions have sustaining and cumulative antidepressant effects, with a response rate twice that of placebo, and with nearly 60% of patients achieving a traditionally defined “response.”

Most contemporary racemic IV ketamine protocols begin with two treatments per week, with variation in duration and frequency of treatment thereafter ([Kryst et al., 2020](#); [Murrough et al., 2013](#)); evidence-based dosing, at time of this writing, generally begins at approximately .5 mg / kg ([Fava et al., 2020](#)). More research is needed to better define optimal longitudinal protocols.

The importance of adequate patient selection and careful medical and psychiatric monitoring cannot be underestimated in considering treatment with racemic ketamine ([McIntyre et al., 2021](#); [Sanacora et al., 2017](#)), as standards of practice and attention to evidence-base can vary quite widely between centers. In general, there remain many critical unanswered questions regarding key clinical and mechanistic aspects in the evolving use of ketamine for therapeutic purposes, supporting conservative, cautious approaches and a healthy index of suspicion when extraordinary claims appear ([Sanacora & Schatzberg, 2014](#)). Likewise, while ketamine has been a life-saving treatment for many, it is a known illicit drug of abuse ([Bokor & Anderson, 2014](#)); in the addictions literature, the consequences of inappropriate or over-exposure to ketamine are striking. Patients and clinicians alike have ample reason to carefully discuss what is known and unknown about ketamine prior to engaging in treatment. This is especially true for administration of generic racemic ketamine, which is not FDA approved for the treatment of depression or suicidality, and is not subject to as stringent monitoring and oversight as one might expect.

Esketamine

In March of 2019, the FDA approved esketamine for the adjunctive treatment of treatment resistant depression ([Office of the Commissioner, 2019](#)). The FDA subsequently granted a second FDA approval for treat depressive symptoms in adults with MDD with acute suicidal ideation or behavior based on data collected through the Aspire Trials ([Fu et al., 2020](#); [Ionescu et al., 2021](#)). This medication, which is administered intranasally, can only be given by registered centers that engage in a program known as REMS (Risk Evaluation and Mitigation Strategy); Esketamine does not take the place of a standard, concurrent anti-depressant.

The associated protocol begins with an Induction phase in which the medication is administered twice weekly for 4 weeks, followed by a second phase of once weekly administrations for one month. A maintenance phase, with administration occurring every one to three weeks, follows the second phase and continues indefinitely.

Many patients find the FDA approval associated with esketamine, its REMS requirement, and its established protocol to be reassuring. Little is known regarding which of the two treatments above may be more effective in clinical populations; this remains an area of important research as preliminary data begins to emerge ([Bahji et al., 2021](#)).

Clozapine

Approximately 50% of patients who have schizophrenia or schizoaffective disorder attempt suicide. Estimates suggest that about 5%–10% die of suicide over a lifetime ([Meltzer et al., 2003](#); [Palmer et al., 2005](#)). For years, clozapine was the only medication approved by the FDA for “reducing suicidal behavior” and only in patients diagnosed with schizophrenia.⁷ In general, clozapine is used for patients with schizophrenia or schizoaffective disorder who have not been helped by other treatments or who have tried to kill themselves and are likely to try again, regardless of their previous responses to treatment. Clozapine is available only through a restricted distribution and monitoring program to limit risks of potentially lethal agranulocytosis.

Clozapine is an old drug, but widely considered to be the first of a class designated as “second-generation” or atypical antipsychotics, reflecting their far lower risk of adverse neurological effects that were typical of the early antipsychotics, including the phenothiazines, thioxanthenes, and haloperidol. Clozapine produces complex changes in brain chemistry and its special status as one of the most effective treatments for psychotic illness remains unexplained.

Evidence that treatment of schizophrenia patients with clozapine substantially reduces their risk of suicidal behavior is quite secure ([Masuda et al., 2019](#)), including a randomized trial that found it more effective than olanzapine ([Meltzer et al., 2003](#)). There is no evidence that clozapine treatment reduces suicidal risk in depressive disorders and it remains poorly studied in bipolar disorder.

Other Antipsychotic Agents

While first-generation antipsychotics (e.g., fluphenazine, thiothixene, and haloperidol) are very effective in treating psychotic symptoms (delusions, hallucinations, agitation, aggression, and confusion), studies have found them to be less effective in treating suicide risk than clozapine ([Taipale et al., 2020](#); [APA, 2003](#)). They are also associated with prevalent adverse side effects, including extrapyramidal neurological side effects, akathisia, and possibly also worsening of depression. Because of this, they have been replaced over time in

⁷ There are now two medications with FDA recognition of antisuicidal effects (clozapine and esketamine). In 2020, esketamine was FDA approved “to Treat Depressive Symptoms in Adults with Major Depressive Disorder with Acute Suicidal Ideation or Behavior” ([Mischel & Balon, 2021](#)).

the United States by second-generation antipsychotics, which have lower risks of most extrapyramidal adverse effects ([APA, 2003](#); [Meltzer & Okayli, 1995](#); [Walker et al., 1997](#)).

Studies found that the risk of suicide in patients with schizophrenia was 57% lower among those treated with clozapine than those treated with haloperidol ([Glazer, 1998](#); [Glazer & Dickson, 1998](#)). In another study, Spivak and colleagues ([1998](#)) compared 30 patients with chronic, treatment-resistant schizophrenia who had been maintained on clozapine for at least 1 year with an equal number of patients who had been treated with first-generation antipsychotics for similar lengths of time. They found that clozapine treatment was associated with fewer suicide attempts. Because of clozapine's efficacy in reducing suicide risk, the use of first-generation antipsychotics in suicidal patients is specifically reserved for those whose psychosis has not responded to a second-generation antipsychotic, or those for whom economic considerations encourage use of less expensive drugs ([APA, 2003](#)).

However, clozapine treatment has also been associated with some potentially serious adverse effects, including seizures, weight gain, hyperlipidemia, type II diabetes, agranulocytosis, cardiomyopathy, myocarditis, ileus, and rare atypical forms of a syndrome similar to neuroleptic malignant syndrome, which can also reduce longevity. Thus, in clinical practice, the evident advantage of clozapine in reducing the rate of suicide attempts and perhaps the rate of suicide must be weighed against the risks of death from these adverse effects ([Glazer, 1998](#)). Therefore, when deciding whether to institute or continue clozapine treatment in patients with psychosis who are at risk for suicidal behaviors, the clinician will need to weigh the advantages and disadvantages of clozapine therapy for the individual patient ([APA, 2003](#)).

Hypnotics

Although the use of hypnotics is not generally recommended, a recent randomized controlled trial compared a hypnotic in combination with an SSRI to placebo and found that the combined medications reduced suicidal ideation in suicidal adults with insomnia. The authors suggest that prescribing controlled-release zolpidem when starting SSRI antidepressant treatment may be beneficial for suicidal patients with severe insomnia. It is known that severe insomnia is a risk factor for suicide ([McCall et al., 2019](#)).

Medication for Addiction Treatment

Twenty-five percent of people who die by suicide are misusing or dependent on alcohol or drugs. Those who use opioids regularly are twice as likely to attempt suicide than those who do not report any opioid use. Those who use opioids regularly are also 75% more likely to make a suicide plan ([Ashrafioun et al., 2017](#); [Oquendo, 2017](#)).

Medication for addiction treatment (MAT) for opioid use disorder has been associated with a decreased rate of suicide. Opioid-dependent individuals who used methadone or buprenorphine to treat their addiction exhibited less suicidal behavior and lower rates of crime ([Ahmadi et al., 2018](#); [Fazel & Runeson, 2020](#); [Molero et al., 2018](#); [Yovell et al., 2015](#)).

A recent study found an approximately 50% reduction in suicide mortality in those who received medication treatment of opioid use disorder through the VA medical system. The reduction in suicide risk occurred during stable treatment periods. Stopping periods were associated with an increase in suicide risk ([Watts et al., 2022](#)).

Of the three medications for addiction treatment under study, buprenorphine was associated with the greatest reduction in suicide risk (65%) and was the only medication associated with reductions after adjusting for demographics, comorbidities, and health care utilization. Methadone was associated with decreased risk in the unadjusted models only. Naltrexone showed no effect on suicide mortality in this large, retrospective cohort study ([Mooney, 2022](#); [Watts et al., 2022](#)).

Watts et al ([2022](#)) theorize that the 65% reduction in suicide mortality with buprenorphine may be related to its unique property as a kappa receptor antagonist. Buprenorphine treatment protocols also seem to be better tolerated than other treatment protocols used in the U.S. ([Watts et al., 2022](#)). Studies have shown that buprenorphine has antidepressant, antisuicidal, and analgesic effects, and may be helpful for those with treatment-resistant depression or chronic pain ([Mooney, 2022](#)).

Brain Stimulation Techniques

Electroconvulsive Therapy (ECT)

Electroconvulsive Therapy (ECT) is one of the most effective treatments for patients with treatment-resistant depression or severe depression, with or without psychotic features. The treatment is effective for both bipolar and unipolar depression, and ECT can be helpful for psychotic and mood symptoms in some patients with schizophrenia. ECT helps rapidly resolve catatonia, a life-threatening syndrome that can occur in multiple psychiatric disorders. It can also be used to treat mania in bipolar disorder.

ECT is also used for suicidal patients who require a rapid treatment intervention. ECT can rapidly reduce suicidal ideation ([Watson, 2019](#)). Over 60% of patients with major depressive disorder may achieve remission by the third week of treatment with ECT, though the risk of relapse of depression is highest within the following 6 months. Accordingly, most people treated with ECT require some form of maintenance treatment (e.g., psychotherapy, medication, additional ECT), which is not surprising for lifelong, recurring illnesses. Overall, 70 to 90% of patients benefit from the treatment.

ECT involves applying a brief, controlled electrical stimulation to the brain to induce a generalized seizure, while the patient is under general anesthesia and given a muscle-relaxant to avoid injury. In the U.S., ECT is frequently performed on an outpatient basis. ECT may be used for severe cases when other treatments (including medication and psychotherapy) have failed to yield adequate responses ([APA, 2001](#)). However, as techniques and equipment have advanced, ECT has become safer and more comfortable, and memory side effects can be minimized. Therefore, ECT is no longer considered a treatment of last resort and may be used earlier in a patient's overall treatment course.

Repeated Transcranial Magnetic Stimulation (rTMS)

Repeated Transcranial Magnetic Stimulation (rTMS) is sometimes used to treat patients with major depressive disorder who do not respond to one or more adequate trials of antidepressants. rTMS uses magnetic stimulation to activate selective brain sites without inducing a generalized seizure.

rTMS may resolve suicidal ideation in some patients with treatment-resistant depression. In one study, bilateral, left-unilateral, and sham rTMS were evaluated for effects on suicidal ideation ([Weissman et al., 2018](#)). It resolved in 40.4% of patients exposed to bilateral rTMS, 26.8% with left-unilateral rTMS, and 18.8% with sham rTMS, indicating superiority of bilateral treatment.

Although rTMS does not seem to be as effective as ECT, it does not require anesthesia and has far less adverse effects on memory and cognition, and bilateral rTMS may be a useful alternative for suicidal ideation when ECT is declined, not tolerated, or not readily available.

Stanford Neuromodulation Therapy (SNT)

Researchers at Stanford University School of Medicine are testing a promising new protocol known as Stanford Neuromodulation Therapy (SNT) for treatment-resistant depression. Although SNT does not yet have FDA approval, preliminary results have shown an 80%-90% remission rate in patients after 5 days of open label treatment ([Cole et al., 2020](#); [Cole et al., 2021](#)). This is significantly better than the efficacy of current treatments, including ECT and rTMS, which require significantly longer treatment courses ([Cole et al., 2021](#)).

Before receiving SNT, individuals will undergo a structural MRI and resting-state fMRI. The strategy is to individually excite the nerve cells in the brain underactive in depression (the left dorsolateral prefrontal cortex to the subgenual anterior cingulate cortex) and stimulate them with a magnetic coil. SNT relies upon a form of rTMS known as intermittent theta-burst stimulation (iTBS), which is a more efficient form of rTMS. Ten sessions of iTBS are delivered daily, for a total of 18,000 pulses per day, over 5 consecutive days ([Cole et al., 2021](#)). This iTBS has 5x the power of conventional rTMS ([Williams, 2021](#)).

A recent double-blind randomized controlled trial found that SNT was more effective than sham stimulation for treatment-resistant depression; 78.6% of the SNT treatment group achieved remission compared to 13.3% of the sham treatment group. Moreover, there was a 52.5% mean reduction in scores on the Montgomery-Asberg Depression Rating Scale 4 weeks after treatment in the group who received the 5 days of SNT, whereas those in the sham treatment group had an 11.1% mean reduction in score. In fact, the trial was halted at midpoint because of the large antidepressant effect size for SNT compared to sham treatment ([Cole et al., 2021](#)).

Although the sample size in this RCT was small (n = 29) and SNT is still an experimental treatment which has not yet been approved as a therapeutic tool, the high rate of efficacy and

short treatment course makes SNT a potentially appealing choice for suicidal patients who are in crisis and for whom a rapid-acting treatment is very much needed.

Larger trials of SNT, funded by NIH, are currently underway. Preliminary findings from one of these trials shows a significant reduction in suicidal ideation after the first day of SNT treatment ([Williams, 2021](#)). Dr. Nolan Williams, Director of Stanford's Brain Stimulation Lab, hopes that hospitals may be able to eventually use SNT "as a fast-acting antidepressant to stabilize suicidal patients who may, after weeks of intensive treatments, leave the hospital feeling safe" ([Cohen, 2021](#)). The expectation is that SNT treatment given in the emergency or inpatient setting would be followed with less intensive maintenance treatment (e.g., medication, psychotherapy, brain stimulation) ([Cole et al., 2021](#)).

Magnetic Seizure Therapy (MST)

In this relatively new intervention for patients with treatment-resistant depression, a therapeutic seizure is induced by magnetic stimulation of the brain at higher frequencies than are used in rTMS. Patients given MST are anesthetized and given a muscle-relaxant to avoid injury similar to the protocol for ECT. MST can reduce suicidal ideation in some patients with treatment-resistant depression: In one study 44.4% of patients treated with MST experienced resolution of suicidal ideation ([Sun et al., 2018](#)).

Psychotherapy

In addition to pharmacotherapies and brain stimulation techniques, psychotherapies play a central role in the management of suicidal behavior in clinical practice. Psychotherapy is often used to treat patients who have suicidal thoughts or who have made suicide attempts. Evidence-based treatments include cognitive behavioral therapy (CBT), cognitive therapy for suicide prevention (CT-SP), brief cognitive-behavioral therapy (BCBT), dialectical behavioral therapy (DBT), collaborative assessment and management of suicidality (CAMS) and mindfulness-based cognitive therapy (MBCT). Although there is limited research, clinical consensus suggests that psychodynamic and interpersonal psychotherapy can be of significant benefit, even if there are fewer studies. Psychotherapy can be used by itself, but typically is used in conjunction with medication treatment.

Cognitive Behavioral Therapy (CBT)

CBT is a psychological treatment that addresses faulty or unhelpful thoughts and behaviors. The goal is to build skills to better cope with distress. A number of cognitive-behavioral treatment protocols have been evaluated using randomized controlled trials (for systematic reviews, see [Tarrier et al., 2008](#) and [D'Anci et al., 2019](#)). There is substantial evidence that CBT can reduce suicidal ideation, attempts, and hopelessness ([D'Anci et al., 2019](#)), with some gains made in therapy being sustained over time ([Wenzel & Jager-Hyman, 2015](#)). CBT

appears to be especially effective in reducing suicidal behavior when the treatment specifically targets suicidal thoughts and behaviors (as opposed to thoughts and behaviors related to depression or mental illness in general).

Cognitive Therapy for Suicide Prevention (CT-SP)

CT-SP is suicide-specific cognitive behavioral therapy. It is based on the premise that suicidal behavior is the “primary problem” rather than a symptom of a psychiatric disorder and, therefore, suicide-related thoughts and behaviors should be targeted directly in therapy ([Wenzel & Jager-Hyman, 2012](#)). The goal of CT-SP is the “elimination of suicidal behavior” ([Jobes et al., 2015](#), p. 365).

More specifically, CT-SP is centered on the idea that if you can teach individuals how to more effectively manage proximal stressors, these stressors, while potentially still extant, will no longer trigger suicidal behavior ([Jobes et al., 2015](#)). Like other CBT treatments, CT-SP is structured and time-limited. Completing all three phases will typically take ten (50 minute) sessions to complete.

CT-SP has “strong empirical validation” ([Brown et al., 2005](#); [Wenzel et al., 2009](#), [Jobes et al., 2015](#), p. 365). For example, Brown and colleagues (2005) conducted a randomized controlled trial of CT-SP versus treatment as usual. The sample consisted of 120 adults who had attempted suicide and were evaluated at a hospital emergency department within 48 hours of the attempt. The study found an approximately 50% reduction in subsequent suicide attempts over an 18-month period with CT-SP. In other words, those who had received CT-SP were 50% less likely to make a repeat suicide attempt during the 18-month follow-up period than those who received usual treatment ([Brown et al., 2005](#), [Jobes et al., 2015](#)).

Brief Cognitive-Behavioral Therapy (BCBT)

BCBT is a brief, time-limited, cognitive behavioral outpatient treatment. Similar to other suicide-specific cognitive therapies, BCBT is based on the belief that “effective treatment of risk for suicidal behavior does not require complete remission of a psychiatric diagnosis or symptom severity, but rather the development of core skills in the areas of emotion regulation, interpersonal functioning, and cognitive restructuring.” ([Rudd et al., 2015](#), p. 447). Brief CBT consists of 12 outpatient sessions with the first lasting 90 minutes and subsequent sessions lasting 60 minutes.

There is evidence of BCBT’s effectiveness for a primarily male military sample. 152 active-duty soldiers who were experiencing suicidal ideation with intent or who had made a suicide attempt within the past month were randomly assigned to either receive BCBT along with treatment as usual or just treatment as usual. The findings were impressive. Soldiers who had received brief CBT along with treatment as usual were approximately 60% less likely than those who had only received treatment as usual to make a suicide attempt during the two-year follow-up period ([Rudd et al., 2015](#)).

Dialectical Behavioral Therapy (DBT)

DBT combines methods of CBT with skills-training and mindfulness meditation techniques to improve emotion regulation, interpersonal relationships, and ability to tolerate distress. DBT was originally developed as a treatment for suicidal behavior in women with borderline personality disorder ([Linehan & Kehrer, 1993](#)), but has since shown effectiveness for other disorders, including mood disorders, eating disorders, substance misuse, and PTSD.

A recent meta-analysis of 18 controlled studies found DBT to be effective for treatment of suicidal behavior, though there was no significant pooled effect for suicidal ideation in this meta-analysis. This may reflect the fact that DBT prioritizes behavior over thoughts ([DeCou et al., 2019](#)). Several recent studies have found DBT to be an effective treatment for reducing repeat suicide attempts in highly suicidal patients, including adolescents ([McCauley et al., 2018](#); [Asarnow et al., 2021](#)). A cornerstone of DBT is the idea that the patient must build a life worth living, even when the patient has many problems and wishes to die. [Click here](#) for some online DBT skills training courses.

Mindfulness-Based Cognitive Therapy (MBCT)

This form of psychotherapy integrates mindfulness meditation practices and cognitive therapy techniques. A growing body of evidence indicates that training in mindfulness can help break the link between depressive symptoms and suicidal thinking. For example, in a randomized controlled trial conducted by [Barnhofer and colleagues](#), previously suicidal patients were assigned to four different conditions, including a mindfulness-based cognitive therapy (MBCT) condition. Results showed a weaker correlation between symptom levels and suicidal cognitions in the group who had received MBCT than in the groups who had not received training in mindfulness. The MBCT group also showed a reduction in suicidal cognitions. Such findings suggest that MBCT may help protect against depressive relapses that are common in those with a history of suicidal ideation and behavior ([Barnhofer et al., 2015](#)).

Collaborative Assessment and Management of Suicidality (CAMS)

The Collaborative Assessment and Management of Suicidality (CAMS) is a therapeutic framework that specifically targets the reduction of suicide risk. CAMS focuses on identifying risk factors and patient articulated “drivers” of suicidal ideation and intent (i.e., specific thoughts, feelings, and behaviors that are leading or contributing to the patient’s suicidal ideation). A main tool within CAMS is the Suicide Status Form (SSF), which contains open-ended questions about psychological pain, stress, hopelessness, reasons for living, and other such variables along with quantitative ratings. CAMS relies on a collaborative partnership between the clinician and the patient, who decide together how to manage and treat the patient’s suicidality. Clinicians work to understand the struggle of the suicidal patient with empathy and without judgment. The SSF functions as a clinical

roadmap, guiding and documenting suicide assessment, treatment planning, stabilization planning, the on-going tracking of risk, and accounting for all clinical outcomes.

CAMS is an evidence-based approach with five published randomized controlled trials showing that CAMS reliably reduces suicidal ideation, symptom distress, depression, hopelessness, and emergency department visits for suicidal behavior in a variety of populations (e.g., [Comtois et al., 2011](#); [Huh et al., 2018](#); [Jobes et al., 2018](#); [Pistorello et al., 2020](#); [Ryberg et al., 2016](#)). In addition, there is growing evidence that it can treat self-harm and suicide attempts (e.g., [Andreasson et al., 2016](#)). Evidence for the effectiveness of this approach can be found [here](#). To learn about how to become trained in this technique, [click here](#). A new meta-analysis of 9 CAMS trials reports that CAMS is a “well supported” intervention for suicidal ideation as per Center for Disease Control and Prevention criteria ([Swift et al., 2021](#)).

Interpersonal Psychotherapy (ITP)

Interpersonal Psychotherapy (IPT) is an evidence-based approach for treating mood disorders. While IPT was originally developed to treat major depressive disorder in adults, there is now evidence of its effectiveness for treating other disorders (e.g., eating disorders, perinatal depression, substance use disorders, dysthymia, bipolar disorder) and other populations (e.g., adolescents, older adults), and a growing body of evidence that it may be able to reduce suicidal ideation in particular ([Bentum et al., 2021](#); [Diamond et al., 2010](#); [Wiffley & Shore, 2015](#)). The main goal of IPT is to improve the quality of interpersonal relationships and social functioning to help reduce distress ([Wiffley & Shore, 2015](#)).

Attachment-Based Family Therapy (ABFT): ABFT is a 16-week treatment program for youth aged 12-24 who have experienced suicidal thoughts or attempts, depression, or trauma. ABFT is based on the *interpersonal theory of depression*, which posits that the quality of family relationships can impact suicidal ideation and depression. The goal of ABFT is to repair parent-adolescent bonds and improve family communication, so that parents can become a resource to the adolescent coping with stress. ABFT is the first manualized family therapy specifically designed to target family processes associated with depression and suicide ([Diamond et al., 2010](#)).

ABFT has been designated as a “Program with Evidence of Effectiveness” for reducing suicidal thoughts and behaviors as well as for depression and depressive symptoms ([SPRC, n.d.](#)). [Diamond et al. \(2010\)](#) conducted a randomized controlled trial of ABFT in the city of Philadelphia. For the study, adolescents were randomized to either receive ABFT or to receive enhanced usual care (EUC). Adolescents in the EUC condition were referred to private practice or community mental health centers, where they received individual therapy, group therapy, family therapy, and/or case management. Results showed ABFT to more effective than EUC for reducing suicidal ideation and depressive symptoms in this sample of adolescents. Those in the ABFT group were more likely than those in the control group to self-report suicidal ideation in the normative range. They were also more likely to report having had no suicidal ideation in the past week, compared with the control group ([SPRC, n.d.](#)).

Interpersonal Psychotherapy (ITP) for Suicidal Patients: The Interpersonal Theory of Suicide, proposed by Thomas Joiner in the 2007 book, *Why People Die by Suicide*, posits that for a suicide to occur, there needs to be not only a desire to die by suicide, but also an “acquired capability” ([Joiner, 2007](#); [Van Orden et al., 2010](#)). The desire to die by suicide is driven by two psychological states: perceived burdensomeness and low sense of belongingness (social alienation/isolation). The “acquired capability” is the result of repeated exposure to painful or fear-inducing events which, in turn, leads to “habituation,” which, in turn leads, to increased pain tolerance and lessened fear of death. The interpersonal theory of suicide has a growing body of evidence to support it (e.g., [Joiner et al., 2002](#); [Van Orden et al., 2006](#); [Conner et al., 2007](#)).

A clinical manual that applies the Interpersonal Theory of Suicide to clinical work with suicidal patients has been developed ([Joiner et al., 2009](#)). ITP clinicians are particularly attuned to whether their clients are socially isolated or feel like a burden, and whether they have the acquired capability to die by suicide (e.g., fearlessness of death; previous suicide attempts; access to lethal means), as these three factors together are thought to significantly heighten suicide risk. The clinical framework assumes that suicide risk will be reduced in therapy by reducing thwarted belongingness and perceived burdensomeness, and by addressing the presence of acquired capability (e.g., safety planning) ([Van Orden et al., 2012](#); [Van Orden et al., 2010](#)). There are case studies suggesting that targeting constructs of thwarted belongingness and perceived burdensomeness with ITP may help suicidal patients resolve suicide ideation and avert suicidal crises (e.g., [Van Orden et al., 2012](#)). Because of fearlessness of death, these patients can be in a higher risk category and, thus, the focus of treatment is also on means restriction.

Psychodynamic Psychotherapy

Psychodynamic psychotherapy helps patients to improve self-esteem and interpersonal relationships by understanding and working through the way in which past experiences have shaped current feelings and behavior. There is increasing evidence that psychodynamic therapies are effective for a wide range of mental health conditions ([Leichsenring & Klein, 2014](#)), and that they can help to reduce suicidal behavior ([Briggs et al., 2019](#)).

Psychodynamic psychotherapists often integrate techniques from CBT and DBT in an empathic frame that is flexible in addressing the patient’s problems ([Schechter et al., 2019](#)).

There are promising studies of several specific psychodynamically-based psychotherapies for recurrent suicidality that have demonstrated efficacy in decreasing suicidal behavior: Mentalization Based Treatment (MBT; [Bales et al., 2012](#); [Bateman & Fonagy, 1999](#); [2001](#); [2008](#); [2009](#); [Bateman et al., 2016](#); [2021](#); [Vogt & Norman, 2019](#)), Good Psychiatric Management (GPM; [Links et al., 2015](#)), Transference Focused Psychotherapy (TFP; [Doering et al., 2010](#)), and Schema Focused Psychotherapy (SFP; [Giesen-Bloo et al., 2006](#)).

Regardless of theoretical bases, the key element is a positive and sustaining therapeutic relationship. The psychotherapist may be the only reliable, stable connection in a person's life.

Informed Consent and Confidentiality

Informed Consent

Informed consent is a conversation between the clinician and the patient about the risks and benefits of a particular treatment. Frequently, informed consent requires the patient to sign a written document verifying their consent. Clinicians and/or designees provide information that a patient needs to know to make a well-informed decision about engaging in the treatment, such as taking psychiatric medication or undergoing ECT ([Darby & Weinstock, 2018](#)). Clinicians may need to assess the patient's competency to understand what is being presented to them ([Appelbaum, 2007](#)).

Moreover, even if a patient is admitted to a hospital against their will, they still retain the right to consent to treatment. For example, medications can only be administered involuntarily when the patient is acutely unstable and a danger to themselves or others.

Confidentiality and Duty to Warn

Clinicians have a duty to maintain confidentiality of information disclosed to them by patients. This standard goes back to the Roman Hippocratic Oath and has been codified in state and federal laws in the U.S. Clinicians can be held liable if they breach patient confidentiality ([NCSL, 2018](#)).

However, there are certain situations in which clinicians, based on their clinical judgment, can respond to confidential information that the patient communicates to them. While confidentiality is the norm, clinicians can breach confidentiality if the patient is at risk of harming themselves or others. Psychiatrists and other mental health professionals often tell new patients upfront about situations in which they may breach patient confidentiality ([Darby & Weinstock, 2018](#)).

The duty to respond when a patient indicates they may be a danger to others is known as the "duty to warn" or the "duty to protect" ([NCSL, 2018](#)). There also must be an identified victim and intent ([Monahan, 2006](#)). Additional situations in which clinicians must respond include intent to commit a crime or communication of child or elder abuse (Mass. Gen. Laws ch. 123 § 12). While this law is meant to protect potential victims, some have voiced concern that the "duty to warn" will preclude certain patients from seeking help or from disclosing their suicidal or homicidal intent ([NCSL, 2018](#)).

The "duty to warn" varies from state to state. In Massachusetts, for example, there has been a "duty to warn" statute since 1989. Massachusetts General Laws Chapter 123, the Massachusetts mental health statute, includes laws regarding the "duty to warn." The statute also includes laws regarding hospitalization and emergency restraint for persons with mental illness who are at risk of harming themselves or others. These laws allow for a 3-day holding period. For more information about the mental health statute in Massachusetts, see: <https://malegislature.gov/laws/generallaws/parti/titlexvii/chapter123>

Safety Planning and Continuity of Care

Safety Planning

A suicide safety plan is an individualized written list of coping strategies and resources that can help a person know what to do when they are experiencing an acute suicidal crisis ([Stanley & Brown, 2012](#)). This collaborative plan between the clinician and the patient (and family when indicated) is a living document that can be modified over time as circumstances change. The safety plan typically covers the following areas:

1. Recognizing warning signs of suicide risk in oneself (e.g., thoughts, images, mood, situation, behavior)
2. Employing internal coping strategies without needing to contact another person (e.g., relaxation technique, physical activity)
3. Socializing with others who may offer support as well as distraction from the crisis
4. Contacting family members or friends who may help resolve a crisis
5. Contacting mental health professionals or agencies
6. Reducing the potential for use of lethal means

The [Safety Planning Intervention](#) was developed by Dr. Barbara Stanley, Professor of Medical Psychiatry at Columbia University Medical Center, and Dr. Gregory Brown, Director of the Center for Prevention of Suicide at the University of Pennsylvania. The concept behind the Safety Planning Intervention is that it is important to have advanced knowledge of what to do in an emergency because the person who is in crisis and at acute risk of suicide may be in an impaired state and may have more difficulty generating solutions. There can be a higher risk of death if one does not know what to do in the event of an emergency.

At the [2020 National Stop A Suicide Today Town Hall](#), Dr. Barbara Stanley spoke about the utility of the Safety Planning Intervention as one component of suicide prevention. She discussed how safety planning is based on evidence-based coping strategies (e.g., social support, [reasons for living](#)) to reduce suicide risk, and relies heavily on “distraction.” Suicidal crises are transient, lasting for a few minutes to hours, and survival will often depend on getting through this very challenging period of acute risk. The Safety Planning Intervention helps a person identify ways to distract themselves, in order to buy time between suicidal urges and lethal actions. Distracting from suicidal thoughts and reducing access to lethal means buys time and mitigates risk. To view Dr. Stanley’s 20 minute talk, [click here](#) and advance the recording to 1:06 hrs:min.

There is empirical support for this approach. A recent meta-analysis found that safety-planning type interventions decreased the risk of suicidal behavior by 43% ([Nuij et al., 2021](#)). Stanley and colleagues ([2021](#)) used [Ecological Momentary Assessment \(EMA\)](#) to study the effectiveness of 7 common coping strategies in reducing suicidal ideation. They found that strategies that were distraction-oriented (e.g., keeping busy, socializing) were more likely to

lower the intensity of suicidal thoughts in the short-term than strategies that were more mindfulness-based (e.g., calming self, sitting with feeling until they passed).⁸

The [Safety Planning Intervention](#) is a collaboration between the clinician, the patient, and the patient's family (if the patient wishes their family to be involved). Clinicians can be trained to implement the Safety Planning Intervention. For information on how to become trained on the Safety Planning Intervention, [click here](#). To utilize the Safety Planning Intervention for one's records, permission is also necessary. Permission can be obtained from Barbara Stanley, PhD by contacting her via email at bhs2@cumc.columbia.edu or through her website www.suicidesafetyplan.com.

Safety plans are different from no-suicide contracts, which were frequently used in the past, but had limited usefulness and depended on a strong therapeutic alliance ([Miller et al., 1998](#)). However, there is evidence that safety plans work. A recent study found that safety planning with telephone follow-up reduced suicidal behaviors over a 6-month period by 45% ([Stanley et al., 2018](#)). There is also accumulating [evidence](#) that the safety planning intervention can increase the likelihood that a suicidal patient will engage in follow up outpatient treatment.

Some clinicians and hospitals have been using mobile safety planning apps in addition to, or in lieu of, written safety plans. Many of these apps are free of charge and publicly available, such as the [Safety Plan](#), which was developed by the New York State Office of Mental Health with permission from Stanley and Brown. Preliminary data evaluating the effectiveness of safety planning smartphone apps is encouraging (e.g., [Melvin et al., 2019](#)).

Problems with No-Suicide Contracts

- No studies demonstrating ability to reduce suicide
- Not a legal document, whether signed or not
- Gives false sense of security

([Miller et al., 1998](#))

Brief Suicide Interventions and Continuity of Care

Suicide interventions can be targeted towards periods when patients are at very high risk of suicide in the short term, such as following discharge from an emergency department or psychiatric hospital ([Olfson et al., 2014](#)). Suicidal patients can have difficulty with treatment compliance after discharge from acute care settings. Indeed, only around one-third of patients who have an outpatient appointment scheduled within one week of discharge follow through

⁸ The meta-analysis conducted by Nuij and colleagues did not find evidence of an effect for safety-planning type interventions on suicidal ideation. A recent systematic review by McCabe et al ([2018](#)) of brief psychological interventions also found that these brief interventions may alter behavior, but not necessarily cognitive distress. One possible explanation may be that suicidal ideation fluctuates over time and reductions in suicidal ideation may not be evident at the time of follow-up, highlighting the need for studies of suicidal ideation in real time, such as the EMA study by Stanley and colleagues mentioned above. However, in the past two years, suicide attempts and deaths have decreased in the United States, while suicidal ideation has increased substantially. Interventions specifically targeting suicide ideation have been recommended (e.g., [Jobes & Joiner, 2019](#)).

with that appointment ([Melhem & Brent, 2020](#)). Brief interventions aim to increase linkage to care during these critical transition periods ([Olfson et al., 2014](#)).

Research syntheses show that brief interventions can actually reduce suicide attempts and increase linkage to care ([Doupnik et al., 2020](#); [Jobes, 2020](#); [McCabe et al., 2018](#); [Melhem & Brent, 2020](#)). Brief interventions include not only the Safety Planning Intervention (SPI) discussed in the section “Safety Planning” above, but also follow-up phone calls, post cards, or letters to remind the patient to follow up with outpatient care ([Jobes, 2020](#); [Jobes & Chalker, 2019](#); [Luxton et al., 2013](#)). While more research is needed to determine what makes certain "caring contacts" more effective than others, it appears that the frequency of the contact as well as the degree of personalization are important factors ([Motto, 1976](#); [Motto & Bostrom, 2001](#); [Luxton et al., 2013](#)).

Another type of brief intervention is care coordination. **Care coordination can involve** scheduling an appointment or a mobile crisis response team evaluation, or delivering a warm handoff to another mental health clinician. The primary goal of most of these interventions is to promote connectedness between the suicidal patient and another mental health clinician, or between the patient and their community or family ([Doupnik et al., 2020](#)).

One suicide-specific brief intervention that has received empirical support from a randomized controlled trial is the Attempted Suicide Short Intervention Program (ASSIP). The study found that those who had received the ASSIP intervention in addition to treatment as usual were 80% less likely than those who received only treatment as usual to make at least one repeat suicide attempt during the two-year follow-up period ([Gysin-Maillart et al., 2016](#)). The ASSIP intervention is cost-effective ([Park et al., 2018](#)); it is completed in just 3 sessions, each lasting 60 to 90 minutes. Components important to the therapy include the development of an early therapeutic alliance, safety planning, psychoeducation, as well as continued long-term outreach via personalized letters ([Gysin-Maillart et al., 2016](#); [Jobes et al., 2015](#)).

Another brief intervention for suicidal behavior that has been studied with a randomized controlled trial is the Crisis Response Plan ([CRP](#)). The CRP was originally developed to be used as part of brief cognitive behavioral therapy (BCBT), but has since been tested as a stand-alone intervention for use in emergency departments and other behavioral health settings. The CRP is typically handwritten on a note card and completed in one session. CRP specifies self-management strategies, reasons for living, and available sources of social and professional support. A randomized control trial testing the efficacy of the CRP was done in active duty soldiers. The RCT found that those soldiers who received the CRP intervention were 76% less likely to attempt suicide during the following 6 months than soldiers who received standard treatment ([Bryan et al., 2017b](#)). Moreover, the CRP seemed to be most effective when the clinician was perceived as “especially understanding and empathetic” ([Bryan et al., 2019](#)). To learn more about the CRP, click [here](#).

Lethal Means Restriction and Counseling

In 2019, half (50.4%) of all suicide deaths in the United States were due to injuries related to firearm use. Males are more likely to die by suicide by firearm (55.6%) than females

(31.4%). Females seem to be about equally likely to die from suicide by firearm (31.4%), poisoning (30%), or suffocation (29%) ([Stone et al., 2021](#)).

In recent years, there have been some changes in the means used for suicides. For example, between 1999 and 2019, the rate for suicide by suffocation tripled for females (from 0.6 to 1.8 deaths per 100,000) and doubled for males (from 3.3 to 6.6 deaths per 100,000). Suffocation is defined by the CDC as hanging, asphyxiation, strangulation, and other such methods. In addition, poisoning is no longer the leading means of suicide for females. Since 2016, the number of suicides by poisoning have declined, while the number of suicides by firearms and by suffocation have increased ([Hedegaard et al., 2021](#)).

The proportion of suicide attempts that result in death is known as the *case fatality ratio*. With suicide deaths, the case fatality ratio varies significantly by method. For example, nearly all suicide attempts by firearm (85-90%) will result in death, whereas only 1-2% of suicide attempts with medication or sharp instruments result in death. Firearms and jumping have high case fatality ratios; they do not offer the same opportunity for rescue or a change of mind as other methods, like medication overdoses or carbon monoxide poisoning ([Barber & Miller, 2014](#)).

The particular method an individual chooses for their suicide attempt depends to a large extent on its accessibility/availability. As [Barber & Miller \(2014\)](#) point, “A gun in the closet poses a greater risk than a very high bridge 5 miles away, even if both measures have equal lethality if used” (p. S265). A study of 30 survivors of suicide attempts by firearm found that the most common response given to why they used a firearm was, “Availability.” ([Harvard T.H. Chan School of Public Health, n.d.](#); [Peterson et al., 1985](#)).

[Multiple studies](#) have found that restricting access to guns reduces the number of suicides, without an increase in suicide by alternative means ([Kaufman et al., 2018](#)). While some individuals will substitute other methods, virtually all other methods are less lethal than firearms ([Harvard T.H. Chan School of Public Health, n.d.](#)). Moreover, suicide is often impulsive: A significant proportion of suicides (24%-53%) are contemplated for as little as 5 minutes. Actual suicides may be averted if the firearms are kept unloaded and/or locked because this increases the time to access the firearm ([Shenassa et al., 2004](#)). Parents are often more amenable to locking up their weapons than disposing of them ([Kreusi et al., 1999](#); [Barber & Miller, 2014](#)).

However, in some cases, it may be necessary to consider having the firearm removed from the home, even if only on a temporary basis. Extreme risk protective orders (ERPOs), also known as “red flag laws,” are laws that allow immediate family members or law enforcement to petition a court to allow for removal of a gun when a person is in acute crisis and a potential danger to themselves or others. Currently, nineteen states, including the District of Columbia, have laws permitting extreme risk protective orders ([Frattaroli & Horwitz, 2020](#)).

The American Psychiatric Association’s (2003) practice guidelines state that, “Whether or not a plan is present, if a patient has acknowledged suicidal ideation, there should be a specific inquiry about the presence or absence of a firearm in the home or workplace” (p. 23). When indicated, clinicians may be in a position to apprise family members of red flag laws. Clinicians should be aware that, “If there is one gun, there are usually more than one” ([Harvard T.H. Chan School of Public Health, n.d.](#))

Unfortunately, suicidal individuals may have access to other lethal means at home or work, which makes suicide-proofing challenging and realistically impossible. For example, suffocation (hanging) is now the second leading cause of suicide deaths in the United States and its use has increased in recent years, but this method is not very amenable to means restriction, except perhaps in controlled settings such as prisons or hospitals ([Barber & Miller, 2014](#)). Moreover, while restricting access to firearms may in certain circumstances avert a suicide, it does not always work for a given individual, particularly if there is ongoing suicide risk ([Harvard T.H. Chan School of Public Health, n.d.](#)).

Still reducing access to suicide methods with high case fatality rates has the potential to mitigate risk. A recent study found that opioids are the most commonly identified substance in fatal suicide poisonings ([Miller et al., 2020](#)). Suicide completion is over five times more common in suicide acts involving opioids than in suicide acts not involving opioids. Opioid fatalities have increased exponentially in recent years due to the increasing risk of death associated with fentanyl and other synthetic opioids. The study found that 75% to 87% of these deaths would not have occurred if the decedent lacked access to opioids....” ([Miller et al., 2020, p.9](#)). Other substances with high relative risks for suicide completion are barbiturates, antidepressants, antidiabetics, and alcohol. The authors suggest that lethal means restrictions in certain circumstances extend to these drugs with high case fatality rates ([Miller et al., 2020](#)).

Moreover, there is evidence that youth younger than 21 years use different drugs than adults for suicidal acts ([Miller et al., 2020](#)). Youth are more likely to use nonopioid pain relievers (e.g., acetaminophen, aspirin, or ibuprofen), antidepressants, and allergy medications that are readily available, whereas adults are more likely to use opioids, benzodiazepines, alcohol, cocaine, and drugs to treat chronic conditions (e.g., epilepsy, Parkinson’s disease) ([Miller et al., 2020](#)). Awareness of these findings can be useful for clinicians when treating families whose children are at risk, and can be incorporated into treatment planning and lethal means restrictions, when indicated ([Brent et al., 2000](#); [Harvard T.H. Chan School of Public Health, n.d.](#); [Kruesi et al., 1999](#); [McManus et al., 1997](#); [Barber & Miller, 2014](#)).

Counseling on Access to Lethal Means (CALM) is a free online training for clinicians. The goal of the training is to teach clinicians how to identify those who could benefit from lethal means counseling and to provide strategies for working with patients and families to reduce access to lethal means ([Everytown Research & Policy, 2021](#)). Strategies that work for one group may not be effective or appropriate for another group ([Jin et al., 2016](#)). The course can be accessed by [clicking here](#).

System Change

[Zero Suicide](#) is a system-wide, transformational model for how health care systems can identify and care for individuals at risk for suicide. The Zero Suicide framework is based on the belief that suicides can be significantly reduced for those engaged with health care by using a bundled set of evidence-based practices reliably and with training about how to incorporate these practices. Health care programs who have implemented Zero Suicide are a version of High Reliability Organizations (HROs) where organizations deliver quality care,

routinely examine outcomes, and remain committed to fidelity. The framework emphasizes the need to keep both patients and clinical staff safe, prepared, and supported. [The website](#) contains a toolkit and other resources that may be helpful to clinicians and health care system leaders.

SafeSide Prevention offers educational, governmental, behavioral health, and other health care organizations assistance with implementing a “Zero Suicide” approach. To learn more about their video-based trainings, [click here](#).

Postvention



The term “postvention” was coined in 1972 by Edwin Shneidman, the founder of the nation’s first comprehensive suicide prevention center ([Shneidman, 1973](#)). The term refers to interventions that are conducted after a suicide death to support those who have been affected, including family, friends, coworkers, classmates, and community at large. Those grieving a suicide often receive less community support for their loss than those grieving deaths by other means, which can lead to isolation ([Pitman et al., 2014](#)). One of the main purposes of postvention is to offer comfort and support to the bereaved, and potentially reduce the aftereffects of a suicide. In a later section, we discuss the importance of postvention for clinicians who experience a patient suicide.

Postvention

One in every 5 people report exposure to a suicide during their lifetime ([Andriessen et al., 2017](#)). Those who have been exposed to a suicide are at an increased risk of suicide. For example, those who experience the suicide death of a first-degree relative are 3 times more likely to die by suicide themselves. Those whose spouses died by suicide have between 3 and 16 times increased suicidal risk ([Agerbo, 2005](#)). Men who have been exposed to suicide in the workplace are 3.5 times more likely to die by suicide than those not exposed ([Hedstrom, Liu, & Nordvik, 2008](#)).

One study found that 4.5-7.5 immediate family members and 15-20 extended family, friends, and colleagues were “intimately and directed affected” by a suicide ([Berman, 2011](#)). The box below indicates that friends, family, and others who were emotionally close to the deceased are likely to require support and postvention services (Berkowitz et al., 2011). One study found an increased incidence of depression, anxiety, and post-traumatic stress disorder (PTSD) in adolescents exposed to the suicide of a peer ([Brent et al., 1996](#)). Another study found that, without early intervention, a significant proportion of prepubertal children who had lost a sibling or a relative to suicide were likely to go on to develop major depression or PTSD ([Pfeffer et al., 1997](#)).

Those Most Likely to Need Support Following a Suicide

- Those emotionally close to the deceased (e.g., friends and family members)
- People who were already depressed and possibly suicidal before the death
- Those who might psychologically identify with the deceased (e.g., similar in lifestyle, values, or life circumstances)
- Family members and peers who were aware or suspicious of suicidal planning by the deceased
- Members of the community who might have felt responsible for the wellbeing of the deceased (e.g., teachers, coaches, school counselors)
- Supervisors and colleagues in the deceased’s workplace

([Berkowitz et al., 2011](#))

Research shows that those who knew about the deceased’s suicide plans are at greater risk of PTSD and depression, and that those who had witnessed the suicide or viewed the scene afterward are at greater risk of PTSD and anxiety ([Brent et al., 1996](#)). Adverse mental health outcomes following a suicide are also more common among those who have a psychiatric disorder or a family history of psychiatric disorder, particularly a mood disorder ([Andriessen et al., 2019](#); [Pitman et al., 2016](#)).

Negative Impacts on Mental Health of Suicide Exposure

- Life-partners have an increased risk of suicide
- Co-workers have increased risk of suicide
- Parents have an increased risk of psychiatric admission
- Mothers have an increased risk of suicide after an adult child's suicide
- Children have an increased risk of depression after suicide of a parent
- Peers have increased risk of depression, anxiety, and PTSD
- Those who knew about a suicide's plans have increased risk of PTSD and depression
- Those who witnessed a suicide have greater risk of PTSD and anxiety
- Relatives report more rejection and shame

([Agerbo, 2005](#); [Brent et al., 1996](#); [Hedstrom et al., 2008](#); [Pfeffer et al., 1997](#); [Pitman et al., 2014](#))

The goals of postvention are to assist with the grieving process, stabilize the environment, reduce the risk of contagion or suicide clusters, and identify and treat mental health problems among survivors. Clinicians providing postvention typically emphasize that suicide is multifactorial, not the result of a single factor or event. They also emphasize that there are alternatives to suicide when one is feeling depressed and hopeless, that suicide is a permanent solution to a temporary problem, and that there are resources available in the community for getting help. Clinicians also use the forum to provide psychoeducation on grieving, depression, PTSD, suicide, and means reduction ([Berkowitz et al., 2011](#)).

Andriessen and colleagues ([2019](#)) examined the effectiveness of interventions for people who had been bereaved through suicide. The most promising interventions were those led by a trained facilitator, that included supportive, therapeutic, and educational approaches, and that met regularly for an appropriate period of time.

Special Populations



Photo credit: StockSnap/Pixabay

This section recognizes special issues in suicide assessment and intervention, including age, hospitalization, and the perinatal period. It also addresses the heightened risk of suicide among certain professions, such as military personnel and healthcare workers. The section concludes with a list of resources that clinicians may find helpful when dealing with suicidal patients.

Children, Adolescents, and Young Adults

Over the past decade, there has also been a 57.4% increase in the rate of suicide among U.S. youth aged 10-24. According to a recent CDC report, there are now 10.7 suicides/100,000 persons in this age group, compared to 6.8/100,000 in 2007 ([Curtin, 2020](#)). While suicides among 5- to 11-year-olds are rare, they have also increased significantly between 2009 and 2018 ([Sheftall et al., 2016](#)).

The increase in suicide among youth has been propelled by an increase in firearm suicides in the 10- to 24-year age range, and particularly in the 10- to 14-year age range. Over the past decade, there has been a 56% rise in the rate of firearm suicides among 10- to 24-year-olds, and a staggering 213% rise of firearm suicides among 10- to 14-year-olds ([CDC WISQARS, n.d.](#); [Everytown Research & Policy, 2020](#)). American Indian and Alaska Native youth have the highest firearm suicide rate among their age group, followed by White and Black youth ([Everytown Research & Policy, 2020](#)).

At the 2020 [National Stop A Suicide Today Town Hall](#), Dr. Tami Benton, Executive Director and Chair of the Department of Child and Adolescent Psychiatry at the Children's Hospital of Philadelphia pointed out some concerning trends in suicide rates among young people. For example, the rate of suicide attempts among Black youth has increased significantly over time, compared to that of White youth whose rate has remained relatively flat. In fact, a recent study found that the suicide rate of Black children under the age of 13 is now twice that of White children under the age of 13, and that this finding applies to boys as well as to girls ([Bridge et al., 2018](#)). Historically, girls have been found to make more suicide attempts than boys, but their suicide rate is lower than that of boys. However, suicide rates among girls have risen over the years and the size of the gap between the suicide rates of boys and girls has narrowed. Recent data shows that girls have begun using more lethal means in their attempts. African American, LGBTQ+, and youth from other minoritized groups appear to be at particularly heightened risk for both suicide and suicide attempts.

There is limited data on suicides among elementary school-aged children, as nationally representative studies have typically been conducted with adolescents ([Lawrence et al., 2021](#)). However, a recent [study](#) found that compared to early adolescents, children who die by suicide are more likely to be male or black, to die at home, and to have experienced relationship problems with family members and/or friends. The children were also more likely than the early adolescents to have been diagnosed with ADD/ADHD and less likely to have been diagnosed with depression/dysthymia ([Sheftall et al., 2016](#)).

Research shows that about 1 out of every 3 youth (29%) who died by suicide had disclosed their suicidal intent to someone before death ([Karch et al., 2013](#); [Sheftall et al., 2016](#)). This highlights the usefulness of educating those who live and work with children and adolescents on how to recognize and respond to warning signs. Moreover, there is evidence that suicidal preadolescents receive treatment at lower rates than suicidal adolescents, perhaps “due to a lack of recognition among parents and providers of the seriousness of expressions of suicidality in this age group” ([Lawrence et al., 2021](#); [Nock et al., 2013](#)).

Youth Suicide Warning Signs

In 2013, an expert panel met at SAMHSA headquarters in Rockville, Maryland to review literature and develop a consensus list of warning signs for youth suicide. The following warning signs for youth suicide were established at that meeting and have been expanded upon in the following box.

Youth Suicide Warning Signs

The following signs may mean that a youth is at risk for suicide, particularly in youth who have attempted suicide in the past:

- Talking about or making plans for suicide
- Expressing hopelessness about the future
- Displaying severe/overwhelming emotional pain or distress
- Showing worrisome behavioral cues or marked changes in behavior, particularly in the presence of the above warning signs. Specifically, this includes significant:
 - Withdrawal from or change in social connections/situations, including extracurricular activities and school performance
 - Changes in sleep (increased or decreased)
 - Anger or hostility that seems out of character or out of context
 - Recent increased agitation or irritability
 - Risk taking behavior or alcohol/drug use

Risk is greater if the warning sign is:

- new
- has increased
- related to an anticipated or actual painful event, loss, or change
- associated with the acute onset of mental illness

The presence of more than one of these warning signs may increase a youth's risk for engaging in suicidal behaviors in the near future (Adapted from [Youth Suicide Warning Signs](#)).

Some warning signs in youth are similar to warning signs in adults, such as talking about or making plans for suicide, expressing hopelessness about the future, displaying severe/overwhelming emotional pain or distress, and showing worrisome behavioral cues or marked changes in behavior. However, with this age group, signs such as poor school performance, withdrawal from extracurricular activities, alcohol/substance use, and risk-taking behavior can add to the risk.

There is also a need to pay attention to signs of non-suicidal self-injury (NSSI), such as carving, cutting, burning or punching oneself or objects. NSSI is more common among adolescents and young adults than among older age groups (15-20% vs. 6%). Although by definition NSSI is intentional self-injury without the intent to die, having a history of NSSI puts one at higher risk of suicide attempt and suicide death ([Klonsky et al., 2014](#)).

The *New York Times* recently published a series of articles calling attention to the fact that adolescents in the U.S. have been experiencing spiraling rates of suicide, NSSI, and other mental health disorders ([Richtel, 2022b](#)). One article in the series discussed some of the signs that an adolescent may be struggling with anxiety or depression, and how it may be difficult to determine whether these behavioral changes are indicative of a clinical problem or just normal teenage angst. According to the article: "The question is about ‘persistence, interference with thriving, sheer suffering (on her or his part and yours) that can help make this difficult differentiation’" ([Richtel, 2022a](#)). The article also includes some FAQs that can assist clinicians working with families/schools by providing practical advice on how families /youth counselors can help teens who may be struggling with suicidal feelings or who may be using self-harm to manage their emotions. To access these FAQs, [click here](#).

LGBTQ+ Youth

Lesbian, gay, and bisexual high schoolers are significantly more likely than their heterosexual peers to seriously consider suicide, attempt suicide, make a suicide plan, and make a suicide attempt requiring medical treatment, according to the 2019 Youth Risk Behavior Survey ([Ivey-Stephenson et al., 2020](#)). These higher rates may be due to stressors, including discrimination, bullying, and family rejection, which can contribute to anxiety, depression, substance use, and other mental health challenges.

The Trevor Project, a suicide prevention and crisis intervention organization for LGBTQ youth, recently published findings from their 2021 National Survey on LGBTQ Mental Health ([The Trevor Project, 2021](#)). They surveyed 35,000 LGBTQ Youth aged 13-24 years living in communities throughout the United States in 2021, during the COVID-19 pandemic. They found that 47% of LGBTQ youth aged 13-18 had seriously considered suicide in the past year, and that 19% of these 13-18-year-olds had made a suicide attempt. These findings are fairly consistent with findings from the most recent Youth Risk Behavior Survey, which found that 47% of LGB youth had seriously considered suicide and 23% had made a suicide attempt in 2019 ([Ivey-Stephenson et al., 2020](#); [The Trevor Project, 2021](#)).

The Trevor Project survey also found that 75% of LGBTQ youth in their overall sample had experienced discrimination based on their sexual orientation or gender identity at least once in their lifetime, with more than half reporting having experienced this in the past year. Only 1 in 3 reported their home to be “LGBTQ-affirming.” The youth who reported having access to spaces that affirmed their sexual orientation and identity reported lower rates of suicide attempts than youth who did not have access to such spaces ([The Trevor Project, 2021](#)).

Seventy percent of the overall sample reported that their mental health being poor “most of the time or always” during the pandemic. In addition, 67% of the 13-17-year-olds in the sample reported having had symptoms of major depressive disorder in the past two weeks, which is significantly higher than the 40% rate found in the 18-24 age group. Rates of anxiety were high in both groups (73% in the 13-17-year-old, 69% in 18-24-year-olds).

Finally, the 2021 National Survey on LGBTQ Mental Health found that nearly half (48%) of those who had wanted counseling from mental health professionals during the previous 12

months did not receive it ([The Trevor Project, 2021](#)). Additional research is needed on how to reach and support this very vulnerable group.

In addition to its research arm, the Trevor Project offers free and confidential suicide prevention and crisis intervention services to support LGBTQ youth. These services are available 24/7 via phone (TrevorLifeline), text (TrevorText), and chat (TrevorChat). They also run TrevorSpace, a safe space social networking site for LGBTQ youth, as well as educational and public awareness programs. These resources can be accessed at thetrevorproject.org.

School Bullying and Cyberbullying

School bullying has long been associated with mental health consequences in children and adolescents, including suicide ideation, attempts, and deaths ([Hinduja & Patchin, 2010](#)), though no study has demonstrated a causative relationship. The mental health risks associated with cyberbullying have more recently come to attention ([Dorol-Beauroy-Eustace & Mishara, 2021](#); [Hinduja & Patchin, 2018](#); [Zaborskis et al., 2019](#)). Studies show that both school bullying and cyberbullying may independently increase suicide risk, but the risk appears to be greater among students who report being victims of both school bullying and cyberbullying ([Baiden & Tadeo, 2020](#); [Zaborskis et al., 2019](#)).

Cyberbullying has been defined as “willful and repeated harm inflicted through the use of computers, cell phones, and other electronic devices” ([Hinduja & Patchin, 2018, p. 208](#)). A 2018 Pew survey found that a majority of teens have experienced some form of cyberbullying ([Anderson, 2018](#); [Cook, 2022](#)), though not all studies have found this high of a rate ([Cook, 2022](#); [Patchin, 2019](#)). However, incidents of cyberbullying have clearly increased during the pandemic, at least in part due to the increased time youth have been spending online (e.g., online school; leisure activity) ([Cook, 2022](#)).

Studies have uncovered a number of risk factors for suicidal behavior among those who have been cyberbullied. Most of these are factors already identified as associated with suicidal behavior in general (e.g., psychiatric and substance use disorder, stress, loneliness, psychological distress) and not specific to those who have been cyberbullied ([Dorol-Beauroy-Eustace & Mishara, 2021](#)). Findings may also be limited by the self-report nature of the data. For example, youth who report more frequent or more severe cyber harassment are also more likely to report suicidal ideation and attempts ([Hinduja & Patchin, 2018](#); [Dorol-Beauroy-Eustace & Mishara, 2021](#)).

Nevertheless, youth who have been cyberbullied because of their racial/ethnic background, gender identity, or sexual orientation appear to be particularly at risk. This group was 6.85 times more likely to report suicidal ideation and 7.85 times more likely to attempt suicide compared to a control group of youth who were either not cyberbullied or were cyberbullied for other reasons ([Sinclair et al., 2012](#); [Dorol-Beauroy-Eustace & Mishara, 2021](#)).

Protective factors have been studied less than risk factors. However, limited research suggests that factors that mitigate suicide risk in other populations will mitigate risk in this situation, too. For example, school connectedness has been shown to moderate the relationship between

cyberbullying and suicidal behavior in an adolescent sample ([Dorol-Beauroy-Eustace & Mishara, 2021](#); [Kim et al., 2019](#)).

A few studies have explored suicide risk in cyberbullying perpetrators. A recent systematic review found that perpetrators were 1.23 times more likely to experience suicidal ideation and 1.21 times more likely to exhibit suicidal behavior than the nonperpetrators. In this same review, compared to nonvictims, cyberbullying victims were 2.15 more likely to report having suicidal thoughts, 2.10 times more likely to report suicidal behavior, and 2.57 times more likely to report having made a suicide attempt. If we extrapolate from these findings, it appears that while there is a modest increase in the risk of suicidal ideation and behavior among perpetrators, the victims are at more than double the risk ([John et al., 2018](#)).

The vast majority of research in this area has looked at the correlation between having been a victim of bullying and reporting suicidal ideation and/or a suicide attempt. Most studies were cross-sectional as opposed to longitudinal in design, and did not look at suicide death as an endpoint ([Klomek et al., 2010](#)). One longitudinal study by Klomek and colleagues (2009) examined the relationship between childhood bullying behaviors at age 8 and suicide attempts and deaths at age 25. They found that while there was a relationship between bullying and suicide attempts and death in their sample, the relationship varied by sex. Specifically, the relationship between frequent bullying and later suicide attempts and deaths disappeared for males in the study after controlling for baseline psychopathology, but remained for the females. However, this study had several limitations, including the small number of suicides, especially among the females. There were only 2 suicides out of a cohort of about 1000 females who had been bullied and followed for nearly 15 years.

Thus, as stated on [stopbullying.gov](#), a website managed by the U.S. Department of Health and Human Services: “We don’t know if bullying directly causes suicide-related behavior. We know that most youth who are involved in bullying do NOT engage in suicide related behavior. It is correct to say that involvement in bullying, along with other risk factors, increases the chance that a young person will engage in suicide-related behaviors” ([Vivolo-Kantor et al., 2013](#)).

Clinicians treating children and adolescents, and especially those working with marginalized youth, might consider routinely asking about bullying and cyberbullying as further screening for suicide risk may be indicated. There is also a significant risk of suicidal thoughts and behavior among perpetrators, suggesting that typical school discipline relying on isolation might not be the best approach in this instance. Studies (e.g., [Bauman et al., 2013](#)) have also uncovered a link between having been a victim and being a perpetrator of bullying ([John et al., 2018](#)). However, future efforts to reduce bullying and its mental health consequences must be attuned to the unique needs of both of these vulnerable groups ([John et al., 2018](#)).

McLean Hospital has information on its website concerning “The Mental Health Impact of Bullying on Kids and Teens.” This includes how to recognize bullying, what to do if you witness bullying taking place, and where to find help. To access this webpage, [click here](#).

Assessment of Patients Aged 10-24 Years

Record numbers of children and adolescents have been presenting to emergency departments for mental health issues, especially for deliberate self-harm and substance use. A recent study found that while the total number of ED visits for children aged 5 to 17 years remained stable between 2007 and 2016, there was a 60% increase in pediatric ED visits for mental health disorders, a 159% increase in visits for substance use disorders, and a 329% increase in visits related to deliberate self-harm ([Lo et al., 2020](#)).

The National Institute of Mental Health (NIMH) has developed a Brief Suicide Safety Assessment Guide to be used with patients aged 10-24 years old. Children and adolescents under the age of 18 can be interviewed together with a parent or guardian, if one is available. For patients who are 18 years of age or older, the patient's permission is necessary in order for the parent or guardian to join the interview (this varies by state: in some states the minimum age for self-consent is 16). The parent or guardian can also be involved in creating a safety plan for managing suicidal thoughts that may arise in the future.

Suicide risk assessments of adolescents and young adults, especially those with a mood disorder, typically include questions about the presence of non-suicidal self-injury (NSSI), as NSSI has been associated with suicide attempts in this population and others. The assessment for NSSI may include questions about the presence of intent to die, the function of or reasons for engaging in the behavior, methods used, frequency and severity of past self-injurious behavior, and the presence of plan and intent to engage in future self-injury ([Nock et al., 2006](#)).

College Students

The exact rate of suicide among college students is not entirely clear. However, the rate of suicide appears to be lower among college students than their non-student peers ([Arria et al., 2009](#)). Male students older than 25 showed particularly high rates of suicide, and graduate students have higher rates of suicide than undergraduate students ([Haas et al., 2003](#)).

The lower suicide rate found on campus compared to a national sample has been attributed to several factors, including ([Haas et al., 2003](#); [Silverman et al., 1997](#)):

- More readily available no-cost or low-cost health insurance on campus
- More supportive peer and mentor environment on campus
- Campus prohibitions on the availability of firearms
- Greater restriction and monitoring of alcohol use on campus
- Clearer sense of purpose among college students

However, the incidence of suicide among college students is difficult to interpret from individual studies due to variations between studies in the definition of a “college suicide.” Some studies identified only those suicides that took place on campus, whereas others would include all suicides that occurred while the student was enrolled, regardless of the actual location of the suicide. Some studies have been criticized for not distinguishing full-time from part-time students and for not including former students who fail to graduate. In

longitudinal studies, dropping out of college has been associated with a greatly increased risk of suicide ([Haas et al., 2003](#)).

The 2008 American College Health Association assessment of 26,685 students in 40 postsecondary institutions found that 1.3% of college students had attempted suicide and 6.4% had seriously considered suicide at least once in the past 12 months ([Wilcox et al., 2010](#)).

Risk Factors for Suicide in College Students

Suicide in college students, like suicide in other population samples, is always multifactorial ([APA, 2003](#)).

Most mental disorders have their first onset by age 24. College students are in the high-risk age group (18 to 25 years) for the manifestation of symptoms of the more common mental health disorders, including depression, bipolar disorder, schizophrenia, anxiety, and substance abuse problems ([Cook, 2007](#)). The 15-21 age category (which are typically the college years) has the highest past-year prevalence rate of mental illness ([Mackenzie et al., 2011](#)).

Nyer et al. ([2013](#)) examined potential factors that may distinguish college students with depressive symptoms and suicidal ideation from those college students with depressive symptoms but no suicidal ideation. The sample was composed of 287 undergraduates with total scores greater than 13 on the Beck Depression Inventory. They found that the suicidal students were more symptomatic than the non-suicidal students (i.e., they had significantly higher levels of depressive symptoms, hopelessness, and anxiety). However, contrary to expectations, the non-suicidal and suicidal students did not differ on measures of cognitive and physical functioning or grade point average. Monitoring and treating comorbid symptoms of anxiety when students present with depressive symptoms, as well as asking about suicidal ideation even when a student may not appear functionally impaired, can be useful. Nyer et al. ([2013](#)) state: “Lack of functional impairment in students with SI may be one of the reasons why suicide of young people appears to occur unexpectedly” (p. 7).

Alcohol and substance use has been linked to suicide ideation and suicide attempts in college students ([Arria et al., 2009](#)). Eighty percent of college students drink alcohol, and half of college student drinkers engage in heavy episodic drinking ([Lamis et al., 2009](#)). College students who binge drink in solitary contexts (i.e., while alone) experience greater depression and suicidal ideation than students who only binge drink in social contexts ([Gonzalez, 2012](#)). Studies have found evidence of alcohol/substance abuse in 38 to 54 percent of adolescent and young adult suicide victims ([Miller & Glinski, 2000](#)). In addition, prescription opioid use has

Risk Factors for Suicide in College Students

- Depression
- Low social support
- Substance abuse
- Adverse life events
- Family history of suicide
- Sexual abuse
- Troubled relationships
- Difficulties with sexual identity

([Mackenzie et al., 2011](#); [Arria et al., 2009](#))

been correlated with suicidal ideation and attempts in college student samples ([Zullig & Divin, 2012](#)).

Student groups that have elevated rates of suicide include students with learning disabilities, who have been found to be twice as likely as other college students to attempt suicide ([Svetaz et al., 2000](#); [Shadick & Akhter, 2014](#)), and LGBTQ+ students, who have significantly higher rates of suicidal ideation and attempts than heterosexual peers ([Shadick & Akhter, 2014](#)).

Intimate partner or physical dating violence also increase risk for suicide in college students ([Daniels, 2005](#)). Mackenzie et al. ([2011](#)) found that unwanted sexual encounters and a history of physical violence were associated with depression in their college health clinic sample. Blossnich and Bossarte ([2012](#)) found that gay and lesbian college students who experienced any intimate partner violence in the past 12 months had greater than twice the odds of suicidal ideation in the past 12 months compared with gay and lesbian students who did not experience intimate partner violence. Clinicians may decide, when indicated, to screen for intimate partner violence to assure that students are not placed back into a dangerous situation, that an abusive partner is not mistakenly cited as a source of social support, and that referral to additional services can be offered ([Blossnich & Bossarte, 2012](#)). It is not unusual for persons to feel may feel uncomfortable disclosing intimate partner violence even though this presents a problem in their lives that needs to be addressed ([Daniels, 2005](#)). Another area of inquiry in the young adult population are text and social media communications and other forms of cyberbullying. Some recent criminal cases in Massachusetts have uncovered abusive text messages and phone calls contributing to suicide (e.g., [Andersen, 2019](#)).

In addition, clinicians who see college students may need to assess for parent-child conflict and, if relevant, address this issue in therapy ([Lamis and Jahn, 2013](#)).

Summary of Suicide Risk Factors in College Students

The Suicide Prevention Resource Center (SPRC) has a fact sheet titled “Suicide among College and University Students in the United States” which summarizes the risk factors in this population ([SPRC, 2014](#)):

- **Behavioral health issues/disorders:** Depression; substance use; conduct disorders; other disorders (anxiety, eating disorders); previous suicide attempts; NSSI.
- **Individual characteristics:** Hopelessness, loneliness, social isolation, lack of belonging, anger/hostility; risky behavior, impulsivity; low stress and frustration tolerance; poor problem-solving or coping skills; perception of being a burden.
- **Adverse/stressful life circumstances:** Interpersonal difficulties or losses (e.g., relationship breakup, dating violence); school or work problems; financial problems; physical, sexual, and/or psychological abuse (current and/or previous); chronic physical illness or disability.
- **Family characteristics:** Family history of suicide or suicidal behavior; parental mental health problems; family violence or abuse (current and/or previous); family instability and/or loss; lack of parental support.
- **School and Community Factors:** Limited access to effective health or mental health treatment; stigma associated with seeking care; negative social and emotional

environment (negative attitudes, beliefs, feelings, interactions of staff and students); discrimination based on sexual orientation, gender identity, race and ethnicity, or physical characteristics (e.g., being overweight); access to lethal means; exposure to media normalizing or glamorizing suicide.

Treatment Utilization in the College Population

The majority of students who die by suicide do so without ever entering a therapist's office (Eisenberg et al., 2012). One study, for example, found only 23% of college students who committed suicide had been seen by their college counseling center (Cukrowicz et al., 2011; Schwartz, 2006). Treatment utilization in the college population is higher among women, White students, and those who have friends or family members who have been in treatment (Eisenberg et al., 2012; Masuda et al., 2009). Indeed, the *Healthy Minds Study* found that 40% of white students with mental health problems received treatment compared to 28% of Hispanic students, 26% of Black students, and 15% of Asian students (Eisenberg et al., 2012). International students are also less likely than domestic students to seek counseling (Shadick & Akhter, 2014). Those with close friends or family members in treatment were more likely to seek help for themselves (Eisenberg et al., 2011; 2012).

One reason cited for not seeking help was the cultural competence of mental health services. In the *Healthy Minds Study*, 9% of non-White students cited "People providing services aren't sensitive enough to cultural issues" as an important reason for not receiving services. Twenty-three percent of students with sexual orientations other than heterosexual cited "People providing services aren't sensitive enough to sexual identity issues." Other common barriers to seeking help were "I don't have time," "I prefer to deal with these issues on my own," "Stress is normal in college/graduate school," and "I question how serious my needs are" (Eisenberg et al., 2012). Please reference the "Race, Ethnicity, and Culture" section of this guide for resources on providing culturally-competent care.

Older Adults⁹

Epidemiology

Older adults are the fastest growing segment of the population in the U.S. and in most countries worldwide. Over the next 30 years, estimates are that the population over age 65

⁹ We would like to thank Dr. Yeates Conwell, Professor and Vice Chair of the Department of Psychiatry, Director of the University of Rochester Medical Center Office for Aging Research and Health Services and Co-Director of the Center for the Study and Prevention of Suicide, for his significant contributions to this section.

will double and the number over 85 will triple. These demographic changes are fueled by aging into late life of the large post-WWII “baby boom” generation.

The expansion of the older adult cohort poses great challenges for suicide prevention. Among the large majority of countries that report suicide statistics to the World Health Organization, the rate of suicide tends to rise with age for both men and women to peaks in old age ([World Health Organization, 2000](#)). Although in the U.S. the suicide rate among women rises to midlife then decline modestly thereafter, rates for men continue to rise to a peak in those over age 80 of 44/100,000, or almost four times the rate of the general population ([CDC](#)). The pattern varies among ethnic and racial subgroups, with older white men representing the highest risk group. The risk of suicide in a particular age cohort tends to remain stable relative to other age cohorts. Demographic analyses indicate that baby boomers have carried higher suicide rates with them through life than preceding or subsequent age cohorts. The recent rise in both the absolute numbers and rates of suicide in older people therefore likely reflects the entry of the baby boom cohort into older age (the leading edge of baby boomers reached age 65 in 2011), a period of elevated risk among an especially high-risk cohort. That pattern is likely to continue for many years, underscoring the public health imperative of suicide prevention for older adults.

Characteristics of Suicide in Later Life

In addition to the growth of the older population fueled by aging of the baby boom cohort, several unique characteristics of suicide in later life pose challenges to its prevention. First, suicidal behavior appears to be more lethal in older people. Whereas approximately 50% of suicides in the U.S. are by firearm, almost three quarters of older adults who take their own lives do so by this immediately lethal method ([National Vital Statistics Reporting System, 2019](#)). As well, the preparations that suicidal older adults make to end their lives tend to be more planful and deliberate than the suicides of younger people ([Conwell et al., 1998](#)). That is, they act with greater lethality of intent. Furthermore, any injury sustained by an older person is more likely to result in death because of their greater likelihood of physical illness and more limited physical reserves. Older adults are more likely than younger groups to be socially isolated, less likely to discuss their emotional distress with others, and less likely to endorse depression or suicidal ideation, making recognition of high-risk states more difficult as well ([Van Orden et al., 2019](#)).

Using a range of rigorous research methods including retrospective “psychological autopsy” studies, prospective cohort studies, and linkage of disease registries with mortality records, investigators have identified factors that place older people at increased risk for suicide. As a memory aid, we refer to them at the “5 Ds” ([Van Orden et al., 2019](#)).

Depression

Any psychiatric illness is associated with increased risk for suicide on the order of 40-80 times. Affective disorder (major and minor depression in particular, but also bipolar disorder and even subsyndromal depressive states) are more common in late life suicides than other disorders. **D**ementia or mild cognitive impairment is also associated with significantly increased risk although even less likely

	than clinical depression to be diagnosed. A history of prior suicide attempts greatly increases risk for subsequent suicide as well.
<u>Disease</u>	Physical illness increases risk of suicide in later life by a factor of about 2. The illnesses most closely associated with suicide are neurological disorders and cancers.
<u>Disability</u>	Functioning sufficient to perform the usual activities of daily living and maintain independence is central to quality of life in old age. Loss of functional abilities has also been associated with suicide in this age group, independent of other factors.
<u>Disconnectedness</u>	Both theory and research link subjective (e.g., loneliness) and objective measures of social disconnection (e.g., living alone, few social supports) to suicide in older people.
<u>Deadly means</u>	As noted previously, over 70% of suicides in later life are by a firearm. Presence of a handgun in the home has been associated with increased risk of suicide death in an older person, regardless of how it is stored.

Another characteristic of older people who take their own lives is that they are less likely than younger persons to have visited a mental health care professional. Instead, they visit primary and specialty care providers; up to a third of older adults who killed themselves saw their PCP in the last week of life, suggesting opportunities to intervene in that setting ([Amhedani et al., 2014](#); [Luoma et al., 2002](#)).

Given the central role that clinical depression plays in late life suicide ([Conwell et al., 1996](#)), routine screening with tools such as the PHQ-9 ([Kroenke et al., 2001](#)) or Geriatric Depression Scale ([Montorio & Izal, 1996](#)) is recommended in primary care practice. Although routine screening for suicidal ideation in primary care is not recommended by the U.S. Preventive Services Task Force ([USPSTF, 2013](#)), clinicians should be prepared to ask the patient about whom they have concern if he or she has had thoughts that life is not worth living, thoughts of suicide, considered a means by which they would end their lives, and whether they have rehearsed the act. Also, because of the close association of suicide in later life with firearms, routine screening for access to deadly means is an important preventive measure, and where there is concern about an older adult's safety, consideration should be given to removing firearms from the home on a temporary basis.

Prevention

Having systematically reviewed the older person's mental, physical, functional, and social context, screened for depression using standardized measures and for access to firearms, and

assessed the extent and nature of suicidal thoughts they may have, a plan to assure the person's safety and treat the conditions driving suicide risk should be developed.

For those with histories of suicidal ideation or behavior, the Safety Planning Intervention (SPI) has been shown effective in reducing recurrent episodes of self-harm ([Stanley et al., 2018](#)). The SPI is a structured interaction by which the clinician and patient collaboratively develop individually tailored contingency plans for managing periods of increased stress, helping to assure their safety. It should then be coupled with plans for further assessment and treatment.

Indicated preventive interventions are those targeting individuals at high risk for suicide. Evidence-based psychotherapies (cognitive behavior therapy [CBT], problem-solving therapy [PST], and Interpersonal Psychotherapy [IPT]) and, for those with depressive illness, treatment with antidepressant medications appear effective in reducing suicidal ideation and behavior in older adults. Close follow-up to assure ongoing improvement is indicated ([Van Orden et al., 2019](#)).

Because suicidal states tend to be more lethal in later life, it is perhaps even more important to intervene early among those with risk factors but who have not yet become suicidal -- so called "selective" preventive interventions ([Conwell, 2014](#)). Such treatments are not typically thought of as suicide prevention, but nevertheless save lives. They include active treatment of the physical illnesses associated with suicide in later life; aggressive pain management; therapy services designed to optimize the older person's independent functioning; and supports for the older individual's social connectedness and ability to age in place. The settings for these interventions are more often in the community (e.g., through aging services agencies and Area Agencies on Aging) and primary and specialty medical care, than traditional mental health practice. The advent of care models in which mental health, physical health, and non-medical social services for older adults are integrated and delivered in a coordinated manner is a promising development for reducing suicides in this age group.

Finally, negative societal attitudes and misperceptions about aging contribute to risk for suicide in older people as well. The commonly held belief that later life is an unhappy time rife with loss and illness belies the fact that older adults are on average more satisfied with their lives than younger and middle-aged adults ([Carstensen et al., 2011](#)). It is not normal for an older person to be depressed or to think that their life is not worth living, but rather an indication for assessment, diagnosis, and care

Perinatal Women

One of the DSM-5 changes that came out in 2013 is the use of the term "perinatal depression" as opposed to "postpartum depression." The diagnosis of perinatal depression requires that the depression occurs during the pregnancy or during the first four weeks postpartum. The diagnostic criteria did not change in DSM-5, but the time period for relevant symptoms was extended ([Stuart-Parrigon & Stuart, 2014](#)). Perinatal depression also includes episodes that begin prior to pregnancy and persist during the pregnancy.

Risk Factors for Suicidal Ideation in Pregnant Women

- Living in urban areas
- Pregnant teens with limited social support
- Being 20 or younger
- Having fewer than 12 years of education
- Intimate partner violence
- History of major depressive disorder

([Coelho et al., 2014](#); [Gandhi et al., 2006](#); [Gelaye et al., 2016](#))

While pregnant women are more likely than the general population to experience suicidal ideation, they are less likely than their non-pregnant counterparts to die by suicide ([Gelaye et al., 2016](#)). This finding holds both in the U.S. and abroad ([Appleby, 1991](#); [Gissler et al., 2005](#); [Gelaye et al., 2016](#); [Marzuk et al., 1997](#); [Samandari et al., 2011](#)). Nevertheless, suicidal ideation and attempts during pregnancy have been associated with adverse consequences, including low birth weight ([Gelaye et al., 2016](#); [Gandhi et al., 2016](#)). In one study, infants born to mothers who reported depressive symptoms with suicidal ideation weighed 240 grams less on average than infant born to mothers who reported depressive symptoms without suicidal ideation ([Gelaye et al., 2016](#); [Hodgkinson et al., 2010](#)).

The suicide rate among women who have given birth in the last year is also significantly lower than the suicide rate among women who have not given birth. Nevertheless, suicide still occurs in postpartum women and, in fact, is one of the most common causes of maternal death in the year following delivery, accounting for about 20% of postpartum deaths ([Lindahl, Pearson, & Colpe, 2005](#); [Wisner et al., 2013](#)). In addition, diagnoses of suicidality in childbearing women has increased steadily between 2006 and 2017 ([Admon et al., 2020](#)). Women with a postpartum psychiatric hospitalization can be at greater risk for suicide during the first postpartum year than women without a postpartum psychiatric hospitalization ([Appleby et al., 1998](#); [Oates, 2003](#); [Orsolini et al., 2016](#)).

Risk Factors for Suicide Completion in the Perinatal Period

- Younger Maternal Age
- Unpartnered Relationship Status
- Unplanned Pregnancy
- Non-Caucasian Race
- Shorter Psychiatric Illness Duration
- Preexisting Psychiatric Illness
- Current Psychiatric Diagnosis

([Orsolini et al., 2016](#))

The risk of both first onset and recurrence of bipolar disorder is increased during the postpartum period. Nearly a quarter (22.6%) of postpartum women who screened positive for depression in one study had bipolar disorder ([Wisner et al., 2013](#)). A bipolar depression requires a different form of treatment than unipolar depression, including use of a mood-stabilizer, such as lithium. Second-generation antipsychotics (cariprazine, lurasidone,

olanzapine+fluoxetine, quetiapine) and cautious use of an antidepressant may be indicated, depending upon clinical response.

While many mothers may prefer not to use medication in the perinatal period, there is now sufficient research support to suggest that, especially in the case of severe depression, it is more beneficial for both the mother and the child for the depression to be treated. Many women need to take medication to achieve and maintain a euthymic mood during pregnancy and breastfeeding. Medication should not be discontinued without extensive discussion with prescribing physicians and/or other consultants.

Postpartum Psychosis

Postpartum psychosis is relatively rare. It occurs in about 1 or 2 in 1000 deliveries ([Luykx et al., 2019](#)), compared to postpartum depression which occurs in 1 in 9 women ([Ko et al., 2017](#)).

Symptoms of Postpartum Psychosis

- Suicidal or infanticidal thoughts
- Delusions or strange beliefs
- Hallucinations
- Feeling very irritated
- Hyperactivity
- Decreased sleep
- Paranoia or suspiciousness
- Rapid mood swings
- Difficulty communicating at times

([Postpartum Support International](#))

Women with this diagnosis often do not express their suicidal or infanticidal thoughts ([Luykx et al., 2019](#)). One study has indicated that approximately 5% of women with postpartum psychosis ultimately die by suicide ([Lucchesi, 2018](#)). While suicide is uncommon during the immediate postpartum psychosis, it becomes more common during subsequent psychotic episodes and later in life ([Brockington, 2017](#)). Approximately one in three women who have experienced postpartum psychosis experience recurrence with subsequent pregnancies ([Bergink et al., 2016](#)). The most significant risk factors for postpartum psychosis are a previous psychotic episode and a personal or family history of bipolar disorder. There is an increased incidence of suicide among first-degree relatives of women with postpartum psychosis.

The rate of infanticide in women with a history of postpartum psychosis is approximately 4% ([Lucchesi, 2018](#)). Antipsychotics, lithium, and ECT can be effective for postpartum psychosis. Inpatient care is usually required ([Bergink et al., 2016](#)).

Murder-Suicide

Murder-suicide, also known as homicide-suicide, is when an individual kills one or more people before taking their own life. It is necessary for the two acts to occur in close proximity—in most cases, the suicide occurring within seconds or minutes of the homicide. Murder-suicides are very rare, with fewer than 1/year per 100,000 people occurring in the United States ([Knoll, 2016](#)). They account for only about one to two percent of all suicides ([Jacobs, 1999](#); [Joiner, 2014](#)).

Murder-suicides have been classified according to type and class. Type refers to the relationship between the perpetrator and victim. There are three types of murder-suicide: spousal/consortial, familial, and extrafamilial. Class refers to the principal motive or the precipitant for the murder-suicide. Some examples of classes are amorous jealousy, mercy killing, retaliation, and family financial or social stressors. Certain types of murder-suicides have been associated with certain classes. For example, spousal/consortial suicides are more likely to involve amorous jealousy, whereas familial suicides are more likely to be mercy killings because of the declining health of either the victim or the offender ([Jacobs, 1999](#); [Marzuk et al., 1992](#)).

The majority of murder-suicides in the U.S. are perpetrated by men. Most cases involve a man killing a romantic partner or ex-romantic partner before killing himself. Common contributing factors are estrangement and history of domestic violence leading to impending divorce or separation. In the elderly, however, most murder-suicide cases involve an older male caregiver killing his ailing wife and then killing himself. Firearms are the most common method of homicide-suicide. Depression is common among perpetrators ([Eliason, 2009](#)).

The perpetrators of murder-suicide typically have a low rate of prior criminal behavior. This, along with the rarity of murder-suicide, makes prediction impossible. As with attempts to predict simple suicide and homicide, any evaluation of murder-suicide is likely to overpredict mortality. Most individuals who fit the profile will never die in a murder-suicide event ([Eliason, 2009](#); [Jacobs, 1999](#)).

Patients who present with a recent suicide attempt, have a suicide plan, or voice suicidal ideation may need to have their risk of violent or homicidal behavior assessed. Likewise, patients who present with recent violent behavior or homicidal ideations may need to be evaluated for suicidal behavior. Although there are few studies that address the concurrence of homicidal and suicidal ideation, one psychological autopsy study estimated that 10-15% of patients who experience suicidal ideation also experience homicidal ideation ([Brent et al., 1993](#)).

Components of murder-suicide risk assessment include:

- History of domestic violence
- Access to lethal means, particularly a firearm
- Postpartum psychosis
- Suicide attempt, suicide plan, or suicidal ideation in context of interpersonal crisis
- History of financial stress in combination with severe relationship turmoil

- Obsessive or delusional jealousy, especially when comorbid with depression or paranoia
- Older males caring for a deteriorating partner

Interventions will include treating psychiatric symptoms, determining the need for hospitalization, removing access to firearms and other lethal methods, and connecting patients to psychosocial supports and other social services ([APA, 2003](#)).

Individuals with Substance Use Disorders

Substance use disorders have been associated with increased risk of suicide death, even after controlling for known risk factors, such as psychiatric and physical health conditions ([Lynch et al., 2020](#)). While all substance use disorders carry an elevated risk of suicide, the risk is greatest for alcohol and opioid use disorders ([Rizk et al., 2021](#)). Persons with alcohol use disorder and opioid use disorder are 10-15 times more likely to die by suicide than the general population ([Connery, 2021](#)). Suicide risk is elevated even during times of abstinence or remission ([Connery, 2021](#); [Rizk et al., 2021](#)).

As with the general population, more men with substance use disorders will die from suicide than women. However, the strength of the association between substance use disorders and suicide is greater for women than it is for men ([Lynch et al., 2020](#)). Researchers suggest that women may be more reluctant than men to seek treatment for their substance use, so that the women who are diagnosed have a more severe substance use disorder ([Lynch et al., 2020](#)).

Opioid use disorder carries the greatest risk of suicide, as well as mortality. Persons who use opioids are 14 times more likely to die by suicide than the general population ([Harris and Barraclough, 1997](#); [Rizk et al., 2021](#); [Wilcox et al., 2004](#)). The relative risk of suicide and fatality with opioids is five times that of other substances ([Connery, 2021](#)). Opioid users have elevated mortality risk for both drug poisoning and suicide and this increase risk of death persists through age 65 ([Connery, 2021](#)).

There are a number of reasons why substance use may increase suicide risk. Individuals with substance use disorders are likely to have co-occurring depressive disorders and we know that having a depressive mood disorder, particularly bipolar disorder, is a leading risk factors for both and substance intoxication ([Baldessarini, 2021](#); [Connery, 2021](#)). Substance use disorder and substance intoxication are also both correlated with novelty-seeking and other impulsive behaviors, as well as the use of more lethal suicidal behavior ([Connery, 2021](#); [Rizk et al., 2021](#)). There also may be shared neurobiological and social factors for substance use disorders and suicide risk (e.g., social isolation, unemployment, housing insecurity, childhood trauma, legal stressors) ([Connery, 2021](#); [Rizk et al., 2021](#)).

Moreover, frequent exposure to premature mortality may desensitize to death and increase the individual's capacity for self-harm behavior, especially among those who are struggling with opioid use disorder ([Connery, 2021](#)). Fear of death and ambivalence surrounding death protect many individuals from taking their lives.

Suicide and mortality risk in opioid users is further increased with alcohol misuse ([Connery, 2021](#); [Rizk et al., 2021](#)). In general, polysubstance use—having more than one substance use disorder (e.g., alcohol + drug + tobacco)—is known to increase suicide risk ([Lynch et al., 2020](#)). Using opioids together with alcohol also increases one’s risk of unintentional overdose via respiratory depression ([Rizk et al., 2021](#)). The risk of an overdose being fatal is greatest if an opioid or barbiturate was used ([Miller et al., 2020](#)).

Alcohol and opioids are the most common substances found in suicide decedents. Twenty-two percent of suicide deaths involve alcohol, 20% involve opioids ([Connery, 2021](#); [Rizk et al., 2021](#)). However, there is reason to believe that suicide deaths involving these substances are significantly undercounted (e.g., [Abiragi et al., 2020](#); [Rockett et al., 2018](#)). While recent data reports a reduction of suicides by 5.6% between 2018 and 2020, some question whether this reduction is actually due to misclassification as accidental drug overdose deaths. The number of drug overdoses increased by nearly 40% during this very same time period, from 67,367 drug overdose deaths in 2018 to 93,331 deaths in 2020 ([Ahmad, 2021](#); [CDC, 2021](#); [Wilson et al., 2020](#)). A recent study, which isolated data based on age, gender, and race, found that between 2015 and 2019 suicides by intentional drug overdose significantly increased among youth aged of 15-24, elderly adults aged 75-84, and Black women ([Han et al., 2022](#)).

To call a death a suicide, one looks for evidence of “[b]ehavior that is self-directed and deliberately results in injury or the potential of injury to oneself” and implicit or explicit evidence of suicidal intent. Explicit evidence of suicide intent includes suicide notes, internet search for methods, final communication to others. Evidence of implicit intent includes being found shot by your gun in your own home or being found dead of carbon monoxide poisoning in your own garage ([Connery, 2021](#)). However, as Dr. Connery ([2021](#)) stated in a recent presentation, substance use is neither explicit nor implicit evidence of suicidal intent¹⁰ and some jurisdictions will call any deaths with “prominent intoxication” an accidental death.

Intentionality of an opioid user falls on a spectrum, from “I don’t think I will die even though I’m misusing opioids” to “My life is pointless; today is a good day to die.” ([Connery, 2021](#)). Connery and colleagues ([2019](#)) found that over a third (36%) of opioid overdose survivors reported that they had a strong desire to die before their overdose, whereas 41.51% reported no desire to die at the time.

While there is significant overlap, those who intentionally overdose on opioids and those who unintentionally overdose are likely distinct groups with distinct clinical correlates. For example, more females intentionally overdose, whereas more males accidentally overdose. In addition to gender, risk factors for suicide among opioid users include higher dose, older age, comorbid disorder, and a low sense of belonging (e.g., [Webster, 2017](#)).

Researchers, using the psychological autopsy method, also found several factors distinguishing opioid deaths categorized as accidents from opioid deaths categorized as suicides. Though the sample size was small, accidental opioid deaths were more frequently found in men, those with more severe substance use disorders, those who had a prior nonfatal

¹⁰ Though research shows that suicide notes are found twice as often in suicide deaths by drug poisoning than in suicide deaths by firearm or hanging (Rockett et al., 2018; Connery, 2021).

overdose, and those experiencing family conflict. Suicide deaths was more common in those with evidence of a depressive disorder, prior suicide attempt, and greater number of total lifetime stressors. Opioid users who died by suicide were significantly more likely to have experienced the end of a romantic relationship in the 6 months prior to death. They also showed more evidence of recent planning for death ([Athey et al., 2020](#); [Connery, 2021](#)).

Having a prior nonfatal overdose has also been associated with both future fatal overdose and future suicide in large population studies ([Connery, 2021](#); [Olfson et al., 2018](#)). Unfortunately, there are also racial disparities in treatment of those following hospitalization for deliberate drug overdoses, with non-Hispanic Blacks significantly less likely than non-Hispanic Whites to receive a mental health assessment during hospitalization and to be discharged to an inpatient psychiatric facility ([Charron et al., 2019](#); [Connery, 2021](#)). Drug poisoning deaths have also increased disproportionately among Black populations. Persons who lack insurance are also less likely to be discharged to an inpatient psychiatric facility after hospitalization for a deliberate drug overdose ([Charron et al., 2019](#)).

Studies show that a significant portion of those entering treatment for opioid use disorder report at least one prior suicide attempt ([Connery, 2021](#)). Prior suicide attempt has been shown to be one of the most consistent correlates of future suicidal behavior ([Baldessarini, 2021](#); [Ribeiro et al., 2016](#)). It is thus important in this population to take a careful history of depressive symptoms and other factors associated with acute suicide risk ([Connery, 2021](#)).

During a recent presentation, Dr. Connery ([2021](#)) discussed some conversation starters that may help clinicians who work with individuals with opioid use disorders. These include:

- “Has it gotten so bad that you wished you were dead?”
- “I know that you’re telling me about your relapse, but I’m actually more concerned that you’re spending time thinking about your own death.”
- “You told me that you planned to use last week, and that you were not going to carry your naloxone with you, which is different from before. What do you think about this?”
- “You’re taking more risks than you usually do. What’s going on?”

Emergency Department patients who come in with an overdose are frequently screened for suicide risk, so that, if positive, they can be referred for appropriate treatment. The Columbia Protocol provides a screener with triage specifically for use in Emergency Departments. To access this screening instrument, [click here](#).

Educating substance-using patients and their families how to recognize and respond to suicide planning and preparation is also important as is the need to create a personalized safety plan, when indicated ([Connery, 2021](#); [Olfson et al., 2018](#)). Because the number of firearm suicides among persons with opioid use disorder is even greater than the number of overdose suicides, clinicians, when indicated, can discuss restricting access to all lethal means, not just pills, with these patients and their loved ones ([Oquendo & Volkow, 2018](#)).

As discussed earlier in this resource, medication for addiction treatment, specifically buprenorphine and methadone, has been shown to significantly reduction suicide mortality in opioid users ([Ahmadi et al., 2018](#); [Fazel & Runeson, 2020](#); [Molero et al., 2018](#); [Mooney, 2022](#); [Watts et al., 2022](#); [Yovell et al., 2015](#)). It can also be useful for clinicians to focus

efforts on abstinence and recovery care, sleep hygiene, pain relief, peer and community support, and establishing reasons for living. Harm reduction in substance use disorder also includes reducing the number of substances used, avoiding activities such as driving or swimming, and carrying naloxone rescue ([Connery, 2021](#)).

Finally, reducing opioid suicides may require a public health response that is different from the current response, which is currently aimed at preventing unintentional fentanyl overdoses.

Cigarette Smoking

The first study finding an association between cigarette smoking and suicide was published in 1969 ([Li et al., 2012](#); [Paffenbarger et al., 1969](#)). Since that time, many studies have been published on this topic, including a few meta-analyses. For example, Poorolajal & Darvishi ([2016](#)) found in their meta-analysis of 63 studies that current smokers have a higher risk of suicide ideation, plans, attempts, and deaths than nonsmokers. In a meta-analysis of 15 prospective cohort studies, Li and colleagues ([2012](#)) found that current and former smokers are both at increased risk of death by suicide than never smokers. Furthermore, among smokers, the risk is significantly higher for current smokers than former smokers.

There also appears to be a dose-response relationship between cigarette smoking and suicide. In their meta-analysis, Li and colleagues ([2012](#)) estimated that for every additional 10 cigarettes smoked per day, the risk of suicide increased by 24%. A [cohort study](#) of over 300,000 male active-duty Army soldiers also found increased suicide risk among those who smoked more cigarettes per day. Active-duty soldiers who smoked more than 20 cigarettes a day were twice as likely to die by suicide than those soldiers who never smoked ([Miller et al., 2000](#)).

While there is a clear association between cigarette smoking and suicide, the reason for the association is less certain. Some have posited that smoking and suicide are not causally related, but rather that some individuals may be predisposed to both smoking and suicide (e.g., [Miller et al., 2000](#)). Biological, social, and causal explanations have been proposed, many of which are plausible ([Green et al., 2017](#)).

For example, with respect to biology, smoking may lead to depression by altering brain chemistry. We know that smoking decreases serotonin ([Green et al., 2017](#); [Malone et al., 2003](#)). We also know that nicotine is a strong activator of the hypothalamic-pituitary adrenal axis ([Green et al., 2017](#); [Rohleder & Kirschbaum, 2006](#)). These two biological mechanisms may play role in the link.

Smoking is also associated with tobacco-related diseases (e.g., cancer, COPD), which can be painful and debilitating ([Green et al., 2017](#); [Li et al., 2012](#)). Physical health conditions, especially those involving chronic pain or functional impairment, are known risk factors for suicide (e.g., [Racine, 2018](#); [Tang & Crane, 2006](#)).

Pre-existing or co-occurring mental illness may partially account for the finding ([Green et al., 2017](#)). It has been posited that smoking can be a form of self-medication for depression ([Li et al., 2012](#)). There is also significant overlap between mental health disorders and addictions ([Green et al., 2017](#)), and cigarette smoking together with alcohol use is an established risk

factor for suicide ([Hawton & van Heeringen, 2009](#); [Li et al., 2012](#)). However, studies that have adjusted for alcohol intake still find an independent association between smoking and suicide ([Li et al., 2012](#)).

Smoking is also more common among segments of the population who, for various reasons, are at increased risk of suicide. These demographics include individuals with higher levels of life stressors and fewer coping and other resources (e.g., lower SES, less education, or unemployed). Green and colleagues ([2017](#)) hypothesize, for example, that: “If the initiation of smoking starts at a young age when an individual is developing coping skills, tobacco use can quickly become the only mechanism used to cope as it provides instant relief of negative emotions” (p. 839).

Regardless of specific causation, cigarette smoking is a risk factor for suicidal behavior and death. In fact, data from a very large longitudinal study conducted in the U.S. found that the relative risk of death associated with smoking was 4.4 for women and 3.2 for men, after adjusting for factors including age, race, education level, and daily alcohol intake ([Green et al., 2017](#); [Sareen et al., 2015](#)). Miller and colleagues ([2000](#)) also found that Army personnel who smoked were more likely to have risk factors in common with depression and suicide, such as being White, heavy drinkers, and less educated, among other things. When they controlled for these factors, however, there was still “a strong, positive, dose-related association between smoking and completed suicide” ([Miller et al., 2000, p. 1062](#)). There is an increasing body of evidence that quitting smoking can reduce suicide risk, though not to the level of never smokers ([Leistikow & Shipley, 1999](#); [Li et al., 2012](#)).

Military and Veteran Populations

The U.S. Department of Defense recently released its Annual Suicide Report for the calendar year 2020. The report shows an increase in the total number of suicides between 2019 and 2020, and this increase was not only among active-duty soldiers, but also among reservists and the National Guard ([DoD, 2021](#)). In 2020, there were approximately 29 suicide deaths per 100,000 active-duty troops, up from approximately 26/100,000 in 2019 and 25/100,000 in 2018, which was at that time considered an all-time high ([DoD, 2018](#); [LaPorta, 2019](#)). Among the services, the Army showed the highest rate, with 36.4 deaths per 100,000 soldiers ([DoD, 2021](#)).

High rates of suicide have also been found among military veterans. Veterans are 1.5 times more likely to die by suicide than non-veterans. Female veterans are particularly at risk, with a suicide rate 2.2 times higher than that of non-veteran adult women ([Shane, 2019](#)).

Other risk factors among military and veteran populations include early separation from service, transition to civilian life, recent deployment, lower rank, younger age, clinical depression, comorbidity ([Fazel & Runeson, 2020](#); [Ravindran et al., 2020](#)) and recent discharge from a psychiatric hospital ([Kessler et al., 2015](#)). U.S. veterans with opioid use disorder have a rate of suicide six times greater than the general population. Having an opioid use disorder more than doubles the risk of suicide in female veterans, and increases the risk

of suicide by 30% in male veterans, compared to veterans who do not have an opioid use disorder ([Oquendo & Volkow, 2018](#)).

Another risk factor among veterans and military personnel is access to lethal means. Over 60% of U.S. military suicides occur at home and involve a personally-owned firearm ([Myers, 2021](#); [Pruitt et al., 2017](#)). The firearm suicide rate among veterans is 1.5 times that among non-veterans ([Everytown Research & Policy, 2021](#); [U.S. Department of Veterans Affairs, 2018](#)). A recent study found that military personnel with suicidal ideation were 53% less likely to store firearms in a safe manner than those with no such history. In this same study, military personnel with recent thoughts of death or self-harm were 74% less likely to store their firearms safely ([Bryan et al., 2019](#); [Theis et al., 2020](#)). This represents a challenge for clinicians given the proportion of military veterans who have legal access to firearms.

Researchers have been looking for better ways to identify military personnel at imminent risk. One recent study, for example, looked at data from a large sample of U.S. Army soldiers who had made a suicide attempt within 30 days of first medical documentation of suicidal ideation. They found that certain groups of enlisted soldiers, specifically women and combat medics, are at heightened risk of rapid transition from ideation to attempt. Soldiers who had been diagnosed with a sleep disorder on the same day as they were documented to have suicidal ideation were also found to have increased suicide vulnerability ([Herberman Mash et al., 2021](#)).

Race, Ethnicity, and Culture

Suicide is sometimes erroneously thought of as only a “White man’s problem.” White males account for about 70% of all suicides in the United States. The suicide rate for White individuals in the U.S. is 18 per 100,000 persons compared to an overall suicide rate of 14.2 per 100,000. However, the suicide rate is actually highest in the American Indian/Alaskan Native population and is a significant problem in other racial and ethnic groups ([SPRC, 2020](#)). In addition, American Indian/Alaskan Native, Asian American, Black/African American, and Hispanic suicides are often undercounted, either due to medical examiners misclassifying the deaths or families not wanting to report the suicide due to stigma ([Dennis, 2018](#)).

American Indian/Alaskan Native Populations

American Indian and Alaskan Native (AI/AN) populations have the highest suicide rate of all racial and ethnic groups in the U.S., with 22.1 suicides per 100,000 persons in 2018. While suicide rates in the overall U.S. population are highest among middle-aged adults, suicide rates in AI/AN populations are highest among adolescents and young adults ([SPRC, 2020](#)).

There is significant cultural and ethnic heterogeneity among AI/AN populations. There are currently 574 federally recognized tribal nations and Alaska native villages, with members speaking over 200 languages ([National Congress of American Indians, 2020](#)). AI/AN have

the highest poverty rate of any racial and ethnic group in the U.S. While the rate of mental disorders, and especially those associated with suicide, are high in this population, mental health treatment rates are low ([APA, 2020](#)). Reasons may include a lack of available services, lack of culturally competent care, economic barriers, and stigma ([SAMHSA, 2010](#)).

Potential risk factors for suicide in the AI/AN population include higher rates of alcohol use disorder, substance use disorder, and posttraumatic stress disorder, as well as stressors related to poverty discrimination, racism, and historical trauma ([SAMHSA, 2010](#)). SAMHSA has published a guide for understanding suicide within AI/AN communities and promoting culturally sensitive practices in these communities. To access this manual, [click here](#).

Asian American and Pacific Islander Populations

The Asian American and Pacific Islander (AA/PI) population in the U.S. is very diverse, consisting of approximately 50 subpopulations and over 100 languages. Studies have found that only 30% of this population is fluent in English, presenting a significant barrier to accessing mental health services ([APA, 2020](#)).

Other obstacles to accessing mental health care include stigma, especially among first-generation immigrants. In AA/PI cultures, having a mental illness can be a source of shame and weakness. Structural barriers also exist, including lack of cultural competency among service providers and a lack of research specific to these populations. These factors may contribute to the finding that the AA/PI population is the least likely of all racial and ethnic groups in the U.S. to seek mental health care ([APA, 2020](#)).

With respect to suicide, the suicide rate among AA/PI populations is highest among the elderly and the young, in contrast to the overall U.S. population, where suicide peaks in middle-aged adults. The suicide rate among AA/PI young adults has also been on the rise, according to recent CDC data ([SPRC, 2020](#); [SAMHSA, 2018](#)).

The [World Health Organization](#) and [Each Mind Matters: California's Mental Health Movement](#) have highlighted educational resources and outreach materials about suicide in Bengali, Chinese, Hmong, Khmer, Korean, Lao, Mien, Tagalog, Vietnamese, and Japanese, which can be shared with patients.

Black/African American Populations

Black/African American communities make up about 13% of the U.S. population. Only one-third of Black/African American individuals who are in need of mental health care receive it. They are less likely to be offered evidence-based medicines, psychotherapy, and other outpatient services compared to the general population. Black/African American individuals with psychotic disorders (e.g., schizophrenia, bipolar disorder) are also more likely to be incarcerated than those with these conditions in other racial and ethnic groups ([APA, 2020](#)). In addition to stigma and structural racism, other barriers to treatment in Black/African American communities include lack of culturally-competent care, lack of insurance, and lack of trust in the healthcare system ([APA, 2020](#)).

Over the past few decades, suicide attempts among Black/African American adolescents have increased significantly ([Lindsey et al., 2019](#)). Black/African American high school youth are more likely than the overall high school youth population to have attempted suicide in the past year and their suicide attempts are more lethal ([SPRC, 2020](#)). Moreover, a recent study also found that the suicide death rate of black youth also increased significantly between 2003 and 2017 for both genders and all age groups (5-11, 12-14, and 15-17); the greatest percentage increase was among girls (6.6%) and those in the 15-17 year group (4.9%) ([Sheftall et al., 2021](#)).

Congress asked the Department of Health and Human Services (HHS) to report back on why preadolescent Black children are dying by suicide at nearly twice the rate as preadolescent White children. In response, HHS conducted a study of 2266 non-Hispanic Black and White youth aged 10 to 17 who had died by suicide between 2014 and 2017. They found that the Black youth were more likely than the White youth to have a crisis in the two weeks prior to their death and to have a family relationship problem, argument, or conflict ([U.S. Department of Health and Human Services, 2020](#)).

The study also found that Black youth were more likely than White youth to have made a previous suicide attempt ([U.S. Department of Health and Human Services, 2020](#)). This is consistent with recent research, which found an approximately 80% rise in suicide attempts among Black adolescents over the last 30 years, whereas the prevalence of attempts among other racial and ethnic groups did not significantly change (and even declined in some cases) during this same time period ([Xiao et al., 2021](#)).

Despite this rise, the Black suicide decedents in the HHS study were less likely than White suicide decedents to have a known mental health problem, current depressed mood, history of suicidal thoughts or plans, and past or current treatment for mental illness. The fact that Black youth are less likely to have had mental health treatment prior to their death, but more likely to have a history of suicide attempts, is especially concerning, as it suggests significant disparities in access to and/or utilization of available mental health resources.

A New York Times article titled, *Why Are More Black Kids Suicidal? A Search for Answers*, discusses a number of reasons explaining the low treatment rate of depression in Black adolescents. For one, there is a shortage of mental health professionals in Black communities, and especially mental health providers of color ([Caron, 2021](#)). According to the American Psychological Association's Center for Work Force Studies, only 4% of psychologists were Black/African-American in 2015 ([Lin et al., 2018](#)). Stigma is also a barrier. There can be shame in having depressive symptoms and seeking out treatment, even when such treatment is available ([Caron, 2021](#); [Jon-Ubabuco & Champion, 2019](#)).

Mitigating suicide risk in Black youth will necessitate a full-scale approach. The HHS report recommends early identification and treatment of mental health issues, including school-based screening, interpersonal problem-skills training, and family-based interventions. This must occur in combination with strategies that address systemic issues, such as health care disparities, racism, and other social determinants of health. The full report, titled *African American Youth Suicide: Report to Congress*, can be accessed [here](#).

Hispanic and Latino Populations

The U.S. Hispanic/Latino population is also very diverse, and includes people from throughout Latin America and other Spanish-speaking countries. Research on suicide in the Hispanic population is limited, but suggests that mental health treatment in this population is low. In 2018, Hispanic adults were half as likely to receive mental health treatment as non-Hispanic White adults. Barriers to treatment in this population include a shortage of bilingual or Spanish-speaking mental health professionals, low rates of insurance coverage, and stigma surrounding mental illness ([APA, 2020](#)).

In 2017, suicide was the second leading cause of death for Hispanics aged 15 to 34. CDC data show that Hispanic adolescents have high rates of suicide attempts, especially girls. Suicide attempts for Hispanic girls, grades 9-12, were 40 percent higher than for non-Hispanic White girls in the same age group, in 2017 ([CDC, 2019](#); [HHS, Office of Minority Health](#)).

Culturally Competent Care

Lack of cultural understanding by health care providers may contribute to treatment disparities in racial and ethnically diverse groups. The American Psychiatric Association's Cultural Competency webpage has a wealth of information about working with diverse populations. To access this webpage, [click here](#).

Additional resources:

[SAMHSA TIP 59: Improving Cultural Competence \[Treatment Improvement Protocol\]](#)

[National Standards for Culturally and Linguistically Appropriate Services in Health and Health Care \[Webpage\]](#)

[U.S. Department of Health and Human Services, Office of Minority Health: Improving Cultural Competency for Behavioral Health Professionals \[e-Learning Program\]](#)

Primary Care Patients

Approximately 4 out of 5 persons who die by suicide will have seen a healthcare provider in the preceding year, though 55% will not receive a mental health diagnosis. One study of insured patients also found that nearly half will have made a healthcare visit within 4 weeks of suicide death, but only 24% of those who made a visit had a mental health diagnosis within that 4-week period ([Ahmedani et al., 2014](#)). These findings are consistent with a systematic review, which found that, on average, 45% of those who die by suicide had contact with a primary care provider within 1 month of their suicide ([Luoma et al., 2002](#)).

A long list of physical health conditions has been associated with suicide death. These conditions include asthma, cancer, chronic pain, COPD, coronary artery disease, diabetes,

spinal disk disorders, stroke, and traumatic brain injury. In general, chronic illness, terminal illness, and functional impairment places patients at greatest risk ([Racine, 2018](#); [Schreiber & Culpepper, 2020](#); [Tang & Crane, 2006](#)). Persons with these conditions can be assessed for suicide so as to inform a treatment plan ([Jacobs, 2000](#)).

In addition to these physical health conditions, other conditions may warrant screening for suicide risk. These include having a prior suicide attempt, psychiatric history, substance use disorder, family history of suicide or violence, and symptoms such as irritability, agitation, and aggression. Inquiring about suicidal ideation may also be indicated when patients mention that they feel alone, that they experienced a recent loss leading to humiliation, shame, or despair, or that they had been exposed to a suicide ([Suicide Prevention Resource Center, 2021](#)).

At this time, however, there is no requirement for universal screening for suicidal ideation in primary care settings, adult nor pediatric. In 2020, The US Preventative Services Task Force reviewed evidence for suicide ideation screening. They felt there needed to be additional research into the risks and benefits of screening as well as the effectiveness of interventions for populations experiencing suicidal ideation before making a recommendation ([Holcomb et al., 2022](#)). The Joint Commission, which certifies and accredits healthcare organizations and programs in the United States, requires that patients age 12 or above who are being evaluated or treated for behavioral health conditions in an accredited facility be screened for suicidal ideation, but they do not require universal screening ([Joint Commission, 2018](#)).

In a recent article, Holcomb and colleagues ([2022](#)) discuss the challenges faced by primary care pediatricians who are seeing increasing numbers of adolescents experiencing suicidal ideation in their practices. The authors found that nearly 5% of a large national sample of adolescents reported experiencing suicidal ideation at least several days over the two weeks prior to their well-child visit. These adolescents who endorsed experiencing suicidal ideation also reported a high rate of past suicide attempts (20.5%) and had significant impairment in other psychosocial domains (e.g., depression, anxiety, attentional difficulties, conduct problems). The authors go on to discuss the implications for pediatric practice. They argue that while most patients who screen positive for suicidal ideation on screening instruments are not at imminent risk of suicide, they are still experiencing significant psychological distress and could benefit from further assessment and management ([Holcomb et al., 2022](#)). In other words, “The approximately five percent of teenagers identified by the PSC and PHQ-9 should be treated almost like they have a chronic disease...It’s a group that needs care management and ongoing attention, which pediatricians already do with other chronic conditions,” according to Dr. Michael Jellinek, one of the study authors ([Mainey, 2022](#)).

A key factor in reducing suicidal behavior will be diagnosing and treating major depression in primary care. There is evidence that training primary care providers on how to recognize and treat depression decreases suicidal ideation and suicide death in patients ([Mann et al., 2005](#); [Suicide Prevention Resource Center, 2021](#)).

In addition to identifying and managing depression and suicidality, suicide prevention in primary care settings involves educating staff and patients about suicide warning signs, safety planning, and means restriction. Having a pre-established protocol regarding referral for hospitalization and evidence-based treatment in such cases is useful ([Suicide Prevention](#)

[Resource Center, 2021](#)). Please note that the [National Suicide Prevention Lifeline](#) is available 24/7 for patients who are in a suicidal crisis or who may be experiencing emotional distress.

The Suicide Prevention Resource Center website has a toolkit available to help primary care practices. The toolkit includes information on assessment, safety planning, referral, billing, and other resources to help primary care providers with suicide prevention. Click here to access the [online version](#) or the [free pdf](#).

Health Care Providers

Physicians are also at risk for suicide. The rate of suicide among physicians is 28-40/year per 100,000, which is 2-4 times the rate in the general population. In fact, according to a recent presentation at an American Psychiatric Association conference, physicians were reported to have the highest rate of suicide of any profession. The rate of suicide among physicians is even higher than among military personnel. The rate is also high among other health care professionals, including nurses, dentists, and veterinarians ([Hawton et al., 2011](#); [Tomasi et al., 2019](#)).

Although depression appears to afflict physicians at rates similar to that of the general population, the suicide rate is significantly higher in physicians, and especially among women. Unlike the gender gap in the general population, female physicians have a death rate approximately equal to that of their male colleagues. Having knowledge of and access to lethal substances may account for the higher rate of suicide death among doctors ([Brooks et al., 2018](#); [Dong et al., 2020](#)).¹¹ A recent meta-analysis also found a relatively high lifetime prevalence of suicidal ideation among physicians ([Dong et al., 2020](#)).

Medical students and physicians experience significant stress, including high demands, competitiveness, long hours, and lack of sleep. These may contribute to alcohol and substance abuse, which are risk factors for suicide. Between 10% and 15% of physicians report alcohol or substance abuse compared with 9% of the general population ([Baldisseri, 2007](#)).

Stigma is an obstacle to seeking treatment. In one study of 954 medical students who screened positive for depression, only 15% sought psychiatric treatment ([Hoffman & Kunzmann, 2018](#); [Rotenstein et al., 2016](#)). Half of women physicians completing a Facebook questionnaire reported meeting criteria for a mental disorder, but said that they were reluctant to seek professional help because of the fear of stigma ([Gold, 2016](#)).

¹¹ A recent study found that, as with the general population, a little more than half of the suicides (53.5%) in their sample of surgeons were firearm suicides. This finding supports, when clinically indicated, an inquiry as to the availability of/access to firearms ([Elkbuli et al., 2020](#)).

The American Foundation for Suicide Prevention has a collection of resources for physicians who may be dealing with professional burnout, depression, and suicidal feelings, which can be accessed [here](#).

The current COVID-19 pandemic is presenting additional mental health challenges to health care workers, including suicide ([Knoll et al., 2020](#)). [Click here](#) to read a recent opinion piece on the topic, which contains suggestions for how you might be able to mitigate suicide risk among your medical colleagues.

COVID-19

The COVID-19 pandemic is emotionally stressful, and can be especially distressing for those already struggling with symptoms of depression and anxiety. According to recent data, Americans are reporting increased symptoms of depression, anxiety and fear ([Holland, 2020](#), [MHA, 2020](#)). COVID-19 is increasing the likelihood of serious mental illness, which are risk factors for suicide ([Geller & Abi Zeid Daou, 2020](#)).

Suicidal ideation is one of the most concerning symptoms of depression. The CDC recently reported that more than two times as many respondents had seriously considered suicide in the 30 days preceding their June 2020 survey than in the 12 months preceding a survey they had administered in 2018 (10.7% in 2020 vs. 4.3% in 2018). The rate of suicidal ideation during the COVID-19 survey was particularly high among certain groups, notably young adults aged 18-24 years (25.5%), Hispanic individuals (18.6%), non-Hispanic Black individuals (15.1%), unpaid caregivers (30.7%), and essential workers (21.7%) ([Czeisler et al., 2020](#)).

Youth between the ages of 12 and 17 also made more visits to the Emergency Department for a suspected suicide attempts during the pandemic than they did before the pandemic. While suicide-related visits to Emergency Departments had decreased early in the pandemic likely due to the issuance of shelter-in place orders, they began to increase in May 2020 and soon significantly surpassed pre-pandemic levels. According to CDC data, suspected suicide attempts were 2.4 times higher in the spring of 2020, 1.7 times higher in the summer of 2020, and 2.1 times higher in the winter of 2021 than they were during the same periods in 2019. This elevation in suspected suicide attempts occurred especially among adolescent girls ([Yard et al., 2021](#)) and among those with no prior history of psychiatric problems ([Ridout et al., 2021](#)).

It is not known yet how COVID-19 will specifically impact suicide rates and it may take several years before data are available. However, there are some communities already seeing a spike in suicide rates in their counties ([Vernachio, 2020](#)). While the overall number of suicides in the U.S. decreased by 5% between 2019 and 2020, this decline was accompanied by an increase in the number of suicides among people of color and an increase in the number of overdose deaths ([Rabin, 2021](#)). It is unclear if the decline in the number of suicide deaths in 2020 is a consequence of the pandemic or a continuation of a downward trend in suicides after suicides crested in 2018. The Department of Defense also reported an increase in the

number of suicides in the military, but the DoD saw it as continuation of a current, distressing, upward trend and did not attribute it specifically to the pandemic ([DoD, 2021](#)).

Dr. Christine Moutier,¹² Chief Medical Officer at the American Foundation for Suicide Prevention, published an [article](#) in *JAMA Psychiatry*, which discusses how increased suicide rates are not an inevitable outcome of the pandemic. Rather, there are specific steps that can be taken now to reduce suicide risk both during the pandemic and in the future. These steps include not only increasing social connectedness and access to mental health care, but also addressing issues such as domestic violence, alcohol and drug use, financial strain, access to firearms, and irresponsible media reporting. As Dr. Moutier explained at the [2020 National Stop A Suicide Today Town Hall](#), the pandemic could serve as a potential positive catalyst for change, with some “silver linings,” such as normalizing the dialogue surrounding mental health experiences and increasing access to telehealth services.

How Clinicians Can Help Mitigate Risk During the Pandemic

- Screen patients for depression and ask about suicide risk
- Develop or update safety plans for patients with suicidal ideation
- Help connect people with family and loved ones
- Follow telehealth guidelines
- Educate people about the warning signs for suicide
- Push for increased mental health services, especially for underserved populations
- Prioritize self-care for patients, families, and yourself

([Clay, 2020](#))

Resources for Clinicians

The [Zero Suicide](#) Initiative has compiled a compendium of resources for health and mental health clinicians on providing suicide care during the COVID-19 pandemic. To access these resources, [click here](#).

In addition, the American Psychiatric Association has published an article about providing care for patients with serious mental illness during the COVID-19 pandemic ([Geller & Abi Zeid Daou, 2020](#)). This guide includes practical information, including information specifically relevant to inpatient psychiatric hospitals. To access this article, [click here](#).

¹² Dr. Christine Moutier, along with Dr. Anthony Pisani and Dr. Stephen Stahl, also recently published a handbook on [suicide prevention](#) for healthcare professionals.

Closing Remarks

Over the last several decades, there have been improvements in the assessment and treatment of suicide due to research developments, new guidelines, and clinical consensus. Public health campaigns, federal and state agencies, and non-profit organizations have also been successful in increasing awareness about the warning signs of suicide, improving access to treatment, publicizing the crucial role of the National Suicide Prevention Lifeline, and reducing stigma. Yet, despite all of these advances, the suicide rate in the United States has not dropped over the last two decades, but rather has increased by 30% ([Garnett et al., 2022](#)).

The assessment and treatment of suicidal patients continues to be a significant challenge. We hope that the information provided in this resource for clinicians will be an additional tool for addressing the rising suicide rate. The online resource is free and can be accessed at any time. Most references are linked directly to their source. Our goal is to update the resource regularly to keep pace with advancements in the field.

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