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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@djacobsmd.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 two workshops we recently conducted titled "Suicide-Focused Assessment and Treatment: An Update for Professionals." These workshops were 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 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 these events 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

Photo credit: Andrea Piacquadio/Pexels

Understanding Suicide


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"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 31% increase in the age-adjusted rate of suicide deaths in the United States, with the rate increasing more rapidly in rural counties than in large metropolitan areas (Curtin et al., 2023; Garnett et al., 2022; KFF, 2024). In 2022, there were at least 49,449 suicides, the highest number of suicides ever recorded in the U.S. in a year (Curtin et al., 2023). There is no single explanation for the surge, though some may be "deaths of despair" (Case & Deaton, 2020).

The absolute number of suicide deaths in the U.S. declined in 2019 and 2020 from their all-time high in 2018. However, the rate has increased again in 2021, nearly back to its 2018 peak (Stone et al., 2023). The provisional number of suicides in 2022 (49,449) is 3% higher than the final number of suicides in 2021 (48,183) (Curtin et al., 2023). The age-adjusted rate of 14.3 suicides per 100,000 population in 2022 is 1% higher than the age adjusted rate of 14.1 suicides/100,000 population in 2021 (Curtin et al., 2023).

CDC findings indicate that the highest rates of suicide in 2021 occurred among males, non-Hispanic American Indian or Alaska Natives, and persons aged 85 and older (Ehlman et al., 2022). Non-Hispanic Alaskan Native persons experienced a 26% increase in their suicide rate between 2018 and 2021. Rates also increased during this time period for other racial and ethnic groups, including Non-Hispanic Black or African-American persons (19.2% increase) and Hispanic persons (6.8% increase). There were also significant increases in suicide deaths among 25-45-year-olds (5% increase), and especially among young Black persons aged 10-24 (36.6%).

Provisional data[1] suggests that there were fewer suicide in males aged 34 years and younger and more suicides in males 35 years and older in 2022 than there were in 2021. From 2021 and 2022, the rate of suicide declined in females aged 24 or younger and increased in those 25 and older. There was also a 3% increase in suicides in White, non-Hispanic females between 2021 and 2022 (Curtin et al., 2023).

The number of persons reporting suicidal ideation has also climbed over time. In 2022, 13.2 million adults (5.2% of those 18 years or older) and 3.4 million adolescents (13.4% of those aged 12 to 17) reported having had serious thoughts of suicide (SAMHSA, 2023).

Firearms remain the most common means of suicide in the US; approximately 55% of all suicides in 2022 involved a gun, the highest firearm rate recorded since the CDC began recording such data in 1968 (Johns Hopkins School of Public Health, 2023). The most common precipitants for suicide are relationship problems, interpersonal conflicts and recent crises (Parks et al., 2014). A recent study found that at least 20% of suicides are preceded by intimate partner problems (Stanley et al., 2023).

[1] Provisional data is based on analysis of over 99% of death records. Suicides in females are more likely to be incomplete in provisional reports than suicides of males because their deaths more frequently involve drug poisonings than firearms (Curtin et al., 2023).

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).

A large study suicide deaths in the National Violent Death Reporting System found that 3 out of 4 persons (73.2%) who died by suicide between 2003 and 2018 were not in treatment for a mental health or substance use disorder at the time of their death, and 2 out 3 (66.4%) had never been in treatment for a mental health or substance use disorder (Bond et al., 2022). Those who used firearms for suicide were less likely to have sought out mental health services than those who used other means (Bond et al., 2022).

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" suggests negative connotations and can imply a judgment that the suicide was a crime or sin. Similarly, suicide attempts are no longer referred to as "failed," "unsuccessful," or "successful" as these words present suicide as a desired outcome. Instead, clinicians and researchers are encouraged to verbalize that someone has "attempted suicide," "made a suicide attempt," "died by suicide," or "ended his/her/their own life." Other language suggested to be avoided are terms like: "suicide hotspot," "suicide epidemic," and "suicide mission" (National Office for Suicide Prevention, 2023).

It can be beneficial when discussing suicide to use person-centered, non-stigmatizing, and non-judgmental language. Using phrases like: "A person who is thinking about suicide," "a person who has experienced a suicide attempt," "a person impacted or affected by suicide," or "a person with lived experience related to suicide" is preferable to labels, such as "suicide victim" or "a suicide" (National Office for Suicide Prevention, 2023).

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

Photo credit: Scott Graham/Unsplash

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

Provisional estimates show that, in 2022, the age-adjusted suicide rate in the United States was 14.3 deaths per 100,000 persons (Curtin et al., 2023). 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[2]
- 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 plans[3]

While none of these signs in isolation is indicative of imminent suicide risk,[4] the presence of multiple signs may signal that the person is in a suicidal crisis and in need of careful assessment and intervention.

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[2] There is some evidence that a depressive disorder may look different in different people and different populations. For example, a recent study found that, Black/African-American women may be more likely to report sleep disturbances, self-criticism, and irritability as opposed to depressed mood and hopelessness (Perez et al., 2023).

[3] 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.

[4] 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)

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

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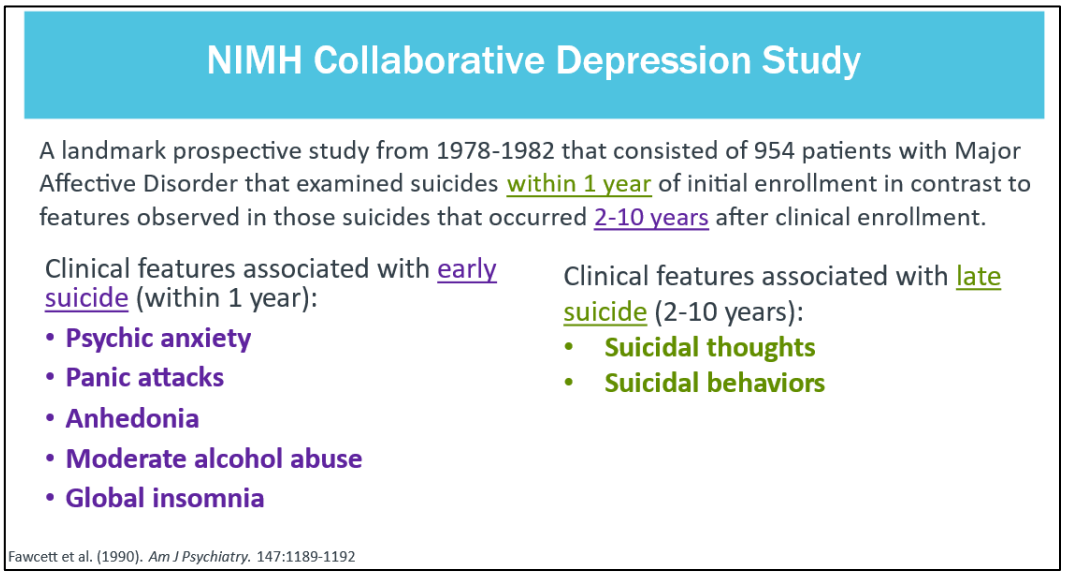
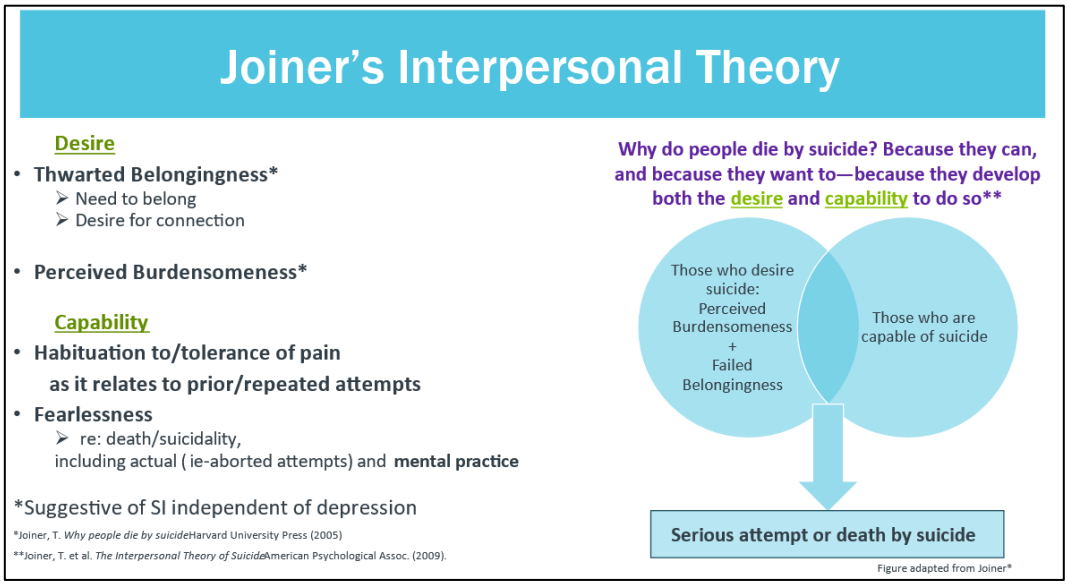
(3) perceptions that the foregoing are hopelessly intractable
(4) Two or more manifestations of overarousal (e.g., insomnia, nightmares, agitation, irritability)."
For a more detailed discussion of this new construct, see: Tucker et al., 2016; Stanley et al., 2016.

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

At the 2023 Suicide Assessment and Treatment Course: An Update for Professionals, Dr. Douglas Jacobs and Dr. Carsen Sulzer also discussed their recent progress on incorporating the SAFE-T protocol into EPIC, an electronic medical record system (to view their presentation, click here). The hope is that the SAFE-T will become an option on EPIC sometime in 2024. The EPIC version will also include a homicide and violence inquiry section, which was not in the original SAFE-T protocol, so that clinicians can get a more comprehensive safety evaluation and picture of the patient.

During their talk, Dr. Jacobs and Sulzer discussed the concept of moving beyond traditional risk factors when assessing suicide risk.





Drs. Jacobs and Sulzer highlighted the importance of identifying suicide-specific symptoms and attitudes thought to be associated with heightened suicide risk. These suicide-specific symptoms and attitudes include:

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

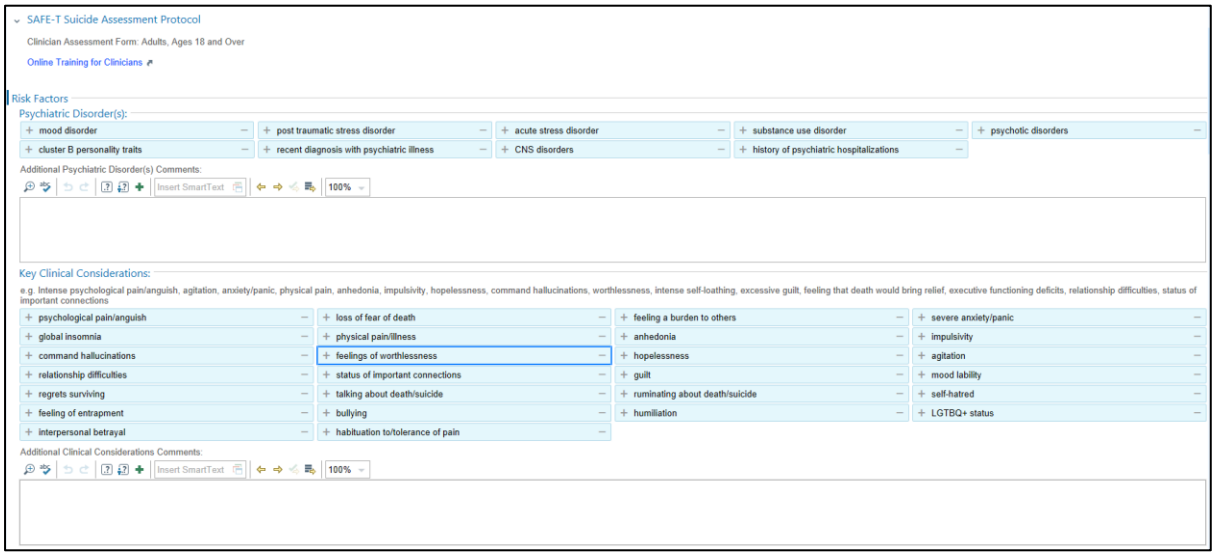
Mental practice is the idea of "seeing one's death by suicide in their mind's eye" or "watching a clear and vivid video" of their potential suicide death (Joiner, 2005, p. 81). The concept of mental practice in relation to suicide was originated by Dr. Joiner, in his 2005 book, Why People Die by Suicide. When inquiring about suicidal thoughts during suicide risk assessments, also inquiring as to whether a person "can see their own death or view it" can be useful (Jacobs & Sulzer, 2023).

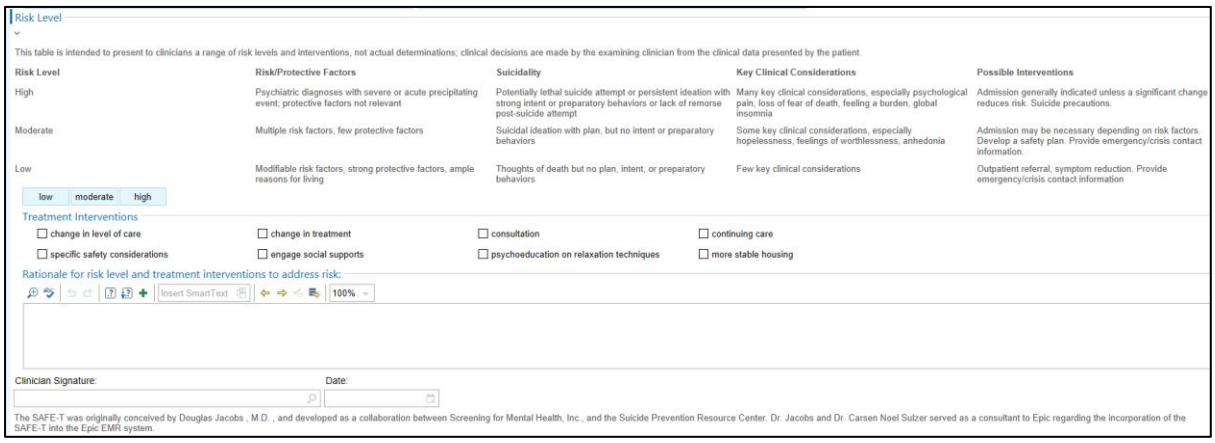
During this same course, Drs. Jacobs and Sulzer also revealed their new CARES-8, which may be useful for those conducting suicide risk assessments (see Jacobs & Sulzer, 2023). The CARES-8© stands for the Clinical Assignment for the Risk Estimate of Suicide and refers to the 8 areas of inquiry that factor into clinical judgment and estimation of suicide risk:

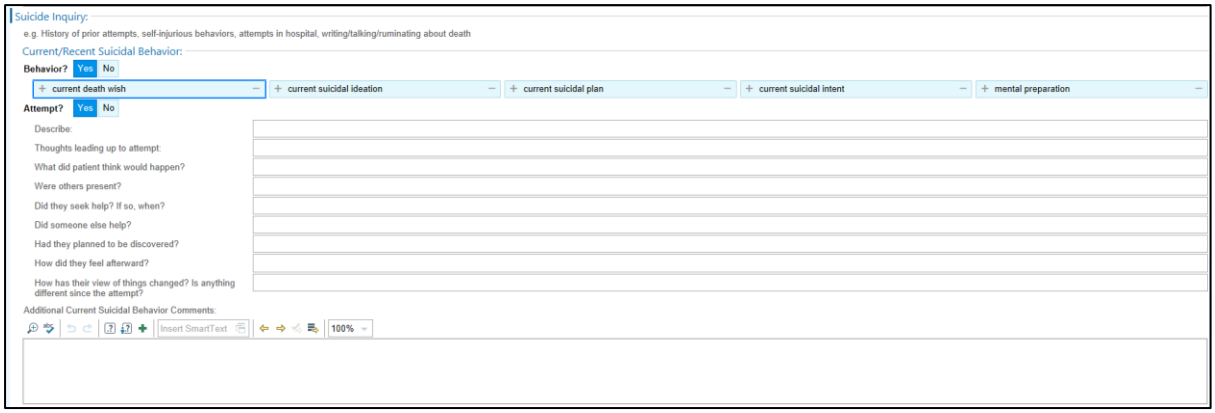
- Psychiatric disorders
- Suicidality
- Suicide-specific symptoms
- Reasons for living
- Status of important connections
- Psychiatric treatment
- Psychosocial stressors
- Access to lethal means

The purpose of the CARES-8 is to provide a framework within which clinicians are able to stratify patients' risk of suicide both flexibly and systematically. In evaluating suicide risk within this framework, clinicians have the ability to weigh patients' current level of risk with regard to 8 widely known potential factors contributing to or reducing risk of suicide attempts. As with the SAFE-T, the CARES-8 requires clinical judgment and there is no strict scoring system to determine level of risk. Rather, the CARES-8 expands upon clinical judgment by creating a thoughtful template to consider risk and protective factors while preserving clinical decision-making by the clinician completing the evaluation. This allows for more patient-centered care and consideration of "the whole picture" when assigning risk.

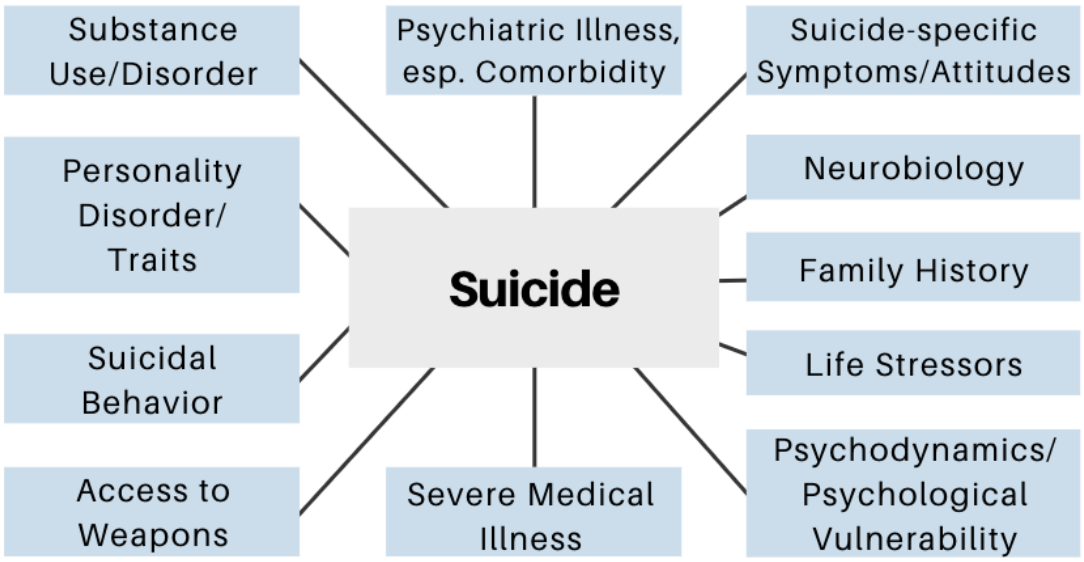
Epic SAFE-T Prototype Screenshots







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 4 times more likely than females to die by suicide, but females are more likely to make suicide attempts than males (Bommersbach et al., 2022; CDC, 2023). 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 (Garnett et al., 2022). 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; CDC, 2023).

- 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 (American Academy of Child & Adolescent Psychiatry, 2022; 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).
- Being unemployed, under financial strain, or homeless is also associated with substantially higher risk of suicide (e.g., Choi et al., 2022; Elbogen et al., 2020).

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 2021 data from the National Survey on Drug Use and Health, 12.3 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 3.7% to 4.8% over the last decade (SAMHSA, 2012; SAMHSA, 2023), with rates particularly increased in young adults aged 18-25 (SAMHSA, 2012; SAMHSA, 2020). Suicidal ideation in children and adolescents has also climbed over the past decade. For example, CDC Youth Risk Behavior Survey trends show that 30% of girls between the ages of 14- and 18-year-olds report seriously considered attempting suicide in 2021, compared to 19% in 2011 (CDC, 2023).

Although prediction is not possible, it is known that suicidal ideation can progress from thoughts to plans to attempts.[5] Of the 12.3 million adults who experience suicidal ideation each year in the U.S., approximately 3.5 million will go on to make a plan, and 1.7 million will go on to make a non-fatal suicide attempt (SAMHSA, 2023). 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

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

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 (e.g., Centre for Excellence in Youth Mental Health, 2009; Jacobs, 1999; Vergara et al., 2023). 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 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).

At the 2022 Suicide-Focused Assessment and Treatment course, Dr. Aguirre stated that people with a history of NSSI are 50-70 times more likely to die by suicide (Guan et al., 2012). The overlap between NSSI and suicidal behavior is around 70% in samples from clinical settings and 50% in samples from non-clinical settings (Nock et al., 2006). Among those with a history of NSSI, 70% have attempted suicide at least once and 55% several times. As a result, when confronted with NSSI, assessing intent can be useful (Aguirre, 2022; Grandclerc et al., 2016).

Inquiring about the age of onset of the NSSI and the duration of NSSI can be informative as those who started self-harming at a younger age and those who self-harmed for a longer period of time have been shown to be more likely to make a first suicide attempt as well as a repeat suicide attempt (Aguirre, 2022; Brager-Larsen et al., 2022).

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 & Schlesser, 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).

Immunologic dysfunction: Suicidal behavior has also been biologically-linked to immune system dysfunction and inflammatory factors in the cerebrospinal fluid (CSF), peripheral blood, and, more recently, in brain tissue (Black & Miller, 2015; Enach et al., 2019; Lindqvist et al.,2009; Sha et al., 2023). The inflammatory markers most implicated in suicidal behavior are interleukin 1β 2, 6, and 8 (IL1β , IL-2, IL-6, IL-8) and tumor necrosis factor-α (TNF-α) (Black et al, 2015). A recent study also found that the gene NPAS4, which helps regulate inflammation in the brain,[6] was dysregulated in persons who died by suicide (Sha et al., 2023).

[6] Animal models using mice found NPAS4 deficiency to be associated with increased protein levels of IL-6 and TNF-α (Choy et al., 2015; Sha et al., 2023)

Abnormal levels of proinflammatory cytokines have been found in many psychiatric disorders, including alcohol use disorder, bipolar disorder, borderline personality disorder, eating disorder, MDD, PTSD, and schizophrenia (Black & Miller, 2015). However, a systematic review and meta-analysis by Enache and colleagues (2019) found increased CSF levels of interleukin-6 (IL-6) in suicide attempters, regardless of psychiatric diagnosis (Enache et al., 2019).

A study by Lindqvist and colleagues (2009) found that CSF levels of IL-6 were not only higher among suicide attempters when compared to healthy controls, but were highest among suicide attempters who had made violent suicide attempts. The Lindhvist et al study also showed that IL-6 and TNF-∞ were significantly correlated with 5-HIAA and homovanillic acid (HVA). 5-HIAA is the primary metabolite of serotonin (Lenchner & Santos, 2023); HVA is the primary metabolite of dopamine in humans (Sher et al., 2005). The authors "propose a role for CSF IL-6 in the symptomatology of suicidal behavior, possibly through mechanisms involving alterations of dopamine and serotonin metabolism" (Lindqvist et al., 2009, p. 287).

A meta-analysis by Black and Miller (2015) found that abnormal levels of cytokines and chemokines[7] distinguished patients with suicidality from other patients and healthy controls. The cytokines most robustly associated with suicidality were IL-1β and IL-6. These two cytokines were significantly increased in blood and post-mortem brain samples of patients with suicidality, compared to patients without suicidality and healthy controls. The Black and Miller meta-analysis also showed that patients with suicidality have lower levels of IL-2 in their peripheral blood and IL-8 in their cerebrospinal fluid, compared to comparison groups.

A recent study by Sha and colleagues (2023) has also found evidence of inflammatory factors in the brain tissue of suicide decedents not found in controls. The researchers examined brain tissue from the temporal cortex of 61 subjects, 29 of whom had died by suicide. Inclusion criteria for the suicide decedent group was not only having the death ruled as a suicide, but also having a history of major depressive disorder. The 32 control subjects were individuals who had died suddenly from homicide, accident, or natural causes. Persons with underdetermined deaths were excluded from the control group. The two groups did not differ significantly by sex or age, and all subjects were "largely free from antidepressant and antipsychotic medication" (Sha et al., 2023).

Sha and colleagues (2023) found that NPAS4 was significantly down-regulated in the brain tissue of suicide decedents, while multiple genes linked to inflammatory processes were up-regulated. These findings suggest that people who die by suicide may be more likely to have reduced levels of NPAS4 gene expression, which has many neuroprotective functions including helping to regulate inflammation in the brain. Thus, brain inflammation may be linked to suicide and suicidal behavior (Costandi, 2024).

[7] Cytokines and chemokines are signaling proteins that coordinate the body's immune response. Cytokines is a class that includes interleukins, tumor necrosis factor (TNF), chemokines and other types of small proteins. Chemokines direct immune cells toward places in the body to fight infection. Cytokines can be proinflammatory or anti-inflammatory (Cleveland Clinic, 2023; Ramesh et al., 2013).

Similarly, in a study to identify potential blood biomarkers for suicide, Mamdani and colleagues (2022) found evidence of differential gene expression in those with major depression who died by suicide. They found, for example, significantly higher levels of two inflammatory markers in the peripheral postmortem blood in the group with MDD who had died by suicide compared to the group with MDD who did not die by suicide. In fact, the study identified 14 genes with different levels of expression in blood samples that distinguished the suicide group from the other groups.[8] These results taken as a whole suggest that suicide in depressed patients may be related to alterations in the stress response, including dysregulation of the immune system. [9] The hope is that, in the future, depressed patients at acute risk for suicide could be identified via a blood sample (Mandani et al., 2022).

There is growing evidence that genetic and neurobiological factors play a role in suicidal behavior. Specific genes, neurotransmitter systems, and inflammatory pathways are being delineated. Sha and colleagues (2023) concluded, for example, that they "*identified central nervous system inflammatory mechanisms that may be active during suicidal behavior, along with oligodendrocyte dysfunction and altered glutamate neurotransmission. In these processes, NPAS4 might be a master regulator, warranting further studies to validate its role as a potential biomarker or therapeutic target in suicidality*." While there has not been a lot of research on NPAS4 expression and suicidality in human samples, a recent study did find NPAS4 to be downregulated in the dorsoprefrontal cortex of persons who had died from acute opioid intoxication, compared to a group of psychiatric controls and a group of normal controls (Sosnowski et al., 2022).

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).

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[8] Mamdani and colleagues (2022) state that there may be other, as yet unidentified, suicide-related gene biomarkers. For this exploratory study, they chose to limit their analyses to 117 genes and one brain region (dorsolateral prefrontal cortex).

[9] In addition to immune system dysregulation, the Mamdani et al study also found that the suicide group showed alterations in expression of genes involved in polyamine metabolism, circadian rhythm, and telomere maintenance. The researchers conclude that "future studies in large clinical populations investigating these systems might help in the identification of acutely suicidal MDD patients" (Mandani et al., 2022).

The psychiatric disorders most commonly associated with suicide are severe depression, bipolar disorder, substance use/alcohol use disorder, and schizophrenia (Edwards et al., 2020; Harris & Barraclough, 1997; Nordentoft et al., 2011; Olfson et al., 2021; Tidemalm et al., 2008).

Anxiety disorders can also markedly increase suicide risk. An older meta-analysis found, for example, that the risk of suicide with panic disorder was as much as 10 times greater than expected, and maybe even more than that if the association had been studied in an unselected sample (Harris & Barraclough, 1997). However, a more recent meta-analysis modified this conclusion, finding that the risk with anxiety was less than previously thought and that no single risk factor was able to predict suicide at a level greater than chance (Franklin et al., 2016).

A recent study by Mataix-Cols and colleagues published in *JAMA Psychiatry* found that individuals with hypochondriasis (also referred to as health anxiety disorder) were four times more likely to die by suicide than individuals in the general Swedish population (Mataix-Cols et al., 2023). The group with hypochondriasis also had increased risk of comorbid diagnoses: 85.7% of individuals with hypochondriasis had been diagnosed with at least one other psychiatric diagnosis during the course of their life compared to 19.9% in the matched control group without hypochondriasis. The most common comorbid diagnoses were anxiety-related disorders (78.4%) and depressive disorders (48.4%). Psychotic disorder, bipolar disorder, neurodevelopmental disorders, eating disorders, and substance use disorders were also exceedingly more common in the hypochondriasis group.

Examples of 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
- Obsessive compulsive disorder
- Panic disorder
- ADHD

This study out of Sweden appears to be the first study to quantify the risk of suicide in persons with hypochondriasis, finding that individuals with hypochondriasis are at increased risk of suicide, especially if there is a known history of anxiety or depression (Mataix-Cols, et al., 2023). This finding is important as it has been thought that individuals with hypochondriasis or illness anxiety disorder may be at lower risk as they seem to be very preoccupied with their health and to not want to die (Mataix-Cols et al., 2023; Torres et al., 2021). Mataix-Cols et al. (2023) argue that: “Even if the finding of increased mortality were not entirely specific to hypochondriasis, it is clear that hypochondriasis is not associated with protection from death...individuals with hypochondriasis have an increased risk of death despite their pervasive fears of illness and death” (p. E7).

Obsessive compulsive disorder (OCD) is related to anxiety, but is classified as a separate, distinct condition.[10] OCD is independently associated with an increased risk of suicide, 4-10 times the expected risk, dependent on the sample (Fernández de la Cruz, 2017, 2022; Harris & Barraclough, 1997; Sidorchuk et al., 2021).

In sum, nearly all psychiatric disorders have an increased risk of suicide associated with them (Yeh, 2019). Additionally, 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).

Personality disorders are estimated to occur in around half of psychiatric outpatients who die by suicide, and a third of all suicide deaths in the U.S. (APA, 2003; Oldham, 2006). Cluster B personality disorders (i.e., antisocial personality disorder, borderline personality disorder, histrionic personality disorder and narcissistic personality disorder) have been studied the most in relation to suicidal behavior (Ansell et al., 2015).[11]

Up to 10% of patients diagnosed with borderline personality disorder (BPD) will die by suicide (e.g., Black et al., 2005; Stone, 2016; Paris, 2019). Although 3 out of every 4 persons diagnosed with BPD are female, BPD persons who die by suicide are predominantly male McGirr et al., 2007; Paris, 2019). Men with BPD are more likely than women with BPD to be diagnosed with comorbid substance use disorders and antisocial personality disorder; men with BPD are also more likely to experience bouts of intense or explosive anger (SAMHSA, 2014). Comorbid diagnoses (e.g., depression, substance use), antisocial traits, and prior suicide attempts and hospitalizations are all more common among persons with BPD who die by suicide (e.g., Black et al., 2005).

Antisocial personality disorder is another Cluster B personality disorder often associated with suicide risk, with lifetime suicide risk estimated around 5% (Links et al., 2003; Oldham, 2006).[12] However, recent studies suggest that suicidal behavior in persons with antisocial personality disorder may actually result from comorbid borderline personality disorder (McGonigal et al., 2017). Antisocial personality disorder is also frequently comorbid with bipolar disorder, especially bipolar 1 disorder (Carbone et al., 2021). Bipolar patients with

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[10] In earlier iterations of the Diagnostic and Statistical Manual of Mental Disorders (DSM), the American Psychiatric Association (APA) considered OCD to be one of the anxiety disorders. However, with the advent of DSM-V in 2013, the APA began classifying OCD as its own separate condition. OCD and anxiety disorders differ in several respects, including the source and nature of the thoughts and the compulsion to act. OCD was thought to have more in common with conditions such as hoarding, skin picking, hair pulling, and body dysmorphic disorder. OCD and these related disorders have obsessive thoughts and repetitive behaviors in common and respond to similar treatments (Falk & Goldman, 2020).

[11] Ansell and colleagues (2015) examined the relationship between a number of personality disorders and suicide attempts, finding that only borderline personality disorder and narcissistic personality disorder were correlated with suicide attempts. Whereas borderline personality disorder predicted any suicide attempt, narcissistic personality disorder was the only disorder that predicted the number of suicide attempts beyond the initial attempt. The researchers were unable to ascertain from this study the mediators (e.g., emotional dysregulation, impulsivity, social cognition deficits), but suggest that all these factors in addition to shame may play a role.

[12] This estimate is thought to be low as individuals with antisocial personality are prone to risk-taking. It is often difficult to tell in such cases whether the death was a suicide or an accident (Oldham, 2006).

antisocial symptoms are more likely to be suicidal; they are also more likely to have severe episodes, addictive disorders, aggressive and/or impulsive behaviors, and poorer clinical outcomes. Impulsivity appears to be a shared feature of all these disorders (Carbone et al., 2021).

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).

Psychiatric Discharge: 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).

Large and colleagues (2011) conducted a systematic meta-analysis of risk factors for suicide in the year after discharge from psychiatric hospitals. They found that "no factor, or combination of factors was strongly associated with suicide in the year after discharge" (Large et al., 2011; p. 619). Post-discharge suicide had a moderately strong relationship with history of self-harm and depressive symptoms. Post-discharge suicide had a weak association with suicidal ideation, unplanned discharge, recent social difficulty, a diagnosis of major depression, and male gender.

Chung and colleagues (2019) conducted a meta-analysis of suicide rates in the first week and the first month after psychiatric hospitalization. They estimated that there are approximately 3000 suicide deaths/100,000 person years in the first 7 days after discharge from a psychiatric hospital and 1000 suicide deaths per 100,000 person years from the beginning of the second week after discharge through the end of the month. These rates are 200 to 300 times the global suicide rate.

A large population-based study out Finland also found suicide risk to be very high in the first days after discharge after hospitalization specifically for depression (Aaltonen et al., 2024). The incidence of suicide on days 0-3 after discharge was 6062/100,000 population and 3884/100,000 population on days 4 to 7 after discharge. The mean rate of suicide in the first 3 days after hospitalization for depression was 330-fold that of the general Finnish population, while the mean rate of suicide in days 4-7 after hospitalization for depression was 260-fold that of the general population.[13]

[13] Some studies have found lower rates because they excluded all persons who had died on the date of discharge (e.g., Chung et al., 2019; Madsen et al., 2020). In contrast, Aaltonen et al.'s study design included persons who died by suicide on the date of discharge; they excluded only those who died by suicide while still admitted to the hospital (i.e., not yet discharged). In addition, all persons in the Aaltonen et al. study had been hospitalized for depression specifically. Aaltonen and (2024) state: "These 2 approaches may underestimate and overestimate, respectively, the true incidence" (p. E9).

The Aaltonen et al. study also identified several factors which increased suicide risk in these first few days. These factors included, for example, higher severity of symptoms and impairment, severe depression, psychotic depression, male gender, higher age, and having made an earlier suicide attempt.

Aaltonen and colleagues (2024) also grouped suicide attempts by estimated lethality of given method. The groups ranged from intoxication or cutting to hanging or firearms. They found an exponentially increased risk of suicide in the firearms or hanging group in both the first 3 days and first week post-discharge.

Aaltonen and colleagues (2024) point out that future research may want to examine the role of "treatment failure," "low response to treatments chosen," "delays in response," "insufficiently identified risk during admission,"[14] as well as "unplanned or patient-initiated discharges" (p. E9). Such factors are potentially modifiable and may be "targets for prevention" (Aaltonen et al., 2024, p. E9).

Efforts have been made to develop ways to better determine which psychiatric inpatients present the most risk early after 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).

Chung and colleagues (2019) state: "Very high rates of suicide in the immediate discharge period should encourage physicians to think carefully about the patient's transition from hospital to the community" (p. 8). 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). Large and colleagues (2011) found that those patients who had had greater contact with services after discharge were significantly less likely to die by suicide that year. This data indicates the importance of deliberate planning with attention to early follow-up after discharge from a psychiatric hospital.

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

[14] Large and colleagues (2011) found that roughly 60% of patients who died by suicide had been categorized as low 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):

- Lifetime rate of suicide: 8-10% (rate varies considerably between studies, depends on sample, length of follow-up, method of follow-up; APA, 2001; Black et al., 2005; Davis et al., 1999; Paris, 2019; Stone, 2016)
- With antisocial personality: 17% (Davis et al., 1999; Stone et al., 1987)
- With alcohol problems and major affective disorder: 38% (female sample; Davis et al., 1999; Stone, 1990)
- Suicide generally occurs after long course of unsuccessful treatment (Paris, 2019)
- 60-79% of BPD patients have made at least one suicide attempt (Davis et al., 1999; Oldham, 2006; SAMHSA, 2014; Zanarini et al., 2008)
- Predictors of suicide attempts: comorbid MDD, substance use disorders, PTSD, younger age, impulsivity, caregiver suicide, NSSI, and childhood trauma (Wedig et al., 2012)

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)
    - Male 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).

Obsessive Compulsive Disorder (OCD):

- Population studies from Sweden found 4-10x the risk of suicide in persons with OCD compared to persons without OCD (Fernández de la Cruz, 2022; Sidorchuk et al., 2021)
- Increased risk of suicide death is associated with a prior suicide attempt and comorbid substance use disorder or personality disorder (Fernández de la Cruz, 2017; 2022).
- OCD and suicide deaths coaggregate in families (Sidorchuk et al., 2021)
- 13% of persons with OCD will make a suicide attempt (Pellegrini et al., 2020)
- Suicide attempts are associated with increased severity of obsessions, substance use disorders, and depressive symptoms (Fernández de la Cruz, 2022; Pellegrini et al., 2020)
- OCD is associated with a longer delay in seeking treatment compared to other psychiatric conditions (Albert et al., 2019; Pellegrini et al., 2020)

Physical Illness

Certain medical conditions have also been associated with an increased risk for suicide. Chronic or terminal illness and chronic pain place patients at higher risk (Calati et al., 2015; 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[15]
- Chronic pain
- COPD
- Coronary artery disease
- Diabetes[16]
- Parkinson's Disease
- Spinal disc disorders
- Stroke
- Traumatic brain injury

Access to Firearms

Firearms account for over half of all suicides in the U.S. (Johns Hopkins School of Public Health, 2023). Provisional data from 2022 shows 8.1 firearms suicide deaths per 100,000 population in the U.S. (Kaczkowski et al., 2023). The rate of suicide by firearms has steadily increased since 2006, and it is now at the highest rate documented since the CDC began documenting such data (Johns Hopkins School of Public Health, 2023). 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.).

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[15] A study recently published in *JAMA Oncology* found a significantly increased risk of suicide in a sample of nearly 2 million patients who had undergone cancer surgery between 2000 and 2016, compared to the general population. Approximately half of the suicides occurred within 3 years of the surgery, one-fifth within the first year. The cancer surgeries with the highest incidence of suicide were cancer surgery on the larynx, oral cavity and pharynx, esophagus, bladder, and pancreas, followed by lung, stomach, ovary, brain, and colon/rectum. As with suicide cases in general, male patients, White patients, and single or divorced patients were also at higher risk of suicide following cancer surgery (Potter et al., 2023).

[16] A number of studies have documented an increased risk of suicide and suicide attempts in diabetic patients (e.g., Pompili et al., 2014; Roberts et al., 2004; Roy et al., 2010). The suicide rate is particularly high among younger males (aged 15-29) with Type I diabetes, prompting some to even recommend that physicians routinely ask young patients with Type I diabetes about suicidal thoughts (Al Alshaikh & Doherty, 2023; Pompili et al., 2014). A recent systematic review has also found a relationship between diabetic ketoacidosis (DKA) and suicidality (Al Alshaikh & Doherty, 2023). Al Alshaikh and Doherty (2023) recommend psychosocial assessment and attention to mental health in cases where the DKA cannot be otherwise explained.

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). Firearm suicide rates increased in all racial and ethnic groups during the COVID-19 pandemic. American Indian and Alaska Natives experienced the greatest change in rate with a 66% increase in suicide by firearm between 2019 and 2022 (Kaczkowski et al., 2023). Provisional data from 2022 also shows that, for the first time on record, the rate of firearm suicide for Black youth aged 10-19 years surpassed that for white youth aged 10-19 years (Johns Hopkins School of Public Health, 2023).

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.

Social Determinants of Health

"Suicide and suicidal behavior are influenced by negative conditions in which people live, play, work, and learn" (CDC, 2023). These adverse circumstances are often referred to as *social determinants of health.* Social determinants of health that have been associated with suicide and suicidal behavior include unemployment, financial instability, relationship problems, legal problems, social isolation, violence, childhood adversity, bullying, barriers to quality physical and mental health care, as well as racism and other forms of discrimination (CDC, 2023). Certain sectors of the population are more likely to experience these negative conditions that have been associated with suicide than others (e.g., tribal populations, LGBTQ+ persons, those who live in rural areas, veterans) (CDC, 2023).

Mitra and colleagues (2023) examined the relationships between various social determinants of health and suicide death in a sample of U.S. veterans, most of whom were white males. They used a natural language processing system to extract data from clinical notes. They found that exposure to legal problems, violence, and "non-specific social needs" in the prior two years were the 3 factors most strongly associated with suicide death in their veteran sample.

Social factors that influence suicide risk:

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

Another study of military veterans by Blosnich et al (2019) using electronic health record data found that suicide ideation and suicide attempt were each independently associated with specific social determinants of health (i.e., violence, housing instability, employment/financial problems, legal issues, social/familial problems, lack of access to care/transportation, and non-specific psychosocial needs). This was the case even after adjusting for sociodemographics and mental health diagnoses. Moreover, the authors found that each additional adverse event increased the odds of suicidal ideation by 67% and the odds of suicide attempt by 49%. For example, patients with one adverse event had 2.5 times the odds of suicidal ideation, patients with two adverse events had 4 times the odds of suicidal ideation, patients with 3 adverse events had 5 times the odds of suicidal ideation, and those with 4 or more adverse events had 8 times the odds of suicidal ideation. There were some limitations to this study, including the fact that the sample, again, had been comprised primarily of older, white, male veterans.

Studies have also been done on social determinants of health in larger, non-veteran populations, with similar results. For example, Llamocca and colleagues (2023) examined the association between adverse social determinants of health and suicide death, using health system data from 2000 to 2015. They found that family alcoholism/drug addiction, being an abuse victim/perpetrator, other primary support problems, employment/occupational maladjustment problems, housing/economic problems, legal problems, and other

psychosocial problems were all factors more likely to occur in the 3300 persons who had died from suicide than in 330,000 randomly matched controls.

However, Llamocca and colleagues point out that documentation of social determinants of health was very low in the medical records they reviewed, leading them to call for increased documentation of these social factors to "assist in identification and intervention among individuals at high risk" (Llamocca et al., 2023, p. 744). The National Academy of Medicine had only begun recommending the collection of social and behavioral determinants of health in 2014 (Blosnich et al., 2019). It is taking time for medical systems in the US to learn from research in population health that optimizing patient health outcomes may depend in large part on collecting information on and addressing these non-medical, often modifiable, social factors that increase risk for a variety of conditions, including suicide (Blosnich et al., 2019; WHO, 2024).

Intimate Partner Problems

A recent CDC study found that 1 in 5 suicide deaths were related to intimate partner problems (Stanley et al., 2023). The study analyzed data from the CDC National Violent Death Reporting System for 402,391 adults who died by suicide between 2003 and 2020. Those who had intimate partner problems were also significantly more likely to have mental health problems, including depressed mood, suicide ideation, and problematic alcoholic use. They were also more likely to have experienced recent life stressors (e.g., argument; interpersonal violence and victimization; financial, legal, job, and family problems). Suicide deaths not involving intimate partner problems were more likely to be older individuals and more likely to have been precipitated by a physical health problem or a crime. The study highlights the importance of being on the alert for acute crises and stressors (e.g., intimate partner violence, arguments, divorce, financial troubles) as these experiences have the potential to precipitate an impulsive suicide attempt among someone who may not have previously had a suicide plan.

Loneliness

There has been increasing interest in research on loneliness, which is related to, but inherently different from social isolation. Loneliness is subjective, whereas social isolation is objective. Loneliness is a discrepancy between one's desired social relations and one's actual social relations (Cacioppo al., 2015; Peplau & Perlman, 1982; U.S. Department of Veterans Affairs, 2022). An individual who is lonely may see themself as disconnected from everyone around them, even if they actually have a significant amount support from family and friends (Joiner et al., 2006; U.S. Department of Veterans Affairs, 2022; Wilson et al., 2018). Loneliness and social isolation both have been reported to increase the risk of suicide ideation, attempts, and deaths (e.g., Shaw et al., 2020; Solmi et al., 2020).

The link between loneliness and suicidal thoughts and behaviors was first observed in the general population in 2001 (Stavynski & Boyer, 2001), though several studies both before and since that time have shown associations in specific subgroups (e.g., the elderly, psychiatric patients, high school and college students, Veterans) (Stickley & Koyanagi, 2016;

Teo et al., 2018; U.S. Department of Veterans Affairs, 2022). For example, one study found loneliness was the most common trigger for Veterans to call a suicide crisis hotline (Porter et al., 1997).

A recent survey commissioned by Cigna found that 58% of US adults were considered lonely in 2021 (The Cigna Group, 2023), which is consistent with other recent studies of loneliness (e.g., Antonelli-Salgado et al, 2021). Men and women had about the same likelihood of loneliness, though mothers and single parents were significantly more likely to experience loneliness than those without children. Adults from underrepresented racial groups were also more likely to be lonely; 75% of Hispanics and 68% of Black/African Americans were considered lonely in 2021. This was a significant increase from findings in previous years, when loneliness was found not to vary across racial and ethnic groups. Adults with lower incomes were also lonelier than people with higher incomes (The Cigna Group, 2023).

Adults with mental health issues were more than twice as likely as those with better mental health to experience loneliness. The Cigna survey found that 85% of those with fair or poor mental health were lonely compared to 42% of adults with excellent mental health. The Cigna study also found that 33% of lonely adults were diagnosed with or receiving treatment for a behavioral or mental health condition compared to 14% of non-lonely adults. Behavioral and mental health conditions included depression, anxiety, bipolar disorder, and other such conditions (The Cigna Group, 2023).

While loneliness and mental health issues often go hand in hand, loneliness may also be a precursor of depression, a symptom of depression, and/or a consequence of depression (Courtin & Knapp, 2017). A recent systematic review of longitudinal studies found adults who report often feeling lonely have a greater than two-fold risk of developing depression over time compared to those who report rarely or not feeling lonely. Research also suggests that occasional experiences of loneliness may be less likely to lead to depressive symptoms than frequent or persistent loneliness (Mann et al., 2022; Stessman et al., 2014). A Danish study found prolonged presence of a mental disorder to be strongly associated with severe loneliness (Lasgaard et al., 2016).

With respect to age, the Cigna study found that young adults (aged 18-24) were twice as likely to be lonely as seniors (aged 66+), as well as significantly more likely to report feeling left out (The Cigna Group, 2023). However, loneliness affects all age groups, and there is data to suggest that it may be an important risk factor for suicidal behavior across the lifespan (Stickley & Koyanagi, 2016). In fact, studies have found a link between loneliness and suicidal thoughts and behaviors in adolescent, middle-aged, and elderly samples (e.g., Garnefski et al., 1992; Miret et al., 2014; Stickley & Koyanagi, 2016).

Population surveys find that loneliness tends to have a nonlinear distribution, with adults under the age of 25 and over the age of 65 reporting higher rates than other population subgroups (Lasgaard et al., 2016; Mann et al., 2022; Victor & Yang, 2014). Both loneliness and passive death wishes are more common in adults over the age of 75 years compared to 50- to 75-year-olds (Ayalon and Shiovitz-Ezra, 2011).[17] However, when considering multiple

[17] There is conflicting evidence whether predictors of loneliness vary by age (e.g., Lasgaard et al., 2016). However, a recent U.S. study with a sample size of nearly 2500 adults found no evidence of age-specific

factors such as demographic, social, health, and mental health indicators, loneliness was a risk factor for passive death wishes only in the 50-75 age group. Loneliness was not an independent risk factor for passive death wishes in the over 75 years age group (Ayalon and Shiovitz-Ezra, 2011).

There are few studies of the relationship between loneliness and suicide death. Such studies are difficult to design and power due to the statistical rarity of suicide. A large longitudinal study using data from the United Kingdom looked at living alone, loneliness, and emotional support in relation to suicide death and self-harm. They found a gender difference. Men who either lived alone or who shared a residence with a non-partner were at increased risk of dying by suicide, even after adjusting for subjective loneliness. Compared to men who live with a partner and are not lonely, there is a 3-fold increase in risk of dying by suicide for men who often experience loneliness and men who are not lonely but live alone with non-partners. There was also modest correlation between loneliness and suicide for men in their sample, but not women. However, both men and women who reported frequently feeling lonely were more likely to be admitted to a hospital for self-harm. The researchers suggest that loneliness appears to lessen the protective effect of cohabitation and that it may be more strongly associated with self-harm than with suicide death (Shaw et al., 2021).

There is no single cause of suicide; not everyone who is lonely experiences suicidal thoughts. Loneliness often interacts with other suicide risk factors to increase suicide risk (Stickley & Koyanagi, 2016). These risk factors include not only mental illness, but also poor coping and social problem skills. People with poor social problem-solving and coping skills who describe themselves as lonely have been found to be more at risk for suicidal behavior than those who do not (Hirsch et al., 2012; US Department of Veterans Affairs, 2022).

The Veterans Administration has disseminated a paper titled: “Loneliness-A Risk Factor for Suicide” (US Department of Veterans Affairs, 2022). To help mitigate Veteran suicide, they recommend assessing for loneliness and meaningful connections with family, friends, significant others, and work colleagues. The VA suggests considering use of an assessment scale for loneliness; however, most studies had simply asked participants, “Do you often feel lonely?” or “How frequently have you felt lonely in the past week?” (e.g., Ayalon & Shiovitz-Ezra, 2011). The VA also suggests that clinicians consider social skills training, psychoeducation, social prescribing (i.e., linking patients with support in the community), as well as cognitive behavior therapy to address maladaptive cognitions (US Department of Veterans Affairs, 2022). The hope is that modifying feelings of loneliness could help reduce suicide risk (Shaw et al., 2020). Click here to learn more about the efficacy of various treatments for loneliness (Cacioppo et al., 2015).

Loneliness is a serious public health issue which can increase suicide risk. Public awareness campaigns may help reduce the stigma of loneliness and mental illness, which can complement the assessment and treatment of these common conditions. Efforts may be targeted toward those most likely to experience loneliness: the young and the very old, the mentally and the physically ill, parents, and persons from underrepresented groups (including LGBTQ+ individuals). Research suggests the importance of promoting strong, quality social

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predictors of loneliness. Household income, household size, marital status, health, and frequency of socializing predicted loneliness in all age groups (Hawkley et al., 2020).

bonds and being part of a community. The point is that, "*People want to feel purpose and they want to belong*." (The Cigna Group, 2023).

"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.

New Quantitative Tools

Researchers are applying new quantitative tools to study questions related to suicide. One of these tools, for example, is a formula for quantifying "assortativity" (Cero & Witte, 2020). Assortativity is "the observation that any two people with similar attributes are more likely to be linked in some way than any two people with dissimilar attributes" (Cero & Witte, 2020, p. 365-366). Basically, this is the idea that "birds of a feather, flock together" (Cero & Witte, 2020, p. 365).

The phenomenon of suicide clustering has been established for some time. The CDC defines a "suicide cluster" as "a group of suicides, suicide attempts, or self-harm events that occur closer together in time and space than would normally be expected in a given community" (CDC, 2024). Individuals in a cluster do not necessarily know each other; they may be connected by other factors (e.g., highly publicized suicide; social media post; connection to a third party).

In the event of a suspected cluster, the CDC recommends that the "community response plan should consider identifying and referring persons who may be at high risk for suicide, regardless of whether the community-identified cluster involves a statistically significant greater-than-expected number of cases" (CDC, 2024). We know from past research that suicide clusters occur more commonly among males, adolescents or young adults, and those with history of excessive alcohol use, drug misuse, and/or self-harm (CDC, 2024; Gould et

al., 1990; Haw et al., 2013; Niedzwiedz et al., 2014).[18] But how do we best determine, with the limited resources that are typically available, which individuals are most at risk?

Cero & Witte (2020) devised a study to try to answer this question. They machine-coded 64,499,981 million suicide-related verbalizations on Twitter from 17,438,868 million users. They found that if a user posted a suicide-related verbalization, their friends and their friends' friends were significantly more likely than expected by chance to also post suicide-related verbalizations. Specifically, suicide-related verbalizations were assortative through six degrees of separation. When mood was controlled, suicide-related verbalizations were assortative through two degrees of separation (Cero & Witte, 2020; Westers, 2020).

Cero & Witte used the following analogy to describe the implications of their finding. If an adolescent attempts or dies by suicide, rather than screening all students at the school for suicide risk, the school psychologist would ask a teacher to identify the student's closest friends and screen them. If any of the student's closest friends screen positive, then the school psychologist would ask a teacher to identify that student's closest friends and screen them. Cero & Witte go on to statistically show how such an assortative-informed approach to screening would be more likely to identify true positives than random mass screening (Cero & Witte, 2020).

Furthermore, Cero & Witte (2020) point out that the benefit of their assortative-informed sampling approach "grows nonlinearly with the size of the network, thus making it ideal for improving the accuracy and resource efficiency of suicide prevention in large scale contexts like the military, Veterans Affairs, school districts, and online social media platforms" (p. 376).

While a number of other studies have discovered clustering of suicidal behavior or that individuals at risk for dying in a suicide cluster share some features in common, Cero & Witte's study appears to be the first to directly estimate the assortativity of suicidal behavior. It also shows how an assortatively-informed sampling approach could potentially improve the accuracy (i.e., true positive rate) and efficiency of population-based suicide risk screening.

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

[18] The CDC recently released three reports updating its guidance for communities assessing, investigating, and responding to suicide clusters (see Ballesteros et al., 2024, Ivey-Stephenson et al., 2024; Trinh et al 2024). In its first report, outlining the background and rationale for the new guidance, the authors assert: "Risk factors for point clusters are postulated to be the same as general risk factors for suicide [Haw et al., 2013] and therefore do not aid in identifying those most at risk for becoming part of a suicide cluster" (Ballesteros et al., 2024).

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 valanced, 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-relate 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 the 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.

Dombrovski 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), women with postpartum depression (e.g., Bondoc et al., 2019), 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).

Folic Acid and Other Medications: Certain medications have been associated with an increased risk of suicidal behavior, while others have been associated with a decreased risk.

Gibbons and colleagues (2019) used a drug safety signal-generation algorithm known as IDEAS to look for an association between 922 drugs on the market and suicide attempt. They found 10 drugs to be associated with an increased risk of a suicide attempt, with the strongest associations for alprazolam, butalbital, hydrocodone, and the combination codeine/promethazine. They found 44 drugs to be associated with a decreased risk of suicide attempt, with the strongest associations for folic acid, mirtazapine, hydroxyzine, disulfiram, and naltrexone. Many of these latter drugs are discussed in the treatment section of this resource (Gibbons et al., 2022).

The researchers felt that the strong association between folic acid and decreased risk of suicide attempts warranted further study. They designed a new study—a within-person pharmacoepidemiologic study—which included 866,586 adult patients. The new study confirmed their earlier signal generation study: Folic acid treatment was correlated with a significantly reduced rate of suicidal events, even after controlling for confounds such as age, sex, diagnoses, folic acid deficiency, folate-reducing medication, history of folate reducing medication, and history of suicidal events. There were 261 suicidal events during the months covered by a folic acid prescription for a rate of 4.73 per 100,000 person-months, compared with 895 suicidal events during the months without folic acid for a rate of 10.61 per 100,000 person months. Moreover, a dose-response analysis showed that for each month of additional treatment, there was a 5% decrease in suicidal events (Gibbons et al., 2022).

There is support for this finding, such as a study showing improvement in treatment-resistant depression with folinic acid (Gibbons et al., 2022; Pan et al., 2017). There are various forms of vitamin B9: folate, folic acid, and folinic acid. Folinic acid, also known as leucovorin, differs from folate or folic acid because it does not require activation by dihydrofolate reductase. Unlike folate or folic acid, folinic acid requires a prescription (Hegde & Nagalli, 2022).

Potential mechanisms to explain the association between folate and suicidal behavior include: a) folate deficiency may predict a poorer clinical response to SSRIs; b) folate may enhance effects of antidepressants acting via monoamine neurotransmitter systems by its involvement in methylation pathways; and c) folate is essential for neurogenesis, nucleotide synthesis, and methylation of homocysteine (Gibbons et al., 2022).

Dr. Ross Baldessarini spoke about these findings as part of his talk on medications and suicide at the 2022 Suicide-Focused Assessment and Treatment course (Baldessarini, 2023). These findings are exciting. Folic acid—a common, inexpensive, over-the-counter, readily available drug with no real side effects—has been linked to a 44% reduction in suicide attempts and self-harm. The hope is that folic acid supplementation might in the future be added to the arsenal of medications available to help reduce suicides and suicide attempts. However, an RCT is required first to determine whether or not the relationship between various forms of folate and suicidal behavior is causal.

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; McCoy et al., 2016).

An article by Westers (2020) points out other recent advances in the field. One advance, for example, is greater inclusion of persons with lived experience in suicide research protocols. Persons who have lived through a suicide attempt or who have lost someone to suicide have typically been excluded from suicide research due to concerns that the risk of participation would outweigh the benefit. Researchers are beginning to include people with lived experience in the design and development of research, bring an important perspective to the field (Westers, 2020).

Additionally, there has been concern that including people with lived experience might be a trigger or be upsetting. In fact, there is increasing data that not only does participation not increase risk, there is data indicating a reduction in risk of suicidal ideation and suicidal activity after participation (Blades et al., 2018; Dazzi et al., 2014; Westers, 2020). The hope is that such findings will lead to more and higher quality research in suicidology.

Another positive advance that Westers mentions is the ideation-to-action theories of suicide. We have long known that many persons, especially youth, will have suicidal thoughts, but very few will end up attempting or dying by suicide (Van Orden et al., 2010; Westers, 2020). What we are learning from these ideation-to-action theories is that reducing suicides depends not only on reducing suicidal ideation and mitigating associated risk factors, but also "reducing capability for suicide by restricting access to lethal means, borrowing strategies from public health initiatives, quickly addressing modifiable behaviors that increase acquired capability like NSSI, and leveraging modern technology using large data sets ("big data"), machine learning algorithms, and social media (Anestis et al., 2017; Franklin et al., 2017)" (Westers, 2020).

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.[19]

Researchers have studied a variety of indicators of subjective well-being in relationship to suicide risk, including, for example, measures of life satisfaction, happiness, purpose and meaning in life. As expected, they found negative correlations between suicidal ideation and behavior and such measures of positive emotion (or, alternatively, the absence of negative emotion) on both the individual and the population level (e.g., Bray & Gunnell; 2006; Bryan et al., 2013; Bryan et al., 2021; Daly & Wilson, 2009; Heisel & Flett, 2004; Kleiman & Beaver, 2013: Koivumaa-Honkanen et al., 2003).

A study by Bryan and colleagues (2021) measured levels of happiness and meaning in life after recovery from suicidal ideation. The sample was comprised of nearly 1000 US National Guard personnel, two-thirds of whom had been previously deployed. Not surprisingly, the researchers found that having a history of suicidal thoughts and behaviors was associated with reductions in happiness and meaning in life. The suicide attempt group were less likely to report average or above average levels of happiness or meaning in life, followed by the suicide ideation group, and then the group without a history of suicidal ideation or attempt. In addition, there was a positive correlation between happiness scores and the length of time since the participant had experienced their last suicidal thought. Those who reported their last suicidal thought with the past week had the lowest happiness scores, whereas those who experienced their last suicidal thought more than a year ago had the highest happiness scores.[20]

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[19] 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).

[20] A different pattern emerged with respect to meaning in life scores in the Bryan et al study. Whereas those who experienced their last suicidal thought in the past week had the lowest meaning in life scores and those who experienced their last suicidal thought more than a year ago had the highest meaning in life scores, there was no

However, what may be most interesting about the Bryan et al study is their finding that most of the participants with suicidal ideation (66-73%) and even those with a history of a suicide attempt (41-62%) were able to experience average to above average levels of happiness and meaning in life less than one year after they had last had a suicidal thought. We have long known that only a small percentage of suicidal individuals will ultimately die by suicide. The Bryan et al study shows that most will go on, at least in the short term, to live lives with happiness and purpose, giving hope to patients in the throes of a suicidal crisis hope that things can get better soon. The study has implications for both research and clinical practice. Bryan and colleagues suggest, for example, that happiness and meaning in life should be studied and pursued as outcome measures in their own right, so that clinicians can learn more about how best to "facilitate this change process" (Bryan et al., 2021).[21]

Researchers have also 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 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

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significant difference found between those who had experienced their last suicidal thought in the past month and in the past year. This is in contrast to happiness scores which increased steadily and significantly increased from past week to past month to past year (Bryan et al., 2021).

[21] Machado and colleagues (2015) reviewed literature on happiness and health in psychiatry. They argue that studying factors leading to happiness (i.e., what promotes happiness) may be particularly beneficial for those who treat patients with mental health disorders. Their literature review found that higher levels of happiness were not only associated with reductions in levels of mental illness, but also with improved coping in the face of adversity.

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 (Fochtmann & 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 addition, asking specific questions with respect to "mental practice" is useful: Can they see their own death? Can they view it? (Jacobs & Sulzer, 2023; Joiner, 2005).

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 (Brüdern 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?

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., 2010; Kalafat et al., 2010).

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).

The *988 Suicide & Crisis Lifeline* was launched in July 2022. The new 3-digit phone number is intended to be a quick and easy way for people who are suicidal or in a mental health crisis to connect to a trained mental health professional. Data shows that the Lifeline responded to 1.7 million more calls, texts, and chats in its first 5 months of operation, which is nearly half a million more than the old 10-digit number answered during the same period the year before. The average wait time to speak to a counselor decreased from close to 3 minutes in November 2021 to 36 seconds in November 2022 (Chatterjee, 2023).

The greatest increase was in the number of individuals connecting to the 988 Suicide & Crisis Lifeline via text and chat. Chat service users tend to be younger and to be more likely to report suicidal ideation than other crisis callers (Gould & Lake, 2021). Younger persons tend to be in more acute stages of distress, so a quicker response time is even more important with this population (Chatterjee, 2023). The 988 Lifeline is currently working on improving access to crisis care for marginalized communities, with pilot programs specifically for LGBTQ youth and American Indian and Alaskan Natives, and a video chatting option for people who are deaf or hard-of-hearing (Chaterjee, 2023).

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., 2010; Kalafat et al., 2010).

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; Maltsberger, 1988; 2004; Maltsberger 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).[22] 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)**

[22] 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 (Maltsberger & 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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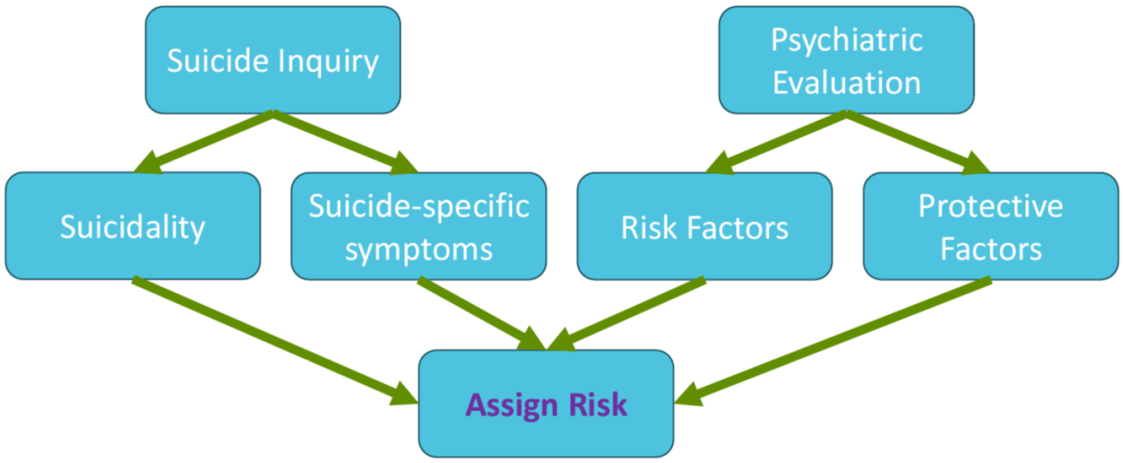
Determination of Risk Level and Intervention

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).



(Jacobs & Sulzer, 2023)

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. ***Risk remains high despite absence/presence of protective factors.***	Desire paired with intent or capability. Absence/presence of buffers may raise or lower risk.	Any core factor presenting alone. 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 heath 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).

Electronic Health Records

While the terms electronic medical record (EMR) and electronic health record (EHR) are often used interchangeably, they are actually different entities. An electronic medical record is basically a digital version of a patient's medical record; it is intended for one clinician and is typically only available to that clinician/group. An electronic health record (EHR), on the other hand, is meant to be used by a number of clinicians and by healthcare organizations. The purpose of an EHR is to share information about the patient between providers, including between providers at different healthcare organizations (Haan & Main, 2022). This can be especially helpful for suicidal patients who stand to benefit from the support of collaborative, team-based care.

At the 2023 Suicide-Focused Assessment and Treatment Course: An Update for Professionals, Donna Vanderpool, M.B.A, J.D. discussed some unique issues related to the documentation of suicidality in EHRs as opposed to paper charts (Vanderpool, 2023). For example, clinicians seeing suicidal patients may need to be careful about using certain functions of the electronic health record, such as copy and paste. According to Vanderpool, copying and pasting information from other notes can result in a "massively bloated" medical record, thereby making it more difficult to locate important information. However, if the clinician decides to copy and paste from another note or another area of the chart, Vanderpool recommends crediting the original author and specifying where the information came from. Clinicians may need to be careful when using prepopulated fields, templates, and symptom generated data. The point is that the documentation needs to be specific to the patient at hand. If using an electronic record and there is space for text, the clinician may choose to document in narrative form the risk assessment and rationale and other specific information about the patient and the visit (Vanderpool, 2023).

EHRs provide patient portals. With these portals, patients can access their own medical records. Parents and guardians can access records of children and impaired adults. One may need to consider this in deciding what information to include in a note. Many EHRs provide a method to block a patient's access to specific notes. This can be taken into consideration when entering sensitive information about the patient. Providers may need to familiarize themselves with the capabilities and limitations of the EHRs that they use.

Vanderpool also highlighted that EHR's were never meant to be printed. Clinicians may consider doing a test print of the note to ensure that relevant information does not get cut off when printed. For a variety of reasons, including risk management, the printed copy of the record should not be very different from the electronic record (Vanderpool, 2023).

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 fidal 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.

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

Discharge planning is a component of keeping patients safe (Vanderpool, 2023). For some patients, there may be heightened risk of suicide both during psychiatric hospitalization as well as post-discharge (Forte et al., 2019). Patients are assessed for suicide prior to discharge from the facility and discharged when indicated, based upon clinical judgment. Discharge instructions may include a safety plan for what to do should a suicidal crisis arise following the hospitalization (Forte et al., 2019).

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 patients 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 may reduce suicidal thoughts in patients as depression improves, but they require time to take effect. Approximately two-thirds of patients will experience significant improvement within three months of antidepressant treatment, with one-third being considered "treatment resistant" (Ionesco et al., 2015). Antidepressants are advised to 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 (Braun at al., 2016). 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).

Naslund and colleagues (2018) examined the effects of three SSRIs (sertraline, paroxetine, or citalopram) on item #3 of the Hamilton Rating Scale for Depression (HRSD). Item #3 is the HRSD item which asks about suicidal ideation. The study found that adults age 25 or older who had received an SSRI had lower mean suicidal ideation ratings than adults age 25 or older who had received a placebo. However, for young adults aged 18-24, those who had received one of the SSRIs showed no reduction nor increase in mean suicidal ideation ratings compared to those who had received a placebo. Findings such as this suggest a potential benefit for SSRIs in patients over the age of 24, and neither a beneficial nor harmful effect of SSRIs in the 18-24 age group.

It is difficult to assess the effects of newer antidepressants on suicide risk in children and adolescents as these younger age groups have frequently been excluded from studies (Hetrick et al., 2021). Of note, fluoxetine (Prozac) is the only FDA approved medication for the treatment of depression in children ages 8 years and up, and fluoxetine (Prozac) and escitalopram (Lexapro) are the only medications FDA approved for the treatment of depression in adolescents ages 12 and up (FDA, 2019).

The FDA requires that 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, and 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 sedating antidepressant, such as trazodone (APA, 2003), a benzodiazepine, or a sedating second-generation antipsychotic (Londborg et al., 2000; Smith et al., 2002; Smith et al., 1998).

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).

Since benzodiazepines can reduce 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 include 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

Lithium is a first-line treatment for bipolar disorder (Yatham et al., 2018), an illness in which approximately 15-20% of individuals die by suicide over a lifetime (e.g., Grande et al., 2016; Hu et al., 2023). Persons with bipolar disorder are particularly at risk for suicide during mixed phase (manic/hypomanic and depressed) episodes (Nierenburg et al., 2023).

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 (Smith & Cipriano, 2017). In patients with bipolar disorder, 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.

Results for lithium reducing suicide risk in shorter term studies were equivocal (Katz et al., 2022), highlighting the need for long term treatment (Del Matto et al., 2020). It is to be noted that lithium can be toxic or even lethal in amounts that are three or more times the typical or standard dose.

There is evidence that lithium is 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).

Additionally, lithium "appears to have the best evidence for relapse prevention and prophylaxis" in postpartum psychosis (PPD) (Jairaj et al., 2023; Osborne 2018). A recent literature review found that PPD patients who had been promptly treated "with antipsychotics and lithium, followed by maintenance treatment with lithium" had significantly better prognoses than PPD patients who had not been managed in this way (Jairaj et al., 2023).

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). 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).

Chen and colleagues (2023) recently published an article suggesting that valproic acid may also be associated with a decreased risk of suicide in patients with bipolar disorder. In this study, lithium was still associated with the lowest risk of suicide, all-cause, and natural mortality within 5 years of the index admission. However, valproic acid was also significantly correlated with a reduction in suicide and other types of death. Of note, there were no significant findings for either lamotrigine or carbamazepine (Chen et al., 2023).[23]

There is limited information on risks of suicide and suicide attempts during treatment with other mood-stabilizing agents aside from lithium. 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).

Ketamine[24]

Originally synthesized as a cyclohexaylamine 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 sub-specialty of psychopharmacology, both treatments are often found.

Racemic Ketamine

[23] Chen et al (2023) also found a dose-dependent relationship between exposure to mood stabilizers and mortality risk. The higher the lithium dose and the longer the duration of use, the lower the risk of suicide and other types of mortality. Similar findings were found for valproic acid in terms of all-cause and natural mortality (though not for suicide specifically).

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

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."

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 with acute suicidal ideation or behavior (Office of the Commissioner, 2019). The FDA subsequently granted a second FDA approval for treatment of 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 antidepressant. Its anti-suicidal effects are short-lived, lasting for days up to one week, and its anti-suicidal effects are greater than its antidepressant effects (Schatzberg, 2023).

At the 2023 Suicide-Focused Assessment and Treatment Course: An Update for Professionals, Dr. Schatzberg discussed the need for rapid and sustained treatments for suicidality. His talk was titled, "Update on Clinical Utilization of Ketamine in Suicide Prevention, Including Psychedelics." To view this presentation in its entirety, click here.

Other Hallucinogenic Agents

Dr. Alan Schatzberg and colleagues in the Department of Psychiatry at Stanford University School of Medicine are currently exploring whether a single IV infusion of ketamine along

with ultra-low dose buprenorphine can extend ketamine's anti-suicidal and antidepressant effects. The current research is based on previous work showing the potential for ultra-low dose buprenorphine to treat refractory depression (Bodkin et al., 1995) and reduce suicidal behavior and mental pain (Yovell et al., 2016).[25] While data are still in the process of being collected and analyzed, preliminary results are corroborating other research, finding that ketamine has more of effect on suicidal ideation than on depression (Schatzberg, 2023).

Psilocybin

Psilocybin is a hallucinogenic substance originating from certain types of mushrooms. It is a natural analog to serotonin, stimulating the serotonin 5-HT_{2A} receptors (Schatzberg, 2023). Psilocybin is still a Schedule I substance under the Controlled Substances Act and is not currently approved as a treatment in the United States (Department of Justice/Drug Enforcement Administration, 2022), though there is growing evidence of its therapeutic potential with respect to mitigating psychological distress, anxiety, depression, and suicidality.

Epidemiological studies in the United States have found a significant association between having ever used any classic psychedelic substance (e.g., LSD, peyote, mescaline, psilocybin) and reduction in past month psychological distress as well as past year suicidal thinking, past year suicidal planning, and past year suicide attempt (Hendricks et al., 2015a). Moreover, there is evidence that of all the classic psychedelics, psilocybin may have the "greatest therapeutic potential" for alleviating psychological distress and mitigating suicide risk (Hendricks et al., 2015b, p. 1042). Analyzing data from the National Survey on Drug Use and Health, Hendricks and colleagues (2015b) found that lifetime use of psilocybin and no lifetime use of any of the other psychedelics was associated with the particularly significant reductions in past month psychological distress and past year suicide thinking, planning, and attempt.

There have also been a few studies done on psilocybin in patients with late or end stage cancers (Schatzberg, 2023). These studies showed that a single dose of psilocybin may result in clinically significant and sustained reductions in anxiety and depression (e.g., Carhardt-Harris, 2016; Griffiths et al., 2016; Grob et al., 2011; Ross et al., 2016; Schatzberg, 2023).

Cancer patients are at increased risk of death by suicide. A recent large population-based study in the U.S. found that suicide risk was increased 26% in the cancer patients compared to the general population, with the risk especially acute in the first 6 months post diagnosis (Hu et al., 2023). As many as 2 out of every 5 cancer patients will meet diagnostic criteria for a mood disorder (Griffiths et al., 2016). Fifteen percent of cancer patients will be diagnosed with major depressive disorder, a condition highly correlated with suicidality (Agrawal et al., 2023; Shim & Park, 2012; Griffiths et al., 2016; Hu et al., 2023).

[25] Of note, the participants in the Yovell et al. (2016) study were severely suicidal. Two participants made a suicide attempt during the study period. One had been assigned to the buprenorphine group, the other to the placebo group. One of these participants was hospitalized for psychiatric observation.

Agrawal and colleagues (2023) recruited 30 adults with a diagnosis of cancer and major depressive disorder to take part in a fixed dose, open label study, of psilocybin. They found that a single 25 mg dose of psilocybin (administered in combination with group and individual psychotherapeutic support) led to a rapid reduction in depressive symptoms over the 8-week study period. In fact, half of the patients (50%) showed full "remission" of depressive symptoms (defined as a MADRS score lower than 10 posttreatment); 4 out of 5 patients (80%) showed the "sustained" response (defined as MADRS score of 50% or more from baseline to week 3 and week 8). Of note, there was no evidence of suicidality on the C-SSRS during the course of the 8-week study.

The Agrawal et al (2023) study was not designed with a control arm. In contrast, Griffiths and colleagues (2016) conducted a randomized, double-blind, crossover study of very low dose (placebo-like), dose (1 or 3 mg/70 kg), versus high dose (22 or 30 mg/70 kg) of psilocybin. The subjects in the Griffiths et al. (2016) study were 51 cancer patients experiencing symptoms of depression and/or anxiety. Participants were crossed over to the alternate dose condition after 5 weeks. Results showed that high dose psilocybin (22 or 30 mg/70 kg) produced significant decreases in depressed mood and anxiety along with other benefits at 5 weeks, with 4 out of 5 patients continuing to show clinical improvement on the high dose at 6-month follow-up. The authors did not specifically assess suicidal ideation or behavior, though they did note that the adverse events that occurred during the study were not serious.

Ross and colleagues (2016) published a double blind, placebo-controlled, crossover trial of psilocybin for treatment of anxiety and depression. The 29 cancer patients received either a single dose psilocybin (0.3 mg/kg) or niacin, with crossover at 7 weeks. They found that when administered in conjunction with psychotherapy, psilocybin was associated with a substantial reduction in symptoms of depression and anxiety as well as cancer-related demoralization and hopelessness, and that these results can last at least 7 weeks. The authors did not discuss suicidality in particular, but reported that there were no serious adverse events.

While these RCTs on psilocybin were done with cancer patients, there have been RCTs of psilocybin on physically healthy adults with major depression. For example, Raison and colleagues (2023) compared a single 25 mg dose of synthetic psilocybin to 100 mg dose of niacin. The subjects were 104 medically healthy, non-suicidal adults with major depressive disorder. Exclusion criteria included active suicidal ideation with intent, active substance use disorder, as well as a history of psychosis or mania. Psychological support was provided to both patient groups. Results showed a significant and greater reduction in depressive symptoms and functional disability at 6 weeks in the group who had been treated with a single 25 mg psilocybin dose (Raison et al., 2023). The authors also found "no suicidal or self-injurious behavior occurred during the trial and all instances of suicidal intent were considered passive. One participant receiving psilocybin and 5 [participants] in the niacin group had an increase in C-SSRS suicidal ideation score from baseline to end of trial…" (Raison et al., 2023, p. 849).

Future research will clearly be needed to determine whether psilocybin is safe and effective for managing suicidality in various populations, even if just in the shorter-term until the suicidal crisis passes or until an antidepressant or other treatment can take effect. It is important to note that psilocybin is considered a drug with a "high potential for abuse" as it can lead to dependence as well as panic reactions, psychosis, or even death in overdose

(Department of Justice/Drug Enforcement Administration, 2022). Although it may be helpful for treating depression and suicidal ideation and behavior, psilocybin and other psychedelics are not recommended for use with psychotic patients or patients with family histories of psychosis. Research protocols on psychedelics have generally excluded such patients as psychedelics have the potential to precipitate a psychotic crisis (Öngür, 2023).

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.[26] 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 not considered a first-line treatment and 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 known as extrapyramidal symptoms. Clozapine produces complex changes in brain chemistry by exerting effects on various subtypes of dopamine, serotonin, histamine, adrenergic, and muscarinic receptors, 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 there is limited evidence suggesting a possible utility for use in severe and refractory suicidal behavior and self-injurious behavior in individuals with bipolar disorder and severe borderline personality disorder (Masdrakis & Baldwin, 2022). It has been reported that discontinuation of clozapine in patients with schizophrenia can lead to periods of high risk for suicide (Van der Zalm et al., 2021) and any taper or discontinuation is to be monitored accordingly.

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

[26] 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).

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, as with other risk/benefit decisions, weighs the advantages and disadvantages of clozapine therapy for the individual patient (APA, 2003).

Other Antipsychotic Agents

While first-generation antipsychotics (e.g., fluphenazine, thiothixene, and haloperidol) are very effective in treating positive symptoms of psychosis (delusions, hallucinations, agitation, and disorganization) and decreasing all-cause mortality, 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 including dystonic reactions, parkinsonism, akathisia, and possibly worsening of depression or negative symptoms of psychosis (alogia, anhedonia, flattened affect). Because of this, they have been replaced over time in 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).

While second generation antipsychotics (e.g., aripiprazole, quetiapine, olanzapine) have a decreased risk of extrapyramidal symptoms, they are associated with a higher risk of metabolic disorder, and, similar to first generation antipsychotics, are less effective than clozapine in treating suicidality (Forte et al., 2021). Interestingly, 2018 Canadian Network for Mood and Anxiety Treatments (CANMAT) and International Society for Bipolar Disorders (ISBD) guidelines suggest quetiapine and lurasidone as first-line treatments for individuals suffering from bipolar depression who require a fast response to treatment (1 week) due to suicidality. This is attributed to an improvement of depressive symptoms as opposed to inherent anti-suicidal properties of the medication (Yatham et al., 2018).

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).

Hypnotics

It is known that severe insomnia is a risk factor for suicide. 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 (McCall et al., 2019). The authors suggest that prescribing controlled-release zolpidem when starting SSRI antidepressant treatment may be beneficial for suicidal patients with severe insomnia. However, there is mixed data with regard to the use of hypnotics in suicidal patients. A recent meta-analysis and a 10-year long retrospective study examining over 2 million VA patients suggest zolpidem may not decrease suicidality as much as tricyclic antidepressants and antihistamines targeting insomnia (Lavigne et al., 2023).

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). This topic was also discussed in Dr. Schatzberg's lecture at the Suicide-Focused Assessment and Treatment Course: An Update for Professionals (Schatzberg, 2023).

Medication for Treatment of Peripartum Disorders

Postpartum psychosis

Postpartum psychosis is not currently independently classified as a condition by the DSM or ICD classification systems, but is clinically identified as mania, severe psychotic depression, or mixed episodes with features of manic and depressed episodes. Postpartum psychosis is considered a medical emergency requiring inpatient hospitalization. The condition places the mother and child at a significantly increased risk of suicide and infanticide, with suicide being a leading cause of maternal death (Osborne, 2018).

There is limited data on pharmacological treatment of postpartum psychosis. Most of the data stems from small observational studies, though there have been a few larger studies conducted on the topic, such as studies conducted by Bergink and colleagues in the Netherlands (Osborne, 2018)). In one such study, Bergink and colleagues (2015) administered a 3-step treatment algorhythm to 64 women, whom they had followed from admission for postpartum psychosis through 9 months postpartum. Their protocol basically involved tapering benzodiazepines and antipsychotics after symptom remission, and then continuing lithium (or antipsychotics if the patient responded without lithium) for 9 months. The study found that nearly all the patients (98.4%) were able to achieve remission using their 3-step method, and that 4 out of 5 of the women (79.7%) were able to sustain remission through 9 months postpartum (Bergink et al., 2015; Osborne, 2018). The authors concluded "that a structured treatment algorithm with the sequential addition of benzodiazepines, antipsychotics, and lithium may result in high rates of remission in patients with first-onset postpartum psychosis and that lithium maintenance may be most beneficial for relapse prevention" (Bergink et al., 2015).

In 2018, Osborne published a clinical guide for obstetric providers on recognizing and managing postpartum psychosis. Her treatment recommendations can be found in the box below:

Treatment Recommendation for Acute Postpartum Psychosis (Osborne et al., 2018, Box 9)

- "Benzodiazepine (lorazepam 0.5-1.5 mg TID)
- Antipsychotic (high potency preferred, haloperidol 2-6 mg or olanzapine 10-15 mg)
- Lithium (to achieve serum level of 0.8-1.2 mmol/L)
- Taper benzodiazepine and antipsychotic once symptom remission is achieved
- Continue Lithium monotherapy for 9 months (can lower to achieve serum level of 0.6-0.8 after symptom remission if severe side effects)
- For future pregnancies, begin prophylactic Lithium monotherapy during pregnancy or immediately postpartum"

(Osborne et al., 2018, Box 9)

In general, it appears that early initiation of antipsychotics and lithium and maintenance of lithium therapy are the most helpful for preventing poor outcomes (Osborne 2018).

Peripartum OCD

It is very important in the differential diagnosis to distinguish postpartum psychosis from perinatal OCD. For more information on how to do this, please refer to the section of this guide titled Perinatal Women.

Perinatal OCD is treatable, with the same methods used to treat OCD in general (Abramowitz, 2023). While women with postpartum psychosis often require inpatient treatment, women with perinatal OCD are often treated as outpatients with medication (SSRIs, clomipramine) and psychotherapy (CBT with adaptations geared toward the perinatal period) (Hudak & Wisner, 2012; Rodriguez-Cabezas & Clark, 2018).

Peripartum depression

Even in the absence of postpartum psychosis, perinatal *depression* is an independent risk factor for increased risk of death by suicide in mothers (Yu et al, 2024).

The FDA has recently approved the first medication specifically for the treatment of severe postpartum depression (FDA, 2023). The medication zuranolone (tradename ZURZUVAE) is a neuroactive steroid, that has a novel mechanism of action as a positive allosteric modulator of GABA-A receptors. In people with depression, it is thought to work by rapidly rebalancing dysregulated neuronal networks to help reset brain function. In December 2023, ZURZUVAE became available by prescription in the United States (Biogen, 2023). Information about risks and benefits, as well as prescribing guidelines can be found here.

At the time of writing, ZURZUVAE is obtainable only at certain specialty pharmacies or by being directly shipped from the manufacturer to the patient. Financial assistance to cover costs associated with the medication is available to eligible patients through Biogen's patient support program. For more information on ZURZUVAE and the patient support program, *ZURZUVAE For You*, visit ZURZUVAE,com or call 844-987-9882.

Detailed information on postpartum psychosis, perinatal depression, and perinatal OCD and their relationship to suicide risk can be found later in the resource in the section titled "Perinatal Women." There is also information on the safety and efficacy of ECT during the peripartum period in the following section on brain stimulation techniques.

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. In head-to-head studies with ketamine, ECT is superior in treating severe depression (Rhee et al., 2022). 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 safe and effective with over 50 years of data in peripartum patients experiencing depressed mood and postpartum psychosis. A proposed protocol is available here (Ward et al 2018).

ECT is also used for suicidal patients who require a rapid treatment intervention. ECT can rapidly reduce suicidal ideation (Watson, 2019). Additionally, ECT may reduce all-cause mortality (Rhee et al., 2022) and may reduce the risk of death by suicide within one year of discharge in hospitalized patients with severe depression (Kaster et al 2022). 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 will 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.

In another small retrospective study conducted with VA patients, rTMS showed promise in reducing suicidal thinking irrespective of changes in depressive symptoms (Bozzay et al., 2020). However, additional literature suggests TMS may mitigate suicidality through decreasing depressive symptoms (e.g., Abdelnaim et al., 2020). One systematic review reveals that evidence is still lacking within the MDD literature (Godi et al., 2021). TMS also currently lacks evidence for use in patients with bipolar disorder (Miller & Black, 2020).

Overall, more research is still needed to determine the impact of the treatment on suicidality. 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 in individuals with MDD 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 (Williams 2021; 2022). 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 (Williams 2021; 2022). 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).

Dr. Williams discussed his research on rTMS for suicide prevention at the 2022 Suicide-Focused Assessment and Treatment Course. To view his talk and slides, click here.

Magnetic Seizure Therapy (MST)

MST is a relatively new intervention for patients with treatment-resistant depression and is currently being studied as an alternative option to ECT. It is not yet an FDA approved treatment and is currently under the title of "experimental therapies" in the United States (NIMH, 2024). In MST, 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. A recent study suggests MST may be as effective in treating MDD as ECT (Deng et al., 2023). 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). In another study, 47.8% of patients achieved remission of suicidal ideation (Weissman et al, 2020).

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 (Asarnow et al., 2021; McCauley et al., 2018; Mehlum et al., 2014). A cornerstone of DBT is the idea that the patient is encouraged to 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.

A systematic review included 8 other systematic reviews and 15 randomized controlled trials to determine benefits of both nonpharmacologic and pharmacologic interventions to prevent suicide and reduce suicide behaviors. Compared to treatment as usual, DBT demonstrated modest superiority in reducing suicide attempts (D'Anci et al., 2019). Another current network meta-analysis of 54 studies including 17,630 participants investigated nonpharmacological suicide prevention interventions, revealing similar results (Hu et al., 2024). The analysis of these 54 studies suggested that DBT is consistently more effective in reducing the risk of suicide attempts compared to treatment as usual. Hu et al. (2024) propose that both DBT and CBT played a role in reducing the risk of suicide attempts.

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 MCBT 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).[27] 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. Published randomized controlled trials show 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, 2023; Huh et al., 2018; Jobes et al., 2018; Pistorello et al., 2020; Ryberg et al., 2016; Santel et al., 2023). 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 ITP 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). A free, on-demand webinar about the fundamentals of ABFT is available here.

[27] A recent study by Lynch and colleagues (2022) identified specific drivers of suicide in a sample of U.S. Army soldiers with significant suicidal ideation. These drivers fell into four categories: relationships, unpleasant internal states (e.g., suffering and anxiety), role responsibility (e.g., vocational concerns), and the self (e.g., self-hatred or esteem issues).

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.

Chronic Suicidality

A subset of patients experience chronic suicidality. For such patients, suicide is "a frequent and enduring consideration in the context of persistent distress" (Jobes, 2023). Chronically suicidal patients are those with a history of multiple suicide attempts and inpatient hospitalizations (Jobes, 2023).

Dr. David Jobes presented on the chronically suicidal patient at the 2023 Suicide Assessment and Treatment: An Update for Professionals course. To view Jobes's talk, click here. Jobes pointed out that chronically suicidal patients often have diagnoses of major depression along with a comorbid personality disorder, usually of the Cluster B subtype (e.g., antisocial, borderline, histrionic, narcissistic). While major depression and borderline personality disorder are each independently associated with suicide attempts, there is evidence that those diagnosed with both disorders will not only have more suicide attempts, but also more serious suicide attempts (Reed et al., 2022; Soloff et al., 2000).

Chronic suicidality is common in those with Cluster B personality disorders. For example, over 70% of those diagnosed with borderline personality disorder will make 3 suicide attempts during lifetime; with 9% eventually dying by suicide (Yen et al., 2021). Depression, hopelessness, impulsivity, lethal intent, and objective planning are factors shown to increase the seriousness of suicidal behavior in patients with borderline personality disorder (Soloff et al., 2000).

A prospective study in the US examined the relationship between personality disorders and the risk of suicide attempts over a 10-year period. Borderline personality disorder was most strongly associated with making a suicide attempt over the 10 years of follow-up. However, narcissistic personality disorder was the only personality disorder was the only personality disorder associated with making additional attempts beyond the first during that same time period. This latter finding was unexpected by the authors and warrants further explanation. The authors are concerned that current treatment approaches tailored to patients with borderline personality disorder may be less effective for patients with narcissistic personality disorder (Ansell et al., 2015).

Chronically suicidal patients will often have a history of complex posttraumatic stress disorder (complex PTSD). Complex PTSD occurs in response to "prolonged or repetitive events from which escape is difficult or impossible" (Reed et al., 2022, p. 192), including sexual, physical, or emotional abuse, chronic neglect, domestic violence, human trafficking, and torture. Individuals with complex PTSD have more symptoms and a greater diversity of symptoms than those diagnosed with classic PTSD. While the concept of complex PTSD was introduced by Dr. Judith Herman in the 1990s (Herman, 1992) and clinicians and researchers have reported cases over several decades (Reed et al., 2022), the diagnosis of complex PTSD has only recently been added to the International Classification of Diseases (World Health Organization, 2021).

The ICD-11 diagnosis of complex PTSD differentiates between PTSD and complex PTSD, with both diagnoses included under the broader category of "Disorders specifically associated with stress" (Karatzias et al., 2017).[28] Complex PTSD contains not only the three classic PTSD symptoms (i.e., re-experiencing, avoidance; and sense of threat), but also three symptom clusters denoting problems in self-organization. These additional symptoms related to self-organization include affective dysregulation, difficulty with interpersonal relationships, and negative self-concept, with negative self-concept (i.e., feeling worthless or defeated) being the most frequently endorsed symptom in this population (Karatzias et al., 2017; Reed et al., 2022).

Not only is complex PTSD distinct from PTSD in the ICD-11, but it is also distinct from borderline personality disorder. While the two disorders share some symptoms in common, "borderline personality disorder is marked by instability in identity and volatile relationships, and the salient presence of self-injurious and suicidal behaviours, while complex PTSD tends to be characterized by negative but stable identity, a consistent tendency to avoid or break off relationships, and relatively lower levels of impulsivity" (Reed et al., 2022, p. 193). Recognizing the difference between these disorders may help clinicians and researchers optimize the treatment for each disorder.

Approximately 3% of individuals in the US experience complex PTSD over the course of their life, with women at least twice as likely as men to meet criteria (Karatzias et al., 2017). The gender difference in susceptibility to PTSD (in both its classic and complex form) has been attributed to various factors, such as the fact that women are more likely to experience childhood sexual abuse and sexual assault than men and that the trauma women experience is more likely to be chronic (e.g., domestic violence) than the trauma men experience (Vogt, 2023). A 2007-2008 study of 1000 suicidal patients at the Mayo Clinic found that

[28] There is converging evidence from studies using various methods that PTSD and complex PTSD are distinct diagnoses as opposed to complex PTSD simply being a subtype of classic PTSD. Functional magnetic resonance imaging (fMRI) studies, for example, show that the neural profiles of those with PTSD and complex PTSD show different patterns during the processing of threatening stimuli, with increased activation in the insula and right amygdala in those with complex PTSD (e.g., Bryant et al., 2021; Herzog et al., 2019; Reed et al., 2022). Bryant and colleagues (2021) state that "The observation of increased insula and right amygdala activation in CPTSD accords with the proposal that CPTSD is distinguished from PTSD by disturbances in emotion regulation and self-concept" (p. 1121).

approximately 90% of patients who present with chronic suicidality were women (Kahn-Greene et al., 2009; Jobes, 2023).

Complex PTSD is more common in clinical samples than PTSD (Karatzias et al., 2017). Complex PTSD is thought to be a more severe disorder than classic PTSD, with studies finding a much higher incidence of psychiatric comorbidity with this clinical condition, including suicidality (Jannini et al., 2023; Karatzias et al., 2017). The presence of complex PTSD increased the risk of suicidality by more than three-fold compared to the general population, even more than classic PTSD, which has long been known to increase the risk of suicidal behavior (Karatzias et al., 2019). As many as 73% of those who meet diagnostic criteria for complex post-traumatic stress disorder will have histories of suicide attempt, according to another study (Gelezelyte et al., 2022). The thought is that "sustained, repeated, or multiple forms of traumatic exposure" leads to "loss of emotional, psychological, and social resources under conditions of prolonged adversity (Cloitre et al., 2013)" (Karatzias et al., 2017).

A recent study examined factors that might be associated with suicidal ideation in patients who have experienced trauma. The researchers found not only that those patients with complex PTSD experienced more severe symptoms than those with classic PTSD, but that there was a significant correlation between hopelessness in the complex PTSD group that was not found to be significant in the classic PTSD group. These findings may have potential treatment implications. PTSD has long been established as a risk factor for suicidal behavior (Jannini et al., 2023; Law et al., 2019; Nock et al., 2009), and the correlation is even stronger when there is concomitant depression (Jannini et al., 2023; Nichter et al., 2019; Panagioti et al., 2009). This study suggests that clinicians treating patients with complex PTSD may want to consider trauma-focused interventions, specifically targeting hopelessness with the overarching aim of reducing suicidal risk (Jannini et al., 2023).

One of the most vexing problems for clinicians is how to treat the patient who presents with chronic suicidality. We know that suicidality can vary in intensity over time. But how do we know if the risk of suicide in a patient who is chronically suicidal is now becoming acute, and thereby requiring a complete suicide risk assessment and a change in management strategy, including consideration of hospital admission?

Complex PTSD and borderline pattern symptoms have been shown mediate the relationship between sexual abuse and suicide risk, even after adjusting for age, gender, and whether or not the trauma had occurred during childhood or adulthood. Thus, patients who have experienced sexual abuse, and who are now experiencing symptoms of complex PTSD or borderline traits, should be frequently assessed and managed for suicide risk (Gelezelyte et al., 2022).

While individuals with borderline personality disorder or complex PTSD do not usually require hospitalization, there are certain situations where inpatient treatment may become appropriate (Chapman et al., 2023). One potential indication is a change in the person's mental state, such as the onset of psychosis, sustained or severe depressed mood, dissociation, or indication that the person is withdrawing, regressing, or decompensating. Clinicians should also be alert for any changes in that individual's usual pattern or type of self-harm, worsening of alcohol or substance use disorder, and/or any recent adverse life

events (e.g., relationship breakups, legal or financial problems) that may feel unbearable to the patient (Chapman et al., 2023).

There has been ongoing debate as to whether hospitalizing chronically suicidal patients on an inpatient unit each time they present in crisis is beneficial, ineffective, or may even be countertherapeutic (e.g., Fowler et al., 2018; Jobes, 2023; Paris, 2007). An article by Fowler and colleagues (2018) discussed the history of this controversy, particularly the reluctance over the past several decades to hospitalize patients with borderline personality disorder for any extended period of time, especially now that there are several effective evidence-based outpatient treatments for this condition (Fowler et al., 2018). Fowler and colleagues (2018) have published one of the only studies on the advantages and disadvantages of extended hospitalization for borderline personality disorder patients. Their study found functional and symptomatic improvement in the borderline personality disorder patients over 8-weeks of inpatient admission with no adverse effects, which was similar to a matched sample of inpatients without a diagnosis of borderline personality disorder.

While it is difficult to draw a conclusion from Fowler and colleagues (2018) singular study, it may be the case that the benefit of hospitalization depends on specific factors of the sample, such as gender. For example, Dr. Jobes mentioned that in the Mayo Clinic study, the wish to die in chronically suicidal women was higher at inpatient admission, but came down rapidly over the course of care, whereas the wish to die among the chronically suicidal men in the study remained the same (Jobes, 2023).

Dr. Jobes concludes that while a subset of patients will always need to go to the hospital (e.g., those with acute psychosis), there appears to also be a subset of chronically suicidal patients who can be managed and stabilized on an outpatient basis. He pointed out that dialectical behavior therapy (e.g., Bohus et al., 2020), mentalization-based therapy (e.g., Bateman & Fonagy, 2009), and Collaborative Assessment and Management of Suicidality (CAMS; e.g., Pistorello et al., 2020) all have RCT support for treating chronically suicidal patients, with dialectical behavior therapy being the first line of treatment (Jobes, 2023).

There is also growing evidence that high levels of hopelessness, not simply depression, may be driving suicidality in individuals with complex PTSD (Jannini et al., 2023). Interventions aimed at reducing hopelessness may also help to reduce suicide risk in this population.

Finally, it must be emphasized that alcohol and substance use disorder is very common in chronically suicidal patients. Indeed, 64% of those with borderline personality disorder will have a comorbid substance use disorder (Chapman et al., 2023). With complex PTSD, the odds ratio for alcohol use disorder is 2 and for substance use disorder 4 (Jannini et al., 2023; Karatzias et al., 2019). The strength of the association between substance use disorder and suicide is greater for women than men, possibly because women are more reluctant to seek treatment for substance use than men and thus have a more severe substance disorder at the time of diagnosis (Lynch et al., 2020). Nevertheless, there is significant empirical support that treatment alcohol and substance use disorder can mitigate suicidal risk, irrespective of gender (e.g., Ahmadi et al., 2018; Fazel & Runeson, 2020; Molero et al., 2018; Mooney, 2022; Watts et al., 2022; Yovell et al., 2015).

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 themself 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. Clinicians may breach confidentiality and alert a family member or other close contact if the risk of outpatient suicide is determined to be significant, the family or close contact does not seem to be aware of the risk, and the family or close contact might be able to contribute to the patient's safety (Vanderpool, 2023). 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, click here.

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 is typically administered in emergency departments, on the day of discharge from an inpatient psychiatric hospitalization, and in outpatient settings (Schuster et al., 2021). It generally 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[29] and Dr. Gregory Brown. 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

[29] We are saddened to learn of the recent death of Dr. Stanley. She has made major contributions to the field of suicidology, shifting the field of suicidology to "practical, concrete, and timely interventions" (Berry, 2023). She will be missed by so many who knew her and of her important body of work. Fortunately, her work will live on.

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 by Nuij and colleagues (2021) found that safety-planning type interventions decreased the risk of suicidal behavior by 43%. 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).[30]

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.

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)

[30] The meta-analysis conducted by Nuij and colleagues (2021) 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 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).

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 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.[31] 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

[31] A recent randomized clinical trial also found evidence for the effectiveness of the CRP in rapidly reducing suicidal ideation in a sample of U.S. military veterans receiving outpatient treatment for PTSD (Bryan et al., 2024).

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.

Stabilization Interventions and the Hope Institute

At his presentation at the 2022 Suicide-Focused Assessment and Treatment course, Dr. David Jobes stressed the importance of these stabilization interventions, including safety planning and lethal means counseling (Jobes, 2022).

Dr. Jobes also discussed another stabilization intervention, the Hope Institute, which he and his team first established in the town Perrysburg Ohio, to help meet the great need for evidence-based, suicide-focused treatment. Their plan is to establish Hope Institutes in other communities nationwide.

The idea for the Hope Institute came about in the fall of 2020, at the height of the pandemic, when there was—and still is—a very long waiting list for mental health services. The goal of the Hope institute is to fill the gap between Lifeline calls and/or hospital stays and quality outpatient care. The Hope Institute promotes stabilization through next business day appointments and evidence-based, suicide-focused treatment.

The Hope Institute is a short-term outpatient program. Treatment begins within 24 business hours of referral, and averages approximately 5 to 6 weeks. Referrals can come from a variety of sources (e.g., crisis lines, emergency departments, schools, first responders, community mental health centers, churches). At present, individuals can either be treated at the Hope Institute in Ohio or opt to be treated via telehealth. The treatment includes a combination of CAMS and group DBT skills. To learn more about the Hope Institute or establishing one in your community, click here.

Telehealth

Telehealth uses communications technologies to deliver psychiatric services from a distance. Examples of telehealth care used for suicide intervention include teletherapy, online support groups, and mobile apps (Rural Health Information Hub, 2022). A recent systematic literature review found that telehealth can reduce suicidal ideation and behavior (Aiello et al., 2021).

The Zero Suicide Institute has resources on its website with valuable tips for managing suicidal clients via telehealth. This resource, developed by The Center for Practice

Innovations and SP-TIE at Columbia Psychiatry New York State Psychiatric Institute, includes basic guidelines for initiating contact when there is any concern about suicidality, such as making sure to ask for the person's location (address, apartment number) and for emergency contact information at the outset of the visit in case a need to call for emergency rescue arises. If the level of suicidal risk is determined to be concerning, the clinician may decide to maintain telehealth contact with the individual while arranging for emergency rescue or until other care is available. When indicated, it may be important to have a plan in place in advance to maintain real-time communication with the suicidal individual in the event there is a need to contact emergency services for rescue intervention. To access this resource, click here.

One brief intervention that can be used to help manage suicide risk via telehealth is safety planning with reducing access to lethal means (National Action Alliance for Suicide Prevention, 2020). While safety planning using telehealth is basically the same as doing safety planning in person, a few adaptations have been recommended. Safety plans can be developed collaboratively by sharing a screen, with either the patient or the clinician typing the information into the document. If the clinician is the one typing, a copy can be sent to the patient by email or text for them to keep readily available (Center for Practice Innovations and SP-TIE, 2022). The provider can also place a copy of the safety plan in the patient's record.

The standard of care for telemedicine visits is considered the same as for in-person visits (Federation of State Medical Boards, 2022; Vanderpool, 2023). As with in-person visits, providers document the telehealth visit and communication with the patient, whether it be written, audiovisual, or verbal. The note will include the date, duration, platform, type of service, and that the service was provided remotely. Documentation can include useful identifying information.

Zoom and Skype for Business are examples of systems used by healthcare providers for telehealth since these platforms have versions that are HIPAA compliant. To ensure HIPAA compliance, clinicians should obtain and maintain a Business Associate Agreement from the platform. Familiarity with the online platform can increase using the system to its full potential. A provider may need to have a plan in the event the technology fails. For example, how will contact with the patient be reestablished if the connection is lost (Zero Suicide, 2022)?

It is also recommended to understand the security and privacy settings of the telehealth platform. Will the session be recorded or will the recording feature be disabled? How will files be stored? Who will have access? During the call, does the patient have access to a private place in order to avoid being overhead by another person, such as a family member or roommate? It can be useful to discuss in advance how to reduce the likelihood that this will happen and what to do if it does occur. To facilitate privacy, it may be helpful to discuss using headphones and/or using the chat feature for some of the call if others may be in the home during the video. Being comfortable with the chat function can also be very helpful for taking notes or making comments. Many platforms allow the provider to obtain a transcript of the chat discussion after the visit, which can then be shared with the client/patient afterwards (Zero Suicide, 2022).

There are some clear advantages to telehealth that extend beyond the COVID-19 pandemic. For example, for a variety of reasons, there is a high rate of suicide in rural areas in the United States, accompanied by a shortage of mental health providers in these areas. Suicidal individuals in these regions must travel long distances to access mental health providers in person. Telehealth has the potential to expand access to mental health care and improve appointment attendance in these and other underserved areas. Individuals who do not have access to reliable transportation may avail themselves of telehealth options. However, there are still barriers to accessing these resources that need to be taken into account. For example, those in rural areas may not have the reliable broadband internet required to access the web-based services used for telehealth communication systems (Rural Health Information Hub, 2022).

In summary, telehealth services can be used to improve and expand access to mental health services. Optimizing telehealth services also has technical and logistical requirements that need planning and preparation to implement well.

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.

At the 2022 Suicide-Focused Assessment and Treatment course, Dr. David Brent presented a slide with characteristics of health care systems that have been able to successfully reduce suicides within their facilities (Brent, 2022).

- Continuity across levels of care
- Evidence-based depression care
- An assertive crisis response team
- A dual diagnosis program
- Training of staff in evidence-based assessment and treatment
- Team approach
- An open review (including family and all clinicians) when a suicide takes place

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.

The Joint Commission is a nonprofit organization responsible for accrediting and certifying over 22,000 hospital and health care organizations across the United States (The Joint Commission, 2024). They have recently made a significant revision to their definition of suicide in the Sentinel Event Policy. As of January 1st, 2024, suicide is defined in the Sentinel Event Policy as:

"*Death caused by self-inflicted injurious behavior if any of the following apply:*

- *While in a health care setting*
- *Within 7 days of discharge from inpatient services*
- *Within 7 days of discharge from emergency department (ED)*
- *While receiving or within 7 days of discharge from the following behavioral health service*
    - *Day Treatment/Partial Hospitalization Program (PHP)/Intensive Outpatient Program (IOP)*
    - *Residential*
    - *Group Home*
    - *Transitional Supportive Living"* (The Joint Commission, 2023)

The revision aligns with recent literature findings of an ongoing risk of suicide while patients receive health care services and after they are discharged from health care facilities. The Joint Commission's previous definition of suicide in the Sentinel Event Policy had been developed more than 10 years ago. The Joint Commission had defined suicide as the "[s]uicide of any patient receiving care, treatment, and services in a staffed round the clock care setting or within 72 hours of discharge, including from the health care emergency department (ED)" (The Joint Commission, 2023). The 2024 definition of suicide in the Sentinel Event Policy is an important revision, that was based on extensive review of current evidence-based literature on the topic (The Joint Commission, 2023).

Postvention


Photo credit: Pexels

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.

Prolonged grief disorder

One intervention that has shown promise for those affected by prolonged grief and suicide loss is Prolonged Grief Disorder Therapy (PGDT), which was developed by Dr. Katherine Shear of The Center for Prolonged Grief at Columbia University.

Prolonged grief disorder is the new term for the condition previously referred to as "complicated grief" or "disturbed grief." In 2020, the American Psychiatric Association issued diagnostic criteria for prolonged grief disorder. For a DSM-5-TR diagnosis, the loss must have occurred at least 12 months ago for adults, and at least 6 months ago for children and adolescents, and the grief must last longer than that typically expected by social, cultural, or religious norms. The person also must also have experienced at least 3 symptoms of prolonged grief nearly every day for at least the last month prior to diagnosis. Examples of these symptoms include identity disruption, disbelief, avoidance of reminders, emotional

pain, difficulty moving on, emotional numbness, a sense that life is meaningless, and/or intense loneliness (APA, 2022).

Prolonged grief disorder differs from depression in a variety of ways, though both are associated with suicidal ideations and behaviors (Szuhany et al., 2021). "Persistent yearning and preoccupation with the deceased" is central to prolonged grief disorder, whereas "free-floating sadness and loss of interest and pleasure" are central to depressive disorders (The Center for Prolonged Grief). However, prolonged grief is often comorbid with a depressive disorder, anxiety disorder, and/or PTSD (APA, 2022; Szuhany et al., 2021).

Prolonged grief is estimated to affect 7%-10% of bereaved adults (APA, 2022; Szuhany et al., 2021). Risk is increased in older persons, females, caregivers, and those with a prior history of depression or bipolar disorder. Prolonged grief is also more likely to occur when the death occurs unexpectedly or violently (e.g., car accident, suicide, murder) or in the context of other life stress (APA, 2022: Szuhany et al., 2021; Mayo Clinic, 2023).

A recent study examined contributors and moderators of prolonged grief symptoms in the context of suicide loss (Levi-Belz & Ben-Yaish, 2022). The study found that certain intrapersonal and interpersonal variables, specifically guilt, depression, perceived burdensomeness, and thwarted belongingness, significantly contributed to prolonged grief in suicide-loss survivors, even after adjusting for sociodemographic and other factors. Moreover, perceived burdensomeness moderated the relationship between guilt and prolonged grief symptoms. The authors recommend that special attention be paid to suicide loss survivors weighed down by feelings of guilt and feeling like a burden to those around them.

PGDT is an evidence-based approach that targets complicated grief symptoms, using a variety of techniques, including components of CBT. PGDT guides the bereaved through 7 "Healing Milestones" in 16 sessions. The milestones include "understanding grief, managing emotions, seeing a promising future, strengthening relationships, narrating the story of the death, learning to live with reminders and connecting with memories of the person who died" (The Center for Prolonged Grief). Additional information on training in PGDT for mental health professionals can be accessed here.

Approximately 80% of individuals with prolonged grief disorder will experience sleep problems, and CBT has shown effectiveness for insomnia (APA, 2022). Bereavement support groups can also be useful (APA, 2022).

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

The American Academy of Pediatrics, the American Academy of Adolescent and Child Psychiatry, and the Children's Hospital Association have declared "a national state of emergency" in children's mental health (American Academy of Pediatrics, 2021; St. George, 2023).

Suicides among U.S. youth aged 10-24 have increased substantially over the past decade. According to CDC data, there were 10.5 suicides per 100,000 persons in this age group in 2020, compared to 7.6 per 100,000 in 2010 (CDC, 2022). While suicides among 5- to 11-year-olds are rare, they have also increased significantly over time (Sheftall et al., 2016).

The increase in suicide among youth has been propelled in part 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 (Benton, 2020).

The 2021 Youth Risk Behavior Survey found that 13% of high school girls had attempted suicide in the past year, compared to 7% of high school boys. Twice as many high school girls (24%) made a suicide plan in the past year than high school boys (12%). And 30% of high school girls reported having seriously considered suicide in the past year, compared to 14% of high school boys. High school girls fared worse than high school boys on other measures, too (e.g., being electronically bullied; using alcohol and drugs) (CDC, 2023).

The fact that nearly 1 out of every 3 high school girls seriously considered suicide in 2021 is concerning, as it is much higher than the rate of 1 in 5 (19%) high school girls who had reported seriously considering suicide on the same survey ten years ago. While there is clearly no single cause to explain this increase among girls, the data did show a 27% increase in sexual violence from two years ago. Nearly 1 out of every 5 high school girls reported that they were forced to have sex in 2021. American Indian or Alaskan Native students were more likely than other groups to have been raped. White students were more likely to experience

sexual violence than Asian, Black, or Hispanic students and were the only group to see an increase in it (CDC, 2023).

Nesi and colleagues (2023) recently compiled a report, titled "*Teens and mental health: How girls really feel about social media*," which was based on their study of over 1300 adolescent girls aged 11-15 across the United States. The study found that 20-26% of girls in the study reported "hearing or seeing things about suicide or self-harm that are upsetting" at least weekly on various social media platforms, which was fairly similar to the 22% rate of "seeing or hearing things about suicide or self-harm that are upsetting" at least weekly in real life. However, girls with moderate to severe depressive symptoms were as much as 3x more likely to come across harmful suicide-related content across platforms, compared to girls without depressive symptoms (Nesi et al., 2023).[32]

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 systematic review and meta-analysis of 58 studies of preadolescent children found that the lifetime prevalence of suicide was 0.79 per 1 million preadolescents in the general population and that the lifetime prevalence of suicidal thoughts and suicide attempts in preadolescents was 15.1% and 2.6%, respectively (Liu et al., 2022). 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.

[32] The data on social media is not all negative. Girls with moderate to severe depressive symptoms (and those who identify as LGBTQ+) also reported seeing helpful mental health content or resources at least monthly on these platforms. The report concludes: "We must determine how to reduce risks while optimizing benefits, how to minimize the negative aspects while maximizing the positive ones, and how to do so in a way that accounts for the needs of those who are most vulnerable" (Nesi et al., 2023, p. 54).

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+

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 (e.g., CDC, 2023; 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.[33]

The Trevor Project, a suicide prevention and crisis intervention organization for LGBTQ youth, recently published findings from their 2023 U.S. National Survey on LGBTQ Mental Health (The Trevor Project, 2023). They surveyed 28,524 LGBTQ Youth aged 13-24 years living in communities throughout the United States in 2022. They found that 45% of LGBTQ youth aged 13-18 had seriously considered suicide in the past year, and that 16% of these 13-18-year-olds had made a suicide attempt.[34]

Seventy percent of LGBTQ youth aged 13-17 reported experiencing symptoms of anxiety on the 2023 survey, and 57% reported experiencing symptoms of depression. The numbers were slightly lower among older youth/young adults, but still concerning - with 64% of the 18 to 24-year-olds reporting experiencing symptoms of anxiety and 50% reporting having experienced depressive symptoms. Transgender and nonbinary youth were especially likely to report these symptoms (The Trevor Project, 2023).

The Trevor Project found that LGBTQ youth living in the South were more likely to report having considered or attempted suicide in the past year than those who were living in other regions of the United States (Northeast, Midwest, or West). The Trevor Project survey was conducted at a time when state legislatures were introducing a record number of anti-LGBTQ policies. Nearly 1 in 3 LGBTQ youth reported on the survey that "their mental health was poor most of the time or always due to anti-LGBTQ policies and legislation. Nearly 2 in 3 LGBTQ young people said that hearing about state or local law banning people from

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[33] The Trevor Project's 2023 *U.S. National Survey on the Mental Health of LGBTQ Young People* (2023) found that: "LGBTQ young people are not inherently prone to suicide risk because of their sexual orientation or gender identity but rather placed at higher risk because of how they are mistreated and stigmatized in society" (p. 5).

[34] These findings from 2022 can be compared to findings from the most recent Youth Risk Behavior Survey, which found that 45% of LGBQ+ youth aged 13 to 18 had seriously considered suicide in 2021 and that 22% had made a suicide attempt in 2021 (CDC, 2023; The Trevor Project, 2023).

discussing LGBTQ people at school made their mental health a lot worse" (The Trevor Project, 2023, p. 13).

The 2023 Trevor Project survey also found that 60% of LGBTQ youth in their overall sample reported experiencing discrimination based on their sexual orientation or gender identity in the past year, with those living in the South or Midwest more likely to report feeling discriminated against. Of LGBTQ youth who did not feel discriminated against, 7% attempted suicide. This number increased to 18% among those who reported that they did feel discriminated against for their sexual orientation or gender identity (The Trevor Project, 2023).

Moreover, 15% of their overall sample reported that they had been threatened with or subjected to conversion therapy. Being threatened or subjected to conversion therapy is associated with a 2.5-fold greater likelihood of attempted suicide, from 11% to 28% (The Trevor Project, 2023).

Fewer than 2 out of 5 (38% LGBTQ youth; 35% transgender and nonbinary youth) reported their home to be "LGBTQ-affirming." LGBT 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. Family and community support is important. The survey showed that youth with higher levels of family social support were less likely to report suicide attempts. Transgender and nonbinary youth who reported that all the people they live with respect their pronouns reported attempting suicide less than those who lived with others who did not respect their pronouns (The Trevor Project, 2023).[35]

Unfortunately, fewer than half (44%) of those in the overall sample who had wanted counseling from mental health professionals during the previous 12 months actually received it. The top 10 reasons given for not accessing desired mental health care were being afraid to talk about their mental health concerns with someone else (47%), not wanting to have to get their parent's/caregiver's permission (41%), being afraid they wouldn't be taken seriously (40%), not being able to afford it (38%), being afraid of being outed (27%), not wanting to look weak (25%), didn't feel their sexual orientation or gender identity would be understood (23%), not wanting to get their mental health care virtually at their home (21%), and their parent/caregiver not allowing them to go (20%) (The Trevor Project, 2023).

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.

Additional research is needed on how to reach and support this very vulnerable group. During his presentation at 2022 Suicide-Focused Assessment and Treatment Course, Dr. Rajeev

[35] The Trevor Project asked some additional questions in 2023 that they had not asked in earlier surveys. They found, for example, that suicide attempts were less likely in transgender and nonbinary young people who had access to a gender-neutral bathroom in school or to binders, shapewear, and gender-affirming clothing (The Trevor Project, 2023).

Ramchand pointed out some challenges in conducting research on suicide in LGBTQ populations. For example, most jurisdictions in the United States do not include sexual orientation in their death investigations, making it difficult to accurately assess the number of suicide deaths in this population.

Researchers have used a variety of methods to assess suicide risk in LGBTQ populations (e.g., linked survey data, diagnostic codes, and natural language processing), consistently finding that gay individuals, whether youth or adult, have significantly more ideation, planning, and attempts than their heterosexual peers. Dr. Ramchand (2022) states that "the stigma of prejudice and discrimination of LGBT individuals may exacerbate the risk of mental health problems thereby increasing suicide practices."

Ramchand also shared a recent study that he and colleagues conducted on mental health use among lesbian, gay, and bisexual adults. The study found past year receipt of mental health services to be low even among those LGB adults who reported a suicide attempt. While 63% of LGB adults received some form of mental health treatment after their attempt, those who did not seek care thought that they needed care. Reasons given for not seeking care included concerns about cost, being committed or forced to take medication, and not knowing where to go (Ramchand et al., 2023). Dr. Ramchand (2022) stated: "We should be thinking about cost, but we should also consider how we market mental health services…We need to address concerns that some adults might have about being [hospitalized] or forced to take prescription mental health drugs." He concludes: "It's really important to provide evidence-based mental health treatment and make sure that the care provided affirms patients' sexual identities." To view a video of Dr. Ramchand's presentation, click here.

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 & Parchin, 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). In 2021, high school girls were twice as likely as high school boys to report being subjected to cyberbullying (CDC, 2023).

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 youth who were either not cyberbullied or were cyberbullied for other reasons (Sinclair et al., 2012; Dorol-Beauroy-Eustace & Mishara, 2021).

Online racial discrimination has been "defined as demeaning or excluding an individual or group on the basis of race through the use of symbols, video, images, text, and voice" (Tynes et al., 2024, p. E2). A recent study examined whether online racial discrimination may be associated with suicidal ideation (Tynes et al., 2024). The study by Tyne and colleagues found the relationship between online racial discrimination and suicidal ideation was fully mediated by symptoms of PTSD in a nationally representative sample of Black adolescents. Previous research has shown that Black youth are exposed each day to an average of 5.21 racially discriminatory experiences, most taking place on online platforms (English et al., 2020; Tynes et al., 2024). Tynes and colleagues recommend creating "safer spaces" online by proactively monitoring and reducing hate speech" (Tynes et al., 2024, p. E4).

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.[36] 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 non-perpetrators. 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)

[36] At the 2022 Suicide-Focused Assessment and Treatment course, Dr. Brent listed some factors found to be protective against adolescent suicide. These protective factors include having a strong parent-child connection, parental supervision and availability, involvement in school, religious affiliation, and relationships with peers (Brent, 2022).

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.

Screening and 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 increase in ED visits for self-harm was driven at least in part by an increase in ED visits for nonfatal self-injury in females. Nonfatal self-inflicted injury includes "deliberate physical harm against oneself, inclusive of suicidal and nonsuicidal intent" (Mercado et al., 2017, p. 1931). Between 2009 and 2015, there has been a substantial increase in the number of ED visits for self-inflicted injury for females aged 10-24. The greatest increase was in girls aged 10-14, whose visits for self-inflicted injury increased from 109.8/100,000 per year to 317.7/100,000 visits per year, though female aged 15-19 and 20-24 also showed significant increases. Self-inflicted injury is a potent risk factor for suicide (Mercado et al., 2017).

There is concern about the ability of emergency departments to handle these mental health visits. Clinical and other staff in the emergency department often lack formal training in recognizing and managing mental health and suicidal crises, despite the fact that they are often the ones on the front lines (Cafferty et al., 2024). Children and adolescents are often left waiting in the emergency department for a licensed mental health clinician to come to do an evaluation, and even longer for an appropriate disposition (Cafferty et al., 2024).

Moreover, a large study of Medicaid-enrolled children found that fewer 1 out of 3 (31.2%) of patients discharged from the emergency department for a mental health visit had outpatient mental health follow-up within 7 days, and only about 1 out of 2 (55.8%) had outpatient mental health follow-up within 30 days (Hoffman et al., 2023). Non-Hispanic black children were less likely than non-Hispanic White children to have outpatient follow-up (Hoffman et al., 2023). Thus, combatting these problems will likely require a multipronged approach, including formal training for ED staff in suicide risk screening/assessment, crisis stabilization, and safety planning, as well as legislative initiatives to increase linkage between emergency departments and outpatient mental health treatment (Cafferty et al., 2024).

At the 2022 Suicide-Focused Assessment and Treatment course, Dr. David Brent discussed the importance of screening youth for suicide risk in various settings (Brent, 2022). He pointed to evidence that screening plus safety planning and referral can reduce the risk of suicide attempts (Miller et al., 2017). Data shows that youth who screen positive for suicide do not necessarily present with behavioral health issues (Ballard et al., 2017) and that screening for suicide risk can identify youth that had been missed by depression screens (Kemper et al., 2022).

According to Brent, screening for suicide risk should be done at every well-child appointment, emergency department visit, and inpatient admission. Screening should be done more frequently in patients undergoing treatment for mental health issues and substance use. Brent recommends the use of the ASQ (e.g., Horwitz et al., 2012) or the Computerized Adaptive Screen for Suicidal Youth (CASSY) (King et al., 2021).

The American Academy of Pediatrics currently recommends universal screening for all youth aged 12+, and screening youth aged 8-11 when clinically indicated. Examples of clinical indications for children ages 8-11 include when the patient or parents raises a concern, when the patient presents with a behavioral health complaint, and when there are warning signs of suicide or a reported history of suicidal ideation or behavior. The AAP recommends using an evidence-based screening tool that has been validated on youth, such as the ASQ or the Suicide Behavior Questionnaire-Revised (SBQ-R) (AAP, 2023a).

The AAP does not recommend screening in youth under age 8. Pediatricians are to assess for suicidal thoughts and behaviors if warning signs are present. Warning signs in children under age 8 include: talking about wanting to die or killing oneself, grabbing one's throat in a choking motion, pointing one's hands in the shape of a gun toward one's head, engaging in self-harm, acting with impulsive aggression, and/or giving away treasured toys. Clinicians should privately meet with parents to discuss concerns and conduct lethal means counseling (AAP, 2023a).

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).

Evidence-Based Treatment for Suicidal Behavior in Adolescents

There are effective treatments for addressing suicidal behavior in adolescents. These treatments include dialectical behavior therapy for adolescents (DBT-A), cognitive behavior individual and family therapy (I-CBT), mentalization-based treatment (MBT-A), as well as psychotherapy and medications for treatment of depression (Aguirre, 2022; Berk, 2023; Brent, 2022). As with adults, it is important to also pay attention to sleep, anxiety, and substance use (Brent, 2022).

The most recent Youth Risk Behavior Survey found that, in 2021, 22% of U.S. high school students had seriously considered attempting suicide, 18% made a suicide plan, and 10% attempted suicide. Moreover, 40% of high school students said that they had felt so sad or hopeless within the past year that they were unable to do their regular activities, such as schoolwork or sports, for at least two weeks (CDC, 2023). Clinicians are struggling to keep up with the demand for evidence-based treatment.[37] If it is difficult to get teens in for individual treatment, consider a group intervention or interventions such as caring letters (Aguirre, 2022; Motto & Bostrom, 2001). There is evidence that DBT skills groups can decrease suicide attempts, depression, NSSI, and angry outbursts (Neacsiu et al., 2010).

[37] At the *2023 Suicide Assessment and Treatment Course: An Update for Professionals*, Dr. Michele Berk pointed out that there are only a few randomized controlled trials demonstrating reductions in self- harm in youth and that most of the treatments that were found to be effective in the RCTs are in still in the research stage and not yet widely available. These evidence-based treatments for adolescents include, for example, multisystemic therapy (MST), which was found to be more effective than emergency psychiatric hospitalization (Berk, 2023; Huey et al., 2004); mentalization-based treatment (MBT-A) which was found to be effective than treatment as usual for self-harm and depression (Berk, 2023; Rossouw & Fonagy, 2012); integrated cognitive behavioral therapy (I-CBT) which was found to be effective than treatment as usual for reducing suicide attempts in adolescents with comorbid substance use (Berk, 2023; Esposito-Smythers, 2011), and SAFETY (Safe Alternative for Teens and Youth) which resulted in fewer suicide attempts at 3-month follow-up than enhanced usually care (Asarnow et al., 2017; Berk, 2023). The most widely available treatment for adolescents, with the most RCT support, was Dialectical Behavior Therapy for Adolescents (DBT-A), with studies showing it more effective than enhanced usual care in reducing suicidal ideation, self-harm, and repeat suicide attempts (Berk, 2023; Mehlum et al., 2014; McCauley et al., 2018; Berk, 2023). Dr. Berk's full presentation can be accessed here.

There is also evidence that the Caring Letters Intervention can reduce suicide rates (Carter et al., 2005; Motto & Bostrom, 2001).

Safety planning is another important intervention with adolescents. At the 2022 Suicide-Focused Assessment and Treatment course, Dr. Brent discussed how to implement a safety plan when working specifically with youth:

- Ask the child or adolescent to explain the plan to parents
- Get parental feedback
- Ask both parents and the patient what might get in the way of the plan
- Consider ways to overcome these barriers or revising the plan

As with adults, it is important to discuss removing or securing lethal agents. Access to firearms is a greater risk factor for adolescent suicide due to impulsivity in this age group. Most families who own firearms will agree to safely store or secure them, but not remove them (Boge et al., 2019; Brent, 2022).

As part of their Evidence Based Resource Guide Series, the Substance Abuse and Mental Health Services Administration (SAMHSA) has compiled a guide titled "Treatment for Suicidal Ideation, Self-Harm, and Attempts Among Youth" (SAMHSA, 2023). The guide gives an overview of current, evidence-based, treatment practices for youth, including Dialectical Behavior Therapy, Attachment-Based Family Therapy, Multisystemic Therapy-Psychiatric, Safe Alternatives for Teens and Youth, Integrated Cognitive Behavioral Therapy, and Youth-Nominated Support Team-Version II. It discusses research on the effectiveness of each of these promising interventions, as well as what to consider when selecting and implementing a particular intervention. To access this SAMHSA resource guide, click here.

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).

A more recent survey of university students found approximately 12% of students reporting suicidal ideation, 5% reporting making a plan, and 1% reporting a suicide attempt during the past year (Oh et al., 2022). This survey was administered to over 30,000 graduate and undergraduate students at 28 universities during the Fall of 2020. COVID-19-related concerns, COVID-19 related discrimination, financial distress, and infection were significantly associated with suicide thoughts and suicide plans, but were not associated with suicide attempts.

Another recent study of 354,473 college students across 286 U.S. institutions found a significant reduction in suicidal ideation and plans in the college student population between 2017 and 2021 (Zhai & Du, 2022). They did not find a significant reduction in suicide attempts in 2021, during the pandemic. However, risk of suicidality was increased in those with severe depression, severe anxiety, COVID-19-related financial stress, food insecurity, and academic impairment, as well as in those with suspected COVID-19 infection.

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).

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)

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 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. Blosnich 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 (Blosnich & 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 Adults[38]

Epidemiology

Older adults are the fastest growing segment of the population in the U.S. and in most countries worldwide. The 65-and-older population in the United States is projected to grow from 56.1 million in 2020 to 80.8 million in 2040 to 94.7 million in 2060. The 85 and older population is expected to increase even more rapidly, from 6.7 million in 2020 to 14.4 million in 2040 to 19.0 million in 2060 (Vespa et al., 2020). 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 46.63/100,000, over triple the rate of the general population (CDC, 2023).[39] 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.

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[38] 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.

[39] Individuals age 75 and older account for only 10% of all suicides in the United States, but they have the highest suicide rate of all age groups (19.1/100,000). Older non-Hispanic White males are overwhelmingly at risk, with 47.8 suicides per 100,000 individuals (CDC, 2022).

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).[40] 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.
Disease	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.
Disability	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.

[40] A recent article states that firearm suicides by elderly individuals increased 49% between 2010 and 2018, despite there being only a 30% increase in the elderly population during the same time period (Price & Khubchandani, 2021). Firearm suicides are overwhelmingly more common in elderly males: The ratio of firearm suicides is 13 elderly males for every 1 elderly female (CDC, 2023, Price & Khubchandani, 2021).

Disconnectedness	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.
Deadly means	As noted previously, over 70% of suicides in later life are by a firearm. A Pew Research Center study found that 45% of individuals age 65+ have access to firearms; 33% own a gun and 12% more live with someone who owns a gun (Parker et al., 2017; Price & Khubchandani, 2021). 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.

Financial stress or loss of financial resources is another factor that may increase risk of suicide in elderly individuals. According to a recent article, many older workers believed that social security would provide adequate income during retirement, but the reality is that many elderly persons live in poverty (Price & Khubchandani, 2021). In 2023, the average monthly social security payment is estimated to be $1,827. While this is an 8.7% increase over the average monthly social security payment in 2022, it is still a challenge to live on, given the current cost of living in the U.S (Konish, 2022). Out-of-pocket health care costs averaged $6668 in 2020, an increase of 38% since 2010 (Administration on Aging, 2022). "Not having sufficient financial resources may cause adult males to perceive themselves as a burden to their family members and/or society, leading to elderly suicides (Duberstein et al., 2004)" (Price & Khubchandani, 2021, p. 1053).

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).[41]

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

[41] A recent survey of 2,048 older adults aged 50-80 found that fewer than 4% (3.7%) of respondents had been asked about firearm safety by a healthcare provider in the past year (Carter et al., 2022). 26.7% of survey respondents owned one or more firearms, and a quarter of survey respondents who owned firearms (24.2%) reported regularly storing at least one of these firearms unlocked and loaded, factors known to increase suicide risk in various age groups. The authors recommend healthcare-based counseling as well as a number of other policies and interventions aimed at mitigating suicide risk in older individuals.

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.

Intervention

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. The Crisis Response Plan (CRP) is another viable option here. The CRP has been found to significantly reduce suicidal ideation and attempts in U.S. military populations (Bryan et al., 2017; Bryan et al., 2024). One of these brief interventions 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. Studies find that as many as 1 in 13 women will experience a new-onset major depressive episode during pregnancy and 1 in 7 women will experience such an episode postpartum (Rodriguez-Cabezas & Clark, 2018).[42]

There is also a significant risk of relapse in women with histories of mood disorders. A study published in the *American Journal of Psychiatry* found that 4.6% of women with unipolar depression relapsed during pregnancy, and 30% during the postpartum period (Viguera et al., 2011). The rate of relapse for bipolar illness was even greater: 23% of women with bipolar disorder experienced an illness episode during pregnancy, 52% postpartum (Rodriguez-Cabezas & Clark, 2018; Viguera et al., 2011).

The prevalence of suicidal ideation and intentional self-harm has steadily increased in childbearing women in the U.S. in recent years, especially among non-Hispanic Blacks, younger persons, and those with fewer financial resources (Admon et al., 2020).

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

(Alhusen et al., 2015; Coelho et al., 2014; Gandhi et al., 2006; Gelaye et al., 2016)

[42] The risk of depression in the perinatal period is so common that, in 2016, the United States Preventative Services Task Force (USPSTF) began recommending that screening for depression include pregnant and postpartum women (Postpartum Support International, 2023; Siu et al., 2016). The American College of Obstetrics and Gynecology, the American Academy of Pediatrics, and the American Medical Association, among other organizations, all recommend screening for perinatal depression (Postpartum Support International, 2023). At the time of writing, the USPSTF was in the process of reviewing its recommendation for screening for depression and suicide risk in the adult population (USPSTF, 2022).

While pregnant women are more likely than the general population to experience suicidal ideation, they are less likely than their non-pregnant counterparts to engage in self-harm[43] or 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 and preterm birth (Gelaye et al., 2016; Gandhi et al., 2016; Zhong et al., 2019). 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 perinatal women, at a rate in the U.S. ranging from 1.6 to 4.5 per 100,000 live births (Rodriguez-Cabezas & Clark, 2018; Wallace et al., 2016). Suicide 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). There is concern that the rate of perinatal suicide is even higher than stated, as studies often do not account for those suicides that occur after the first 6 months postpartum and suicide deaths are not always reported as such on death certificates (Rodriguez-Cabezas & Clark, 2018).

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).

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,[44] including use of a mood-stabilizer, such as lithium. Second-generation

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)

[43] A retrospective cohort study using primary care data from over 2 million women in the UK found a decreased risk of self-harm in pregnancy for all the women, with the exception of 15- to 19-year-olds (Hope et al., 2022). Although pregnant women with mental illness were more likely to engage in self-harm than pregnant women without mental illness, they were also the group who experienced the greatest reduction in risk during pregnancy.

[44] Clinicians starting patients on antidepressants should be alert for increased irritability and agitation, as well as suicidal thoughts. A study by Tondo and colleagues (2010) found a moderately increased risk of mania in patients using antidepressants, with a greater increase in risk among patients with bipolar disorder compared to

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

Despite the risk to mother and baby, perinatal depression is a significantly undertreated condition (Moore Simas et al., 2023). A 2015 systematic review found that fewer than one out of every four persons (22%) who screened positive for perinatal depression used mental health care (Byatt et al., 2015; Moore Simas et al., 2023). Studies have shown that various strategies can be instituted on the patient, provider, and practice levels to increase the uptake 2-4 fold (Byatt et al., 2015).

On August 4, 2023, the FDA approved the first medication specifically for the treatment of severe postpartum depression (U.S. Food and Drug Administration, 2023). The medication zuranolone (tradename ZURZUVAE) is a neuroactive steroid that has a novel mechanism of action as a positive allosteric modulator of GABA-A receptors. In people with depression, it is thought to work by rapidly rebalancing dysregulated neuronal networks to help reset brain function. It is recommended to be given orally daily for 14 days. Information about risks and benefits, as well as prescribing guidelines can be found here.

Biogen Inc. and Sage Therapeutics, Inc. announced via a press release on December 14, 2023 that ZURZUVAE 50 mg (two 25 mg capsules per day) is now available via prescription in the United States. The press release stated that "ZURZUVAE is the first and only oral, 14-day treatment course for adults with PPD that can provide rapid improvements in depressive symptoms at Day 15 and as early as Day 3" (Biogen, 2023). At present, the drug is available only at certain specialty pharmacies or by being directly shipped from the manufacturer to the patient. Financial assistance to cover costs associated with the medication is available for eligible patients through Biogen's patient support program. For more information on ZURZUVAE and the patient support program, *ZURZUVAE For You*, visit ZURZUVAE,com or call 844-987-9882.

While many mothers may prefer not to use medication during 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.[45] Many women may need to take medication to achieve and maintain a euthymic mood during pregnancy and breastfeeding.

Postpartum Psychosis

There is disagreement as to whether postpartum psychosis is a distinct entity, or a mental disorder on the bipolar spectrum (Rai et al., 2015). In fact, the connection to bipolar disorder

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patients with major depressive disorder. Risk was also greater for patients on tricyclics than for patients on SSRIs (Rodriguez-Cabezas & Clark., 2018; Tondo et al., 2010).

[45] A recent article published in JAMA states that SSRIs "are some of the best studied medications during pregnancy and are considered first-line pharmacotherapy during all trimesters and lactation. The benefits of treatment with SSRIs to the perinatal individual and their infant are generally thought to outweigh known risks" (Moore Simas et al., 2023, p. 2296).

is considered to be so strong that some have even suggested that postpartum psychosis "be considered a bipolar diagnosis until proven otherwise" (Osborne, 2018; PsychDB, 2021).

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
- Extreme confusion

(Postpartum Support International)

Postpartum psychosis typically comes on quickly, usually within 3-10 days of birth, but can occur as early as the first day (Bergink et al., 2011; Rodriguez-Cabezas & Clark, 2018). For a DSM-5 diagnosis, symptoms must begin within the first 4 weeks of birth (American Psychiatric Association, 2022; Rodriguez-Cabezas & Clark., 2018). Women with postpartum psychosis typically have little to no insight into their symptoms, and how radically different their functioning is now from before (Rodriguez-Cabezas & Clark., 2018). The illness onset is not well understood, but has been ascribed to both hormonal changes in estrogen and progesterone following delivery and immune dysregulation (PsychDB, 2021; Rodriguez-Cabezas & Clark., 2018).

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 1 in 3 women who have experienced postpartum psychosis experience recurrence of symptoms 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. However, 2 out of every 3 mothers with postpartum psychosis will not have a history of previous psychiatric symptoms (Rodriguez-Cabezas & Clark, 2018).

Postpartum psychosis is not only associated with a greatly increased risk for suicide, but also murder-suicide and infanticide. The rate of infanticide in women with histories of postpartum psychosis is approximately 4% (Rodriguez-Cabezas & Clark, 2018; Lucchesi, 2018; Porter & Gavin, 2010). Command hallucinations ordering the mother to kill the child are common with this condition. Paranoid and bizarre delusions (e.g., that the child is possessed) and altruistic delusions (e.g., that the suicide/infanticide is will save the mother/infant from fates "worse than death") are also common (Rodriguez-Cabezas & Clark, 2018; PsychDB, 2021). Women with postpartum psychosis typically have little to no insight into their disorder (Rodriguez-

Cabezas & Clark, 2018). They often do not verbalize their suicidal or infanticidal thoughts (Lukyx et al, 2019).

There are no standard questions or standardized screening tools for postpartum psychosis. To assess for postpartum psychosis, practitioners can inquire about a personal or family history of bipolar disorder, sleep issues since the birth, and suicidal/infanticidal ideation and self-harm (PsychDB, 2021). Clinicians will also want to attend to how the woman is caring for themselves and interacting with their infant and other family members. Women who neglect themselves or lack interest in their child can be further evaluated and monitored for suicidality (Rodriguez-Cabezas & Clark, 2018).

Women with postpartum psychosis differ from women with schizophrenia and other psychotic disorders, not just in the timing with respect to childbirth, but also in their presentation. There is a greater degree of disorganization and bizarre behavior in the women with postpartum psychosis. They are also more likely to have non-auditory (i.e., visual, olfactory, or tactile) hallucinations (Jones et al., 2014; Rodriguez-Cabezas & Clark, 2018).

Clinicians consider in their differential diagnosis certain physical illnesses (e.g., febrile infection, postpartum hemorrhage, autoimmune disorders, late onset urea-cycle disorder), as well as substance intoxication and substance withdrawal. These can induce psychotic reactions in postpartum individuals (Rodriguez-Cabezas & Clark, 2018).

Perinatal obsessive-compulsive disorder may need to be ruled out. These conditions are sometimes confused because they both can include thoughts of harming their baby, but are different diagnoses and require different forms of management (Abramowitz, 2023; Rodriguez-Cabezas & Clark, 2018). For additional discussion, please see the section below on “Perinatal OCD.”

Postpartum psychosis is a psychiatric emergency, which usually necessitates psychiatric consultation and hospitalization for safety assessment, evaluation, and treatment (Rodriguez-Cabezas & Clark, 2018). Early identification, prompt intervention, and proper treatment are vital for reducing the risk of suicide and infanticide. Effective treatments include medication (e.g., antipsychotics, lithium), with dosing potentially adjusted due to changing pharmacokinetics during and after pregnancy (Bergink et al., 2016). Rodriguez-Cabezas and Clark (2018) recommend starting with lithium and adding an atypical antipsychotic or benzodiazepine as needed. They advise against the use of antidepressants without a mood stabilizer.

Electroconvulsive therapy (ECT) is also an effective treatment option for postpartum psychosis (Bergink et al., 2016). There is research showing that ECT is a reasonably safe and effective treatment for perinatal women in general, though risks must be weighed against the risks of untreated maternal illness and other treatment options (Ward et al., 2018). There is always a risk of relapse with ECT. However, a recent study found that while the risk of relapse after ECT was still considerable, it was substantially lower for women being treated with ECT for depression or psychosis during the postpartum period than it was for women being treated for these conditions outside of the postpartum period (Rönnqvist et al., 2019). To view a literature review on this topic, as well as a proposed clinical protocol, click here. There is also further discussion of ECT during pregnancy in the “Brain Stimulation Techniques” section of this online resource.

Patients with postpartum psychosis may require ongoing monitoring, even if all their symptoms during the postpartum period have subsided. They are at significantly increased risk of developing a bipolar disorder in the future. Educating the woman and her family about bipolar symptoms can allow them to recognize early signs and seek treatment should they arise (Rodriguez-Cabezas & Clark, 2018).

It is also useful to inform the woman and family members of the importance of sleep. This is not only to help with current symptoms, but also to prevent relapse. One challenge to adequate sleep is a newborn baby's feeding schedule, requiring feeding every 2-4 hours, including overnight. Options to improve overnight sleeping for a new mother is to have another person bottle feed the baby (formula or expressed maternal breastmilk) for some of the feedings (Bergink et al., 2016; Rodriguez-Cabezas & Clark, 2018). In addition, pharmacologic agents, such as short-term use of benzodiazepines and/or atypical antipsychotics, in addition to lithium have been used to promote sleep and to target psychotic symptoms (Bergink et al., 2012; Rodriguez-Cabezas & Clark, 2018).

Advising the patient, family, and other support about the potential for suicide or violence can also be helpful. Women with postpartum psychosis can pose a danger to themselves and/or others. Informing mothers and others around them how to recognize warning signs of suicide and psychosis and developing a safety plan may be lifesaving. This can include removing or reducing access to lethal means. While there is now an excellent resource, the National Maternal Mental Health Hotline, funded by the U.S. Department of Health and Human Services, this hotline is not a dedicated suicide crisis line. If the woman is experiencing a suicidal crisis, they should call or text 988 to contact the 988 Suicide and Crisis Lifeline.

Management of subsequent pregnancies can also be a challenge. For women with a prior history of psychosis, there are two different patterns described for risk of relapse with a subsequent pregnancy. The general recommendation is to restart the treatment that had previously been most effective for that woman (Rodriguez-Cabezas & Clark, 2018).

For women who had only postpartum psychosis in the past, Bergink et al (2012) reported that relapse is uncommon when prophylactic treatment with lithium is started immediately after the baby is delivered. However, for those women with a psychiatric history of other mood disorders, not just postpartum psychosis, 44% suffered a relapse despite restarting therapy after the delivery (Bergink et al., 2012; Rodriguez-Cabezas & Clark, 2018).

Perinatal Obsessive-Compulsive Disorder (pOCD)

Obsessive-Compulsive Disorder (OCD) has been associated with a significantly increased risk of suicidal ideation, attempts, and deaths (Albert et al., 2019; Fernández de la Cruz et al., 2017, 2022). Persons with a history of OCD have a 4- to 10-fold increased risk of dying by suicide compared to persons without such a history, according to two recent population surveys from Sweden with long-term follow-ups (Fernández de la Cruz et al., 2017, 2022; Sidorchuk et al., 2021).

Fernández de la Cruz (2017) found that the strongest correlates of suicide death in persons diagnosed with OCD were having a previous suicide attempt and having a comorbid

personality or substance use disorder, though the risk of death remained substantial even after controlling for psychiatric comorbidities. Interestingly, this study also found that the increased risk of suicide associated with OCD is more pronounced for women than for men (Fernández de la Cruz et al., 2017).

Women who are pregnant or who have recently given birth are also at increased risk of developing new symptoms of OCD and having preexisting symptoms of OCD worsen (Abramowitz, 2023; Miller et al., 2013). The onset of OCD during pregnancy or after childbirth is typically fairly swift, with obsessions and compulsions revolving around the unborn or newborn baby (Abramowitz, 2023).

For example, one study by Miller et al. found that approximately 11 percent of women experience OCD symptoms at 2 weeks and 6 weeks postpartum, which is significantly greater than the 2 to 3 percent reported for the general population. About half of the women who reported symptoms at 2 months reported improvement in their OCD symptoms at 6 months. However, there were also new women who developed symptoms at 6 weeks who had not experienced them at 2 weeks. Approximately 70% of women who screened positive for OCD on the Yale-Brown Obsessive Compulsive Scale (Y-BOCS) had also screened positive for depression on the Patient Health Questionnaire (PHQ-9) (Miller et al., 2013).

Perinatal OCD appears to be related to perinatal depression.[46] OCD affects significantly more women who have postpartum depression (57%) than women who have non-postpartum depression (39%) (Rodriguez-Cabezas & Clark, 2018; Wisner et al., 1999). One author wrote: "*Many people expect pregnancy and childbirth to be a very happy time. When negative obsessional thoughts occur, the person might feel extremely sad and anxious because they don't expect to have these types of thoughts*" (Abramowitz, 2023). A recent systematic review found that suicide attempts in patients with OCD were associated not only with substance use disorders and depressive symptoms, but also with the severity of the obsessions (Fernández de la Cruz et al., 2022; Pellegrini et al., 2020).

Perinatal OCD is treatable, with the same methods used to treat OCD in general (Abramowitz, 2023). While women with postpartum psychosis often require inpatient treatment, women with perinatal OCD are often treated as outpatients with medication (SSRIs, clomipramine) and psychotherapy (CBT with adaptations geared toward the perinatal period) (Hudak & Wisner, 2012; Rodriguez-Cabezas & Clark, 2018).

[46] 11% of women with perinatal depression will also have a diagnosis of OCD. In fact, 2 of every 3 women with perinatal depression will have a comorbid psychiatric condition, with anxiety disorder being the most common co-condition (Moore Simas et al., 2023, Wisner et al., 2013).

Psychosis and Psychotic Disorders

Psychosis "refers to a collection of symptoms that affect the mind, where there has been some loss of contact with reality" (National Institute of Mental Health, 2023a). These symptoms include delusions and hallucinations, as well as speech and behavior that is inappropriate to the situation at hand (National Institute of Mental Health, 2023a). Psychosis has been associated with a heightened risk of suicidal ideation, attempt, and death (Öngür, 2023; Yates et al., 2019).[47]

There are a number of conditions that include psychotic symptoms, including schizophrenia spectrum disorders,[48] bipolar disorder, severe depression, certain personality disorders, and alcohol and drug misuse. Brain disorders (e.g., strokes, tumors, infections, Parkinson's disease, Alzheimer's disease) and sleep deprivation may also cause psychotic symptoms to emerge (National Institute of Mental Health, 2023a).

The incidence of first episode of psychosis is estimated to be around 86/100,000 per year in 15- to 29-year-olds and 46/100,000 per year in 30- to 59-year-olds (Simon et al., 2017). This incidence refers to the first diagnosis of any psychotic disorder, including with comorbid mood and substance use disorders. However, this incidence excludes those with dementia or a neurodegenerative disease (Simon et al., 2017).

The risk of suicide and suicide attempts during the first year of contact with mental health services can be significant among those with psychosis. The rate of suicide during the first year of contact with mental health services is nearly twice as high as that found during later years. Approximately 10% of patients with psychosis will make a suicide attempt during the first year of treatment. Risk factors for suicide attempt in this population after first contact are female gender, young age, suicide plan, and history of suicide attempt (Bertelsen et al., 2007; Nordentoft et al., 2015).

Dr. Dost Öngür discussed the assessment and treatment of suicidal thoughts and behaviors in patients with psychotic disorders at the 2023 Suicide-Focused Assessment and Treatment: An Update for Professionals course. Dr. Öngür is the Chief of the Division of Psychotic

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[47] A recent systematic review and meta-analysis published in JAMA Psychiatry found that individuals in the general population who report "psychotic experiences" are at twice the risk of subsequently reporting suicidal ideation, three times the risk of subsequently attempting suicide, and four times the risk of dying by suicide than others in general population (Yates et al., 2019). "Psychotic experiences" are "hallucinatory experiences and delusional beliefs that are similar to the classic symptoms of schizophrenia but typically associated with at least some degree of intact reality testing" (Yates et al., 2019).

[48] There was a formal name change in 2013 with the advent of the DSM-5. The DSM-IV had referred to these conditions as "Schizophrenia and Other Psychotic Disorders." The DSM-V now calls these conditions "Schizophrenia Spectrum and Other Psychotic Disorders." The reason for the changes in DSM-5 was to improve diagnostic reliability. Not all persons with schizophrenia experience the same symptoms and persons with this condition can experience different symptoms at different times. A diagnosis of "Schizophrenia Spectrum Disorder" is based both on presenting symptoms as well as the severity of these symptoms over the prior 7 days, acknowledging the fact that the symptoms and the severity of symptoms can vary over the course of the illness (Miller, 2021).

Disorders and Director of the Schizophrenia and Bipolar Disorder Research Program at McLean Hospital. The full talk can be viewed here.

Persons with schizophrenia spectrum disorders are usually diagnosed between the ages of 16 and 30 (National Institute of Mental Health, 2023b), though there have been cases of patients being diagnosed even younger (Öngür, 2023). Men typically present with symptoms earlier than women; males are more likely to show symptoms at the end of their teen years or in their early twenties, whereas females are more likely to begin to show symptoms in their early twenties through early thirties (Miller, 2021). Persons are typically diagnosed with a schizophrenia spectrum disorder after the first episode of psychosis (National Institute of Mental Health, 2023b).

Individuals will typically have behavioral changes before the advent of a full psychotic episode. Prodromal symptoms include, for example, paranoia, trouble thinking, social withdrawal, hygiene issues, difficulty sleeping, difficulty telling reality from fantasy, trouble communicating, anxiety, lack of motivation, and difficulty functioning overall (National Institute of Mental Health, 2023a).

The lifetime risk of suicide is estimated to be between 5%-10% of persons with schizophrenia. (Meltzer et al., 2003; Palmer et al., 2005), and that 20-40% of schizophrenic patients will make at least one suicide attempt (Carlborg et al., 2010; Pompili et al., 2007). Of note, the suicide attempts of patients with schizophrenia are frequently more violent and lethal than attempts in the general population, which may be suggestive of greater intent to die (Carlborg et al., 2010; Harkavy-Friedman et al., 1999; Hunt et al., 2006). A history of a suicide attempt and depression are the most consistently reported risk factors for suicide in persons with psychotic disorders (Nordentoft et al., 2105). Dr. Öngür stated during the presentation that suicidal ideation and behavior are about as common in patients with psychotic disorders as they are in patients with depressive disorders (Öngür, 2023).

Psychosis and risk factors for suicide

Most suicides occur in the early phase of the illness, with risk decreasing significantly in later stages of life (Nordentoft et al., 2015). “Loss” may be an explanation for the increased risk of suicide among the young, and especially among the young who had had good premorbid functioning, high educational attainment, and have retained partial insight (Öngür, 2023). Dr. Öngür cautions vigilance in the case of “young people who had much to lose, stricken by psychotic illness, and unable to go back to work or school…” They have lost “so much” and may not have “much hope in [their] recovery” (Öngür, 2023).

The severity of the symptoms and poor treatment compliance raise the risk of suicide in patients with psychosis (e.g., Hawton et al., 2005; Hor & Taylor, 2010; Öngür, 2023). Command hallucinations telling the persons to hurt themselves and delusions eliciting shame or guilt also substantially increase suicide risk. Dr. Öngür explains that it is very difficult to fight against a relentless auditory hallucination telling you are “worthless,” “a burden to society,” and that everyone hates you or delusions that are saying that you are “responsible for death or destruction” or “contaminated” (Öngür, 2023).

Suicide assessment of patients with psychosis is challenging in that part of the psychopathology of such patients is that they are unlikely to present to treatment outrightly saying they are having suicidal thoughts. Depression is not always evident and, regardless, is not a necessary condition for suicide risk (Öngür, 2023). Knowledge about risk factors in this population can be useful including awareness of triggers and warning signs. Clinicians conducting assessments may get a good understanding of the patient by appreciating, for example, their unique triggers and their cultural attitudes and beliefs.

In the general population, suicide risk is increased in males, those who are unmarried and who live alone, those who are unemployed, and those who have experienced a recent life event, particularly one involving a loss. The presence of hallucinations and delusions increase risk. Having been recently discharged from a hospital also increases risk (Carlborg et al., 2010; Öngür, 2023).

Hawton and colleagues (2005), however, found that some risk factors known to be associated with suicide in the general population and other patient groups may not apply to or be as relevant in the schizophrenic population (e.g., being single or divorced as opposed to married or cohabitating) (Bertelsen et al., 2007; Hawton et al., 2005). Hawton and colleagues (2005) found the strongest correlates of suicide risk in the schizophrenic group to be hopelessness, depression, suicidal ideation and behavior, agitation, fear of mental disintegration, poor treatment compliance, recent loss, and drug misuse (Bertelsen et al., 2007; Hawton et al., 2005).

Given that hopelessness is a known risk factor for suicide (e.g., Carlborg et al., 2010; Hawton et al., 2005; Ribeiro et al., 2018), Dr. Öngür points out that the clinical interview can be therapeutic by clinicians attempting to restore hope. One such approach is to emphasize to the patient that their feeling state will not stay this way forever. Dr. Öngür suggests some possible wording – e.g., you are "going through difficult things now" and it "feels intolerable," there is "light at the end of the tunnel." Fortunately, suicidal crises do not last forever, and having a supportive therapeutic environment can be lifesaving. Dr. Öngür states that while a diagnosis of a psychotic disorder is indeed a major problem, many patients can go on to live happy, independent lives.

Negative Symptoms of Schizophrenia

Negative symptoms of schizophrenia include: blunted affect (difficulty expressing emotions), alogia (poverty of speech or content of speech), avolition (lack of motivation to complete tasks), asociality (lack of motivation to engage in social activities), and anhedonia (inability to experience joy or pleasure). While these negative symptoms are often the first symptoms of schizophrenia present (occurring during the prodromal phase before the first episode of psychosis), they can occur and can become more or less prominent at any time during the

illness's course (Correll & Schooler, 2020).[49] Negative symptoms are common, especially among males, the unemployed, and those with reduced functional capacity (Correll & Schooler, 2020).

Dr. Öngür points out that the effect of negative symptoms of schizophrenia on suicide risk is still controversial. There are some studies suggesting that the negative symptoms of schizophrenia may actually be protective against suicide, perhaps due to lack of motivation and social drive (Öngür, 2023). However, other studies have not been able to corroborate these findings (Öngür, 2023).

Negative symptoms of schizophrenia have been associated with poorer treatment compliance and poorer functioning, and may contribute to suicide risk in that way. Up to 60% of patients will have negative symptoms that will interfere with functioning enough to require treatment (Correll & Schooler, 2020). Unfortunately, there are fewer effective and evidence-based treatments for the negative symptoms than there are for the positive symptoms; negative symptoms do not respond well to treatment with antipsychotic medication (Correll & Schooler, 2020).

Dr. Öngür stresses the importance of collaborative care for patients with histories of psychosis. Dr. Öngür reviewed evidence that the outcomes can be better if there is a team of people thinking about and working with the patient, rather than just a solo practitioner (Öngür, 2023).

Differential diagnosis

Dr. Öngür emphasized the importance of establishing an accurate differential diagnosis in order to improve patient outcomes. For example, is it on the schizophrenia spectrum or is it bipolar disorder or depression with psychotic features? Is the psychosis substance-induced or comorbid with a substance use disorder? All of these conditions can contribute to suicidal ideation and behavior and may require different approaches to treatment.

Assessment for suicide risk can occur in conjunction with assessment for psychosis (Öngür, 2023). Given the nature of the psychopathology, it is unlikely that patients with psychotic disorders will mention that they are thinking of suicide unprompted. It is similarly unlikely that these patients will spontaneously complain about their negative symptoms (Correll & Schooler, 2020). In certain patients, clinicians are able to note the presence of negative symptoms (e.g., flat affect, social deficits, psychomotor retardation, low motivation, poor grooming and hygiene, difficulty communicating). Inquiries range from asking the patient, and when indicated, the patient's family, and/or available other caregivers. There are several validated assessment tools that may prove helpful for uncovering negative symptoms (see Correll & Schooler, 2020, p. 525). Clinicians can inquire specifically about mood and suicidal ideation. Negative symptoms predominantly occur in schizophrenia; however, they

[49] Correll and Schooler (2020) report that 73% of patients with negative symptoms experienced them before they began to experience positive symptoms, whereas 20% experienced them the same month that they began to experience positive symptoms.

also occur with other medical (e.g., multiple sclerosis, Parkinson's disease) and psychiatric illnesses (e.g., depression, anxiety, OCD, PTSD, intellectual disability, substance misuse) (Correll & Schooler, 2020).

Treatment to reduce suicide risk

Treatments to consider to reduce suicide risk in patients with psychosis include medication management, electroconvulsive shock therapy (ECT), psychotherapy, safety planning, crisis intervention, and psychoeducation. Early intervention services can be important for optimizing outcomes (Correll et al., 2018). A collaborative team-based approach or integrated treatment and continuity of care can help to ensure that suicide risk is being managed and mitigated appropriately. Evidence from Denmark suggests that it is possible to reduce the number of suicides in patients with a history of psychosis when there is a team-based approach to care as opposed to treatment as usual (Öngür, 2023; Posselt et al., 2021). A study from Hong Kong also found that suicide attempts were significantly reduced following 2 years of early intervention services for psychosis compared to standard care, and that this reduction in attempts was sustained over a 10-year period (Chan et al., 2015; Correll et al., 2018).

In terms of medication management, clinicians will want to stabilize the psychotic symptoms with antipsychotic medication.[50] In treatment refractory patients, consider clozapine as there is RCT support for mitigating suicide risk (Öngür, 2023). There is meta-analytic evidence that people with psychotic symptoms on clozapine have a lower risk of dying by suicide than people with psychotic disorders not on clozapine (Masuda et al., 2019; Meltzer et al., 2003; Öngür, 2023). Dr. Öngür notes that clozapine reduces multiple risk factors for suicide, including substance use (Öngür, 2023).

It is useful to ask about any medication potential side effects (Öngür, 2023). Reducing or changing medications can be challenging in this population, especially when they are on a medication that is working for them, and requires balancing the risk of a particular medication with the benefit.

Psychotic patients with comorbid depression may also potentially benefit from ECT. A recent analysis found that people with depression treated with ECT are at half the risk of dying by suicide in the year after hospital admission than people with depression who are not receiving ECT (Kaster et al., 2022; Öngür, 2023). The reduction in risk was greater for those with unipolar depression than for those with bipolar depression (Kaster et al., 2022). A similar amount of patients with ECT-exposed admissions had psychotic symptoms as those without ECT-exposed admissions (20.9% vs. 21.2%) (Kaster et al., 2022). Clinicians may consider referring a subset of psychotic patients with refractory or severe depression to ECT (Öngür, 2023).

[50] A follow-up study of patients who had been hospitalized for first episode schizophrenia or schizoaffective disorder found a 37-fold increase in suicides among those not taking any antipsychotic medication after hospital discharge compared to those taking an antipsychotic (Hor & Taylor, 2010; Tiihonen et al., 2006).

Certain patients with psychotic disorders may also benefit from evidence-based therapies for suicidality, such as Cognitive Behavioral Therapy for Psychosis (CBTp) or a brief Dialectical Behavior Therapy (DBT)-informed skills group (e.g., Hardy, 2017; Lawlor et al., 2022; Öngür, 2023). CBTp is recommended for those with recent onset of psychosis or who are at risk of developing psychosis (Hardy, 2017). CBTp is most effective for patients who are relatively cognitively preserved and able to examine and label their experiences (e.g., auditory hallucinations) as abnormal, which is a very small minority of patients. Dr. Öngür states that most patients with psychotic disorders lack insight and believe the voice and thus are unable to benefit from CBTp. There is some evidence for the use of these psychotherapeutic techniques in very specific situations, such as impulsivity and affect tolerance. For example, patients with psychotic disorders who are irritable and impulsive and unable to tolerate these experiences may benefit from psychotherapy that applies some of the principles of DBT (Lawlor et al., 2022; Öngür, 2023).

In terms of safety planning, it can be useful to understand unique suicide triggers and warning signs. The patient and family, when indicated, can be educated on how to access crisis intervention, including crisis hotlines, local crisis centers, and emergency services (Öngür, 2023). Inpatient care may be necessary, especially for the first episode of psychosis and the first suicide crisis.

Psychoeducation, as an adjunct to care, can also enhance the patient's and the family's understanding of the condition and reduce stigma. The patient and family can be educated about psychosis, suicidal ideation, and available treatment. Lethal means counseling, when indicated , particularly pertaining to firearms, can be important for patients and families (Öngür, 2023).

Finally, substance use disorder is common in patients with psychotic symptoms and can increase suicide risk (Myles et al., 2016; Simon et al., 2017). Nearly half of patients with schizophrenia will be diagnosed with a substance use disorder (e.g., alcohol, cannabis) at some point during the course of their illness (Carlborg et al., 2010; Hawton et al., 2005). Regardless of gender, substance use can be treated; however, evidence suggests that substance use disorders are more difficult to treat in females with schizophrenia compared to males with schizophrenia (Casanovas et al., 2023).

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-suicide accounts for about one to two percent of all suicides (Jacobs, 1999; Joiner, 2014).

Murder-suicides are very rare, with fewer than 1/year per 100,000 people occurring in the United States (Knoll, 2016). While, at present, there is no comprehensive database tracking all murder-suicides in the United States, the nonprofit Violence Policy Center documents around 1200 murder-suicides each year (Violence Policy Center, 2023a). Recent data

suggests that murder-suicides involving firearms may be on the rise. The Gun Violence Archives reports that there were 674 murder-suicides using firearms in the United States in 2023, the highest number in their 10 years of reporting (Gun Violence Archive, 2024).

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 vast majority of murder-suicides in the U.S. are perpetrated by men who act alone (Violence Policy Center, 2020; 2023). 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 murder-suicide, with 9 out of 10 involving a gun (Eliason, 2009; Violence Policy Center, 2023a). Depression is common among perpetrators, especially elderly perpetrators (Eliason, 2009; Violence Policy Center, 2023a).[51]

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

[51] A study of intimate partner murder-suicide found an interesting difference in the primary intent of younger perpetrators and older perpetrators. Younger perpetrators were more likely have a homicidal motive, whereas older perpetrators was more likely to be suicidal (Salari & Sillito, 2016; Violence Policy Center, 2023a).

- 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).

Postvention in the aftermath of a murder-suicide may also be helpful. Research shows that approximately 8 out of 10 murder-suicides occur in the home (Violence Policy Center, 2023b). Children are not only victims of—but often witnesses to—the murder-suicide. The Violence Policy Center's latest report, *American Roulette: Murder-Suicide in the United States (8th edition)*, found that, in the first half of 2021, 14% of homicide victims of murder-suicide were under the age of 18, and 66 children and adolescent survivors had witnessed some part of the murder-suicide (Violence Policy Center, 2023b). Murder-suicides leave children without parents, parents without children, and can also have detrimental effects on other family members, friends, coworkers, and the community. Survivors may benefit from support in the recovery process.

Individuals with Substance Use Disorders

Alcohol and Opioid 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).

A recent meta-analysis of 33 longitudinal studies found that alcohol use was associated with a 94% increase in the risk of death by suicide (Isaacs et al., 2022). The study found that the relationship between alcohol use and suicide was even stronger when samples was composed of military populations, more women, younger persons, and greater quantities and frequencies of alcohol use. The relationship was also found to be stronger when studies used a longer follow-up period. Therefore, it may be useful to monitor suicide risk in individuals with heavy alcohol use (past or present) and to assess individuals with suicidal thoughts for alcohol use (Isaacs et al., 2022).

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, 2022; 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, 2022; 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, 2022). 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 intent[52] 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. In a replication and extension of this study, Connery et al (2022) asked 60 adults in an inpatient detoxification and stabilization about their desire to die, as well as intent to die, prior to their most recent overdose. Nearly half (45%) reported some desire to die, and 20% reported some intention to die.

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 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).

[52] 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).

During a recent presentation, Dr. Hilary 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.

Dr. Connery discussed substance disorders and suicide at the 2022 Suicide-Focused Assessment and Treatment course. To view her talk, click here. She mentioned PCSS, a program funded by SAMHSA to increase providers' knowledge and skills in the identification and treatment of substance use disorders, with a focus on opioid use disorders. The PCSS website offers clinicians information about evidence-based practices in prescribing medication for opioid use disorder and chronic pain. The website includes resources for both health care professionals as well as the general public.

Cannabis Use Disorder

Cannabis (marijuana) use is associated with an increased risk of suicide ideation, plans, and attempts, according to a recent study published by researchers at the National Institute on

Drug Abuse (NIDA). The researchers analyzed data from over 280,000 young adults, aged 18-35 years. They found that suicidal thoughts and behaviors were increased even in those who used cannabis non-daily (defined as fewer than 300 days per year), compared to those who did not use cannabis at all. Women who used cannabis were more likely to report suicidality than men who used cannabis. The association between cannabis and suicidality remained substantial, regardless of whether or not the individual had depression (Han et al., 2021).

While the NIDA survey cannot establish whether cannabis use causes suicidality, there have been an increasing number of correlational studies linking cannabis use disorder with suicidal ideation, suicide attempts, and suicide deaths (e.g., Borges et al., 2016). For example, cannabis use disorder has been associated with current suicidal ideation and lifetime history of suicide attempts in 3233 Iraq/Afghanistan-era Veterans, even after controlling for gender, depression, PTSD, alcohol use disorder, non-cannabis use disorder, history of childhood sexual abuse, and combat exposure (Kimbrel et al., 2017).

Another literature review and meta-analysis found little evidence that *acute* use of cannabis increases suicide risk, but did find supporting evidence of a positive correlation with *chronic*, long-term use (Borges et al., 2016). Long-term cannabis use has also been associated with a variety of comorbid psychiatric disorders, including depression, bipolar disorder, anxiety, PTSD, psychosis, and other substance use disorders (Kroon et al., 2019).

One possibility is that cannabis use increases the risk of suicidal behavior in those with existing mental health problems (Borges et al., 2016). Cannabis has been reported to exacerbate anxiety and panic, delusions and perceptual distortions, as well as impairments in executive functioning, impulse control and decision-making, which may set into motion suicidal thoughts and behaviors (Stuyt, 2021).

Unlike deaths involving overdose of opioids, deaths involving overdose of cannabis are very rare (Rock et al., 2022). Marijuana doesn't bind to brain receptors that control breathing, though injuries while under the influence of the drug can be fatal (Akhtar, 2022). Nevertheless, the number of deaths where marijuana is found in the system has increased over time. In Colorado, the percentage of suicides where marijuana was present increased from a low of 5.5% in 2004 to 14% in 2013 to 22.8% in 2018. Marijuana is currently the second most common substance, aside from alcohol, found in all suicide decedents in Colorado. It is the most common drug found, even more common than alcohol, in adolescent suicides in Colorado (Stuyt, 2021).

Cannabis use has reached an all-time high.[53] In 2022, 44% of young adults between the ages of 19 and 30 years reported past-year marijuana use, compared to 28% a decade earlier. Daily use has also significantly increased over time; 11% of young adults aged 19 to 30 report using marijuana daily in 2022, compared to 6% in 2012. While the prevalence of marijuana vaping had significantly dipped in 2020, it has since returned to pre-pandemic levels.

[53] The Monitoring the Future (MTF) panel study is an annual NIH-funded study of substance use behaviors and attitudes of adults aged 19-60. Results show that cannabis use also reached a historic high in 2022 in adults aged 35-50, with a greater than two-fold increase over the past 10 years in this age group (13% in 2012 to 28% in 2022) (NIDA, 2023).

Marijuana vaping by young adults in the U.S. has nearly doubled between 2017 and 2021, from 12% to 21% (NIDA, 2023).

Cannabis use has reached an all-time high among young adults. In 2021, 43% of young adults between the ages of 19 and 30 years reported past-year marijuana use, compared to 29% a decade earlier. Both daily use and past-month use have significantly increased over time. While the prevalence of marijuana vaping had significantly dipped in 2020, it has since returned to pre-pandemic levels. Marijuana vaping by young adults in the U.S. doubled between 2017 and 2021, from 6% to 12% (NIDA, 2022).

A systematic review and meta-analysis recently published in *JAMA Psychiatry* found that preadolescents and adolescents who use cannabis are at increased risk of depression and suicidal thinking and behavior in young adulthood (Gobbi et al., 2019). The risk was found to be more pronounced in girls and in younger users (aged 14-15), and is evident even in the absence of a premorbid condition. This finding is consistent with research from countries outside the U.S. (e.g., Silins et al., 2014). It is also consistent with studies on laboratory rats showing association between pubertal exposure to cannabinoids and adult-onset depressive symptoms (e.g., Bambico et al., 2009; Rubino & Parolaro, 2016; Gobbi et al., 2019). The mechanism is thought to be related to the fact that adolescent brains are still undergoing development and that exposure to cannabis may effect neurodevelopment (especially in the limbic system and frontal cortex) (Gobbi et al., 2019).

"Heavy" and "dependent" cannabis use has been associated with a variety of conditions, including suicidality and comorbid psychiatric disorders (Kroon et al., 2019). A systematic review and meta-analysis of longitudinal studies, for example, found that the risk of developing a depressive disorder was greater for heavy cannabis users than for light users or non-users (Lev-Ran et al., 2013). While a causal link has never been established, it can be useful in suicide risk assessments to ask not only about cannabis use, but also about the frequency and quantity of such use over time. Cannabis use disorder is treatable and, as with other mental health disorders, is a potentially modifiable risk factor.[54] Screening and early intervention for cannabis use disorders may be especially helpful for younger persons and women, who appear to be at heightened risk for associated depression and suicidality in later years.

Cigarette Smoking

The 2022 National Survey on Drug Use and Health found that 50.9 million persons aged 12 or older in the United States used tobacco products in the past year; 41.1 million were current cigarette smokers (SAMHSA, 2023).

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

[54] While abstinence after treatment is only achieved in a small number of cases, there has been some success with treatment aimed at reduction in use (for a discussion of psychosocial and pharmacological intervention for cannabis use disorder, see Kroon et al., 2019).

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.[55] These demographics include individuals with higher levels

[55] The 2022 National Survey on Drug Use and Health found that American Indians/Alaska Natives and Multiracial persons had the highest rate of tobacco use and nicotine vaping. Approximately 1 in 3 persons in each of these groups (34% of American Indian/Alaska Natives, 32.4% of Multiracial persons) reported that they

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 2022. The report shows that the suicide rate for active-duty soldiers has been gradually increasing over the past decade, though the suicide rate among active-duty-soldiers in 2022 was lower than the all-time high in 2020. In 2021, there were 25.1 suicide deaths per 100,000 active-duty troops, a 3% increase over 2021. During the past decade, suicide rates in the Reserve and National Guard have fluctuated from year-to-year, with no evidence of a consistent increasing or decreasing trend. In 2022, there were 19.1 deaths per 100,000 Reserve service members, and 22.2 deaths per 100,000 National Guard service members (DoD, 2023).

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

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had used tobacco or vaped nicotine within the past month. These two groups are also the groups with the highest suicide rates (SAMHSA, 2023).

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).[56] 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 (Anestis et al., 2023; 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).

The U.S. Department of Defense has launched several initiatives aimed at suicide prevention. In general, these efforts focus on "fostering a supportive environment for service members and their families," "addressing stigma as a barrier to help-seeking," and "promoting a culture of lethal means safety" (DoD, 2022, p. 5).

The Department of Defense Suicide Event Report (DoDSER) has been collecting data on service members who died by suicide (e.g., gender, behavioral health diagnoses, intimate relationship problems, workplace difficulties, administrative/legal problems, financial difficulties, assault or harassment, location of the suicide). For the first time in 2022, the DoDSER included data on the percentage of active-duty personnel who died by suicide and who experienced abuse before age 18 (14%) and the percentage of personnel who died by suicide and who identified as gay, lesbian, or bisexual (4%). The hope is that these two new data categories will contribute to our understanding suicide risk in this population (DoD, 2023).

The Department of Veterans Affairs has deemed suicide as its "highest clinical priority." As of January 17, 2023, veterans experiencing a suicidal crisis can go to any VA or non-VA health care facility for free emergency health care. This includes inpatient or crisis residential care for up to 30 days and outpatient care for up to 90 days. Veterans do not need to be

[56] For the past five years, the Department of Defense Suicide Event Report included information on military family members who died by suicide. The most recent report found that use of a firearm was the most common method. Approximately 44% of suicide deaths among female military spouses were by firearm. This is significantly higher than the 35% rate found for women ages of 18 to 60 in the general population (DoD, 2023).

enrolled in the VA system to use this new benefit (U.S. Department of Veterans Affairs, 2023).

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 approximately 26.7 suicides per 100,000 population in 2022 (Curtin et al., 2023). 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.

Zero Suicide has excellent resources on its website for providing suicide-care to Native American and Alaska Native populations. To access these resources, click here. A supplemental toolkit, titled "Best and Promising Practices for Implementing Zero Suicide in Indian Country, is also available here.

The Native and Strong Lifeline (NSLL), a 988 crisis line, was launched in November 2022 in Washington State. Its purpose is to address the disproportionately high rate of suicide and the

unique needs of indigenous populations in Washington State. All NSSL staff are members of indigenous populations, and counselors begin each interaction by sharing their tribal affiliation (Suicide Prevention Resource Center, 2023). At the end of the call, counselors coordinate with the Native Resource Hub, which follows up with callers to help them access additional resources and support. In its first year, the NSLL received over 4000 calls and increased the number of counselors from 11 to 23. The hope is to replicate this model in other states with large indigenous populations (Suicide Prevention Resource Center, 2023).

Asian American, Native Hawaiian, and Other Pacific Islander Populations

There is a movement to disaggregate data on Asian American and Pacific Islanders populations, as combining these categories can mask important data and differences between these populations.

According to the Suicide Prevention Research Center, Asian refers to persons "descended from the original peoples of the Far East, Southeast Asia, or the Indian subcontinent," whereas Native Hawaiian or Other Pacific Islander refers to persons "descended from any of the original peoples of Hawaii, Guan, Samoa, or other Pacific Islands" (Suicide Prevention Resource Center, 2023).

Provisional estimates show a 3% increase in suicides for the Asian American population. The age-adjusted rate of suicide for Asian Americans grew from 6.8/100,000 population in 2021 to 7.0/100,000 population in 2022 (Curtin et al., 2023). During this same one year time period, there was a staggering 15.9% increase in suicides among Native Hawaiian or Other Pacific Islander population (CDC, 2023). A recent article states that suicides in the young are driving the increased prevalence in the kānaka maoli and Pacific Islander community (Livingston, 2023).[57]

The 2022 National Survey on Drug Use and Health found that 3.4% of Asian adults 18 or older reported serious thoughts of suicide in the past year, which is concerning, but lower than the rate of most[58]other racial and ethnic groups (SAMHSA, 2023). Native Hawaiian and Other Pacific Islander adults or Asian adults (0.2%) were also less likely than Multiracial, Black (0.9%), White (0.6%), or Hispanic adults (0.6%) to have made a suicide attempt in 2022. In fact, Native Hawaiian and Other Pacific islander adults aged 18 or older (0.1%) were the least likely of all the racial and ethnic groups under study to have made a suicide plan in 2022; they were even less likely than Asian adults (0.8%) to have had a suicide plan.

In 2021, 22.4 million persons in the U.S. (6.1% of the U.S. population) identified as being either Asian American, Native Hawaiian or Pacific Islander (SAMHSA, 2023). The Asian American and Pacific Islander population in the U.S. is very diverse, consisting of approximately 50 subpopulations and over 100 languages. Studies have found that only 30%

[57] Suicide was the leading cause of death for Native Hawaiians/Pacific Islanders ages 15-24 in 2019 (HHS, Office of Minority Health, 2024).

[58] "Most" because the rate of serious suicidal thoughts for Native Hawaiian or Other Pacific Islander could not be calculated with sufficient precision (SAMHSA, 2023).

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. For example, in Asian 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 Asian Americans are the least likely of all racial and ethnic groups in the U.S. to seek mental health care (APA, 2020). Only 36.1% of Asian Americans with mental illness received mental health treatment in the past year, compared to 56% of White adults (SAMHSA, 2023).

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[59] (APA, 2020). 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).

Providers may miss depressive symptoms in Black/African-American women, leading to both underdiagnosis and undertreatment. A recent study found that Black/African-American women may be more likely to report somatic symptoms and self-critical symptoms than conventional depressive symptoms. In the study, mothers with the greatest number of depressive symptoms and stressors were more likely to report sleep disturbances, decreased libido, self-hate, self-blame, and irritability than depressed mood and/or hopelessness. The researchers suggest that depression may look different in Black/African-American women and that current standardized screening tools may not accurately assess a potentially treatable depressive disorder in this and other minority populations (Perez et al., 2023).

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

[59] The 2022 NSDUH survey found that only half of Black adults aged 18 or older who had a major depressive episode in the past year received mental health treatment in the past year. The treatment rate for Black adults for depression was significantly lower than that for White adults (51.2% Blacks vs. 66.6% Whites). The survey found that Black adults were significantly less likely than White adults to receive mental health treatment for any mental health condition, including serious mental illness (SAMHSA, 2023).

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 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 (APA, 2020). For example, the 2022 National Survey on Drug Use and Health found that fewer than half (49.7%) of Hispanic adults with a major depressive episode in the past year received mental health treatment, a rate that is low, and significantly lower than that of Multiracial adults (68.6%) and Whites (66.6%) (SAMHSA, 2023). 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 2019, suicide was the second leading cause of death for Hispanics aged 15 to 34 (CDC, 2021; HHS, Office of Minority Health, 2024). CDC data show that Hispanic adolescents have high rates of suicide attempts, especially girls. In 2019, suicide attempts for Hispanic girls, grades 9-12, were 30 percent higher than for non-Hispanic White girls in the same age group (CDC, 2021; HHS, Office of Minority Health, 2024).

Multiracial Populations

"Multiracial" has been defined as "[p]eople reporting two or more races and who were not of Hispanic or Latino ethnicity" (SAMHSA, 2024, p. 5).

The 2022 National Survey on Drug Use and Health Survey (NSDUH) found that 9.3% of multiracial adults 18 years or older had serious thoughts of suicide in 2022, a rate higher than that of Blacks, Whites, Hispanic, and Asians (SAMHSA, 2024).

Multiracial adolescents aged 12 to 17 were even more likely than multiracial adults aged 18 or older to endorse having serious thoughts of suicide. According to the 2022 NSDUH survey, 15.2% of multiracial adolescents aged 12-17 reported serious suicide thoughts in the past year, 6.8% of multiracial adolescents reported making a suicide plan, and 5.8% reported attempting suicide. The rates may even be higher than this as a significant percentage of multiracial adolescents did not want to answer or refused to answer questions about suicide on the survey (SAMHSA, 2024).[60]

Younger Multiracial adults aged 18 to 25 were more likely than multiracial adults aged 26 to 49 to report serious thoughts of suicide, suicide plans, and suicide attempts in 2022 (SAMHSA, 2024).

Other suicide risk factors were more common in the multiracial group than in other racial and ethnic groups, such as mental illness and illicit drug use. For example, the 2022 NSDUH survey found that 35.2% of multiracial adults aged 18 or older had mental illness in the past

[60] However, the 2022 NSDUH survey did not find any significant racial or ethnic differences in serious thoughts of suicide, suicide plans, or suicide attempts in adolescents aged 12-17 (SAMHSA, 2023).

year, compared to 24.6% if Whites, 21.4% if Hispanics, 19.7% of Blacks, 19.6% of American Indian/Alaska Natives, and 16.8% of Asians (SAMHSA, 2024).

These findings from the 2022 NSDUH survey are largely consistent with findings from other studies (e.g., Oh et al., 2022). For example, using data from the Healthy Minds Study, Oh and colleagues (2022) found that multiracial college students were at greater risk of mental health problems, including lifetime psychiatric disorders and self-injurious behaviors, than monoracial college students.[61] In this study, multiracial identity was defined as an individual who selected more than one race or ethnicity from a list of categories.

The greater mental health challenges of multiracial individuals is not yet fully understood, but has been attributed to a variety of factors, including discrimination/racism and "thwarted belongingness" (Baumeister & Leary, 1995; Oh et al., 2022). For instance, multiracial individuals may feel they do not belong to any community and, thus, lack "access to the same protective effects" as monoracial individuals (Oh et al., 2022, p. 745).

One takeaway for clinicians is to recognize that multiracial identity is an additional factor to consider when assessing patients. Multiracial persons are at increased risk for a variety of behavioral and mental health problems, including suicidality.

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]

[61] Specifically, multiracial students were more likely than monoracial students to have a lifetime history of depressive disorder, bipolar disorder, trauma-related disorder, and eating disorder (Oh et al., 2022). They were also more likely to experience anxiety, depression, languishing, loneliness, and substance use. In terms of self-injurious behavior, the multiracial students were also more likely to experience NSSI, suicidal ideation, and suicide plan, though the relationship with suicide attempt was far less robust.

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).

With adequate training, health care providers are in a unique position to assess and potentially intervene with at-risk patients. Visits to health care providers increase with age (National Center for Health Statistics, 2017). Compared to other age groups, adults age 75 years or older have one of the highest rates of suicide per 100,000 population (CDC, 2023). Provisional data from 2022 shows that the greatest increase in suicides between 2021 and 2022 occurred in older adults, age 45-64 (+7%) and 65 and up (+8%) (The Associated Press, 2023).

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).

In recent years, significant attention has been paid to whether or not there should be universal screening in health care settings for suicide risk. 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 using a validated tool, but they do not require universal screening (Joint Commission, 2018).

However, the Department of Defense and the Veterans Administration have jointly revised their clinical practice guidelines and now recommend incorporating suicide risk screening in all of their clinical settings (US Department of Veterans Affairs and Department of Defense, 2019; U.S. Department of Veterans Affairs, 2022). In October 2018, the VA began universal

screening for suicide risk in all primary care settings (Novotney, 2020). The typical protocol is as follows: A registered nurse administers the PHQ-9. If the screen is positive the RN provides a "warm handoff" to the primary care provider or to a licensed independent practitioner to conduct a secondary screen using the C-SSRS. If the second screen is also positive, the PCP can conduct a comprehensive suicide risk evaluation or facilitate hand off to mental health staff who work in the primary care clinic who will do the evaluation (Novotney, 2020). The American Academy of Pediatrics is also now recommending universal screening for suicide risk for adolescents ages 12+, as discussed in detail below (American Academy of Pediatrics, 2023a).

A key factor in reducing suicidal behavior will be recognizing, 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). Primary care physicians often have frequent contact and have built long-lasting relationships with their patients, making primary care an excellent setting for suicide prevention (Suicide Prevention Resource Center, 2020). The first point of contact for patients seeking treatment for mental health issues will typically be their primary care physician (PCP) (Bonnin et al., 2024).

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 lethal 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 988 Suicide & Crisis 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.

Pediatric Primary Care

A recent national survey of pediatricians found that 80% of pediatricians who provide primary care to patients older than 9 years had had a patient attempt or die by suicide during their medical career. Nearly half (48%) reported that a suicide attempt or death occurred within the past year (Sisk, 2020). Despite high rates of suicidality in their practices, only 57% of pediatricians felt at least moderately prepared to talk about suicide prevention with patients and families (Henry, 2021; Sisk, 2020).

The American Academy of Pediatrics (AAP) currently recommends universal screening for suicide risk for patients 12 and older, despite the U.S. Preventative Task Force's calling for more research on this topic to weigh the risks/benefits of screening asymptomatic adolescents. The AAP recommends screening youth age 8-11 years only when clinically indicated, such as when the patient or a parent raises a concern, when the patient presents with a behavioral health complaint, or when there are warning signs of suicide or a reported history of suicidal ideation or behavior.

The AAP does not recommend screening youth under age 8 for suicide risk. However, if warning signs are present, pediatricians are to assess for suicidal thoughts and behaviors. Warning signs in this age group may include: Talking about wanting to die or killing oneself, grabbing one's throat in a choking motion, pointing one's hands in the shape of a gun toward one's head, engaging in self-harm, acting with impulsive or reactive aggression, and/or giving away treasured toys (American Academy of Pediatrics, 2023a).

To screen for suicide risk, the AAP recommends using an evidence-based tool that has been validated on young patients, such as the Ask-Suicide Questions (ASQ), the Suicide Behavior Questionnaire Revised (SBQ-R) (American Academy of Pediatrics, 2023a; National Institute of Mental Health, 2024; Osman et al., 2001). While screening for depression is important too, not all pediatric patients who are at risk for suicide will experience depressive symptoms (American Academy of Pediatrics, 2023a). Research has shown, for example, that the PHQ-9A missed over a third (36%) of pediatric patients who screened positive for suicide risk, and that item #9 alone missed over half (56%) (American Academy of Pediatrics, 2023a; Horowitz et al., 2021).

According to the AAP, the best way to identify suicide risk is to ask the patient directly about suicide and to actively "listen to their answer" (American Academy of Pediatrics, 2023a). Follow-up questions are then used to build a trusting relationship and a personal connection. For patients who share that they have had suicidal thoughts, the AAP recommends asking follow-up questions like, "*Does that make you feel worried?*" "*Does that scare you*?" "*Have you talked with anyone about this before?*" The AAP also suggests asking family members questions like, "*What was it like for you to hear that?*" "*Does it feel overwhelming?*" "*Does that scare you?*" (American Academy of Pediatrics, 2023a).

As noted repeatedly in this online resource, there is a difference between suicide risk screening and suicide risk assessment. The AAP recommends that suicide screening should be done more frequently in pediatric care than in adult care, but no more than once a month, and no less than once a year. It is not necessary to screen those already known to be at risk for suicide. With these at-risk patients, pediatricians should assess for safety at follow-up, using wording like: "*Last time you were here, you told me you had some thoughts about suicide. I wanted to check in with you about that*" (American Academy of Pediatrics, 2023a).

Most youth with suicidal thoughts will not require emergency care, only those deemed to be at imminent or acute risk of suicide. To assess suicide risk and to determine next steps, the AAP recommends using an assessment tool, such as the C-SSRS – Full Version, the Ask Suicide Screening Questions Brief Suicide Safety Assessment (ASQ-BSSA), or the Suicide Assessment Five-Step Evaluation and Triage (SAFE-T) (American Academy of Pediatrics, 2023b). All patients with suicidal thoughts should be informed of the *988 Suicide and Crisis Lifeline* and the *Crisis Text Line*, regardless of their level of risk (American Academy of Pediatrics, 2023b).

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).

It is important to help young persons and their families "understand and contextualize suicidal ideation" (American Academy of Pediatrics, 2023a). While many young persons have suicidal thoughts, very few end up making a suicide attempt or dying by suicide. Suicidal thoughts in this population are often an indication of a treatable mental health conditions or a modifiable stressor (American Academy of Pediatrics, 2023a). As the AAP states, youth with suicidal thoughts "require compassion, attention, and further evaluation" (American Academy of Pediatrics, 2023b).

Finally, a word about confidentiality. The AAP recommends private, one-on-one time during clinical visits with adolescents. This one-on-one time when the parent is not in the room can be a time when pediatricians may choose to address suicide risk and other mental health issues. Pediatricians are mandated by the state to report persons who may be dangerous to themselves or others. The doctor can explain during this time that anything discussed during one-on-one time is confidential, unless someone's immediate safety is at risk (American Academy of Pediatrics, 2023c).

Parents/guardians will need to be notified if suicide risk is detected. The AAP offers advice on how to explain to suicidal youth that the physician needs to speak to the patient's parents/guardians (American Academy of Pediatrics, 2023c). The AAP suggests, for example, using phrases like:

- "*Your safety is the most important thing, so I am going to tell your parents how you're feeling*"
- "*I don't want you to die, so I am going to tell your grandma what's going on so we can all keep you safe*."
- "*I am going to say something like, 'Our screener indicated that Jaime is having thoughts of suicide, and that these thoughts scare him. He says they get worse at night, and he has trouble sleeping*.' *Does that sound right to you? Is there anything you want me to add."*

The American Academy of Pediatrics (AAP) has a wealth of information on its website regarding how pediatricians and adolescent medicine specialists can best address suicide risk within their practices (American Academy of Pediatrics, 2023a). These steps include screening for suicide risk using a validated screening tool, managing positive screens by assessing level of risk and intervening accordingly, counseling about lethal means restriction, and providing ongoing care and follow-up (Henry, 2021). Detailed information on "How to Talk about Suicide Risk with Patients and their Families*"* and "Talking to Families about Treatment Options" is also available here on the AAP website (American Academy of Pediatrics, 2023c).

The AAP has also recently published in *Pediatrics* a guidance for clinicians delivering pediatric care (Hua et al., 2024). This clinical report, titled "Suicide and Suicide Risk in Adolescents," was compiled by the AAP's Committee on Adolescence, Council on Injury, Violence, and Prevention. To view this updated guidance, click here.

Health Care Providers

Physicians are also at risk for suicide. The rate of suicide among physicians is 28-40/100,000 per year, 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 female physicians. 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).[62]

The 2023 Medscape Physician Suicide Report surveyed 9100 physicians across 29 specialties. The survey found physicians to be twice as likely to attempt suicide (1%) as general population samples (0.5%). They were also significantly more likely to contemplate suicide (9%) than the general population (4.9%). Suicidal ideation was higher in female physicians than in the male physicians in their physician sample. Suicidal ideation was also higher for physicians between the ages of 27 and 41 than for those aged 57 to 75 (Burky, 2023; McKenna, 2023). Results from the Medscape survey are consistent with results from a recent meta-analysis, which found a relatively high lifetime prevalence of suicidal ideation among physicians (Dong et al., 2020).

Physicians and those in training to be physicians (i.e., residents, interns, medical students) 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).

Sen and colleagues (2022) have been studying suicidal ideation among medical interns as part of a larger study of mental health symptoms in this population. Approximately 2% of medical interns report having thoughts of suicide before the internship year starts, but that

[62] 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).

number increases fivefold (to 10-11%) when assessed at any given time during the internship year. Not surprisingly, spending a greater number of hours at work is associated with increased depression, whereas social support is associated with decreased depression (Sen, 2022; Sen et al., 2010).

The medical intern study also showed significant overlap between depression and burnout, two entities often thought to be distinct and to require different intervention approaches (Rotenstein et al., 2020). In his presentation at the 2022 Suicide-Focused Assessment and Treatment course, Dr. Sen stated: "When we focus only on burnout and encourage physicians to identify as burned out, rather than depressed, we lose all the evidence-based, individual level interventions that we know are effective at preventing and treating depression and suicide risk" (Sen, 2022).[63]

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).

More than half of physicians responding to the Medscape survey reported that they did not seek help because they felt that they could "deal with suicidal thoughts without help of a professional." A third (33%) reported not seeking help because they worried about the report being on their insurance record. A quarter (25%) reported being worried a colleague might find out (Burky, 2023; McKenna, 2023).

However, for physicians, the greatest barrier to treatment may be actually finding the time to pursue and receive mental health care (Kakarala & Prigerson, 2022). A recent article discusses the increasing work pressures on physicians today, not just that accounted for by the Covid-19 pandemic.[64] The article argues that system-wide changes to the practice of medicine will also be necessary to improve physician mental health and mitigate suicide risk in this population (Kakarala & Prigerson, 2022).

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.

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[63] Interestingly, a study using data from the U.S. National Violent Death Reporting System, found that while the physician suicides were more likely than the non-physician suicides to have a known mental health problem, they were no more likely to be on an antidepressant at the time of death (Gold et al., 2013; Kakarala & Prigerson, 2022).

[64] The COVID-19 pandemic presented additional mental health challenges to health care workers, including suicide (e.g., Knoll et al., 2020). Click here to read an opinion piece on the topic, which we wrote during the very early months of the pandemic.

COVID-19

Data is accumulating regarding the effects of the COVID-19 pandemic on suicide.

Youth suicide increased during the first year of the pandemic. Bridge and colleagues (2022) found an increase in youth suicide during 2020, equal to approximately 212 more deaths than expected in the United States. Suicides were greater than expected for Black youth and for American Indian/Alaska Native youth. Suicides were greater than expected for youth aged 5-12 and in young adults aged 18-24. Suicides were also greater than expected for males overall, Asian American/Pacific Islander females, as well as for those who used firearms as the method of suicide (regardless of gender). These findings suggest the pandemic may have worsened the problem of suicide in youth, especially among preteens, young adults, and marginalized demographic groups.

The COVID-19 pandemic was emotionally stressful, and especially distressing for those already struggling with symptoms of depression and anxiety. Americans reported increased symptoms of depression, anxiety and fear during the pandemic (Holland, 2020, MHA, 2020). COVID-19 also increased the likelihood of serious mental illness, a risk factor for suicide (Geller & Abi Zeid Daou, 2020).

Suicidal ideation is one of the most concerning symptoms of depression. The CDC 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).

Suicidal ideation was also inordinately high among persons living with disabilities, especially among those who were age 50 years or older (Czeisler et al., 2021). As a group, adults with disabilities were 2.5 times more likely to report serious suicidal ideation within the past 30 days on a 2021 survey than adults without disabilities (30.6% vs. 8.3%). They were also more likely to report symptoms of anxiety or depression and new or increased substance use (Czeisler et al., 2021).[65] Individuals with a self-reported disability along with a comorbid psychiatric or substance use diagnosis reported greater “pandemic-related difficulty accessing

[65] These findings are generally consistent with pre-pandemic findings of frequent mental distress in persons with disabilities. In 2018, adults with disabilities were 4.6 times more likely to report frequent mental distress than adults without disabilities (32.9% vs. 7.2%). Those with cognitive and mobility disabilities in particular reported experiencing more frequent mental distress than those with other disabilities. Moreover, those with cognitive and mobility disabilities were nearly 9 times more likely to report frequent mental distress than those without any disability (Cree et al., 2020).

care and medication" than those with a mental health or substance use diagnosis who did not report also having a "disability" [66] (Czeisler et al., 2021, p. 1148).[67]

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).

A recent CDC study using data from the pandemic examined whether suicidality and mental health in a nationally representative sample of high school students was associated with feeling close to others at school and being connected to others virtually (Jones et al., 2022). The study found that those who felt close to others at school were significantly less likely to have attempted suicide (5.8% vs. 11.9%) or seriously considered attempting suicide (14% vs. 25.6%) during this time period of the pandemic, compared to those who did not feel close to other at school. Those who were virtually connected to friends, family, or other groups via computer, telephone, or other device were similarly less likely to experience suicidal thoughts and behaviors during the pandemic than those who were not virtually connected. While the study relied on data from January-June 2021, the findings suggest that efforts to improve youth connectedness to family, school, and community may pay off in improved mental health even after a pandemic.

A study of 354,473 college students across 286 institutions found a 1.33 percent reduction in suicidal ideation and a 0.85 percent reduction in suicide plans between 2017 and 2021, but did not find a significant reduction in suicide attempts (Zhai & Du, 2022). Risk of suicidal thoughts and behaviors was greater in those with severe depression, severe anxiety, COVID-19 related financial stress, food insecurity, academic impairment, and suspected COVID-19 infection. The authors suggest a number of explanations for why some college students may have been protected against suicidality during the pandemic. For example, some students might have experienced less everyday stress during stay-at-home periods and online instruction, and increased support from their families.

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[66] The authors used a 2-question disability screener to define "disability." The questions were: "Are you limited in any way in any activities because of physical, mental, or emotional condition?" and 'Do you have any health conditions that require you to use special equipment, such as a cane, wheelchair, special bed, or special telephone." 42.4% of the subgroup with disabilities answered yes to both questions (Czeisler et al., 2021).

[67] Efforts aimed at increasing social connectedness may be useful here. There is evidence that married/unmarried couples with disabilities report less frequent mental distress than divorced, widowed, or never married adults with disabilities, and that individuals with disabilities who are employed report less frequent mental distress than individuals with disabilities who are unemployed, retired or unable to work (Cree et al., 2020). A longitudinal study has also found increased social support over a 6-year period to be negatively associated with depressive symptoms in persons with multiple sclerosis, muscular dystrophy, or spinal cord injury (Cree et al., 2020; de la Vega, 2019).

It is not known yet how COVID-19 specifically impacted suicide rates and it may take several years before full data are available. 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 suicide rate increased 4% in the United States in 2021 after 2 years of decline, but was still lower than it had been in 2018 (CDC, 2022). Provisional data from 2022 shows that the suicide rate rose again in 2022 (Curtin et al., 2023). The suicide rate in 2022 was 3% higher than it was in 2021. This is the highest rate documented in the United States since 1941 (Curtin et al., 2023).

The Department of Defense reported an increase in the number of suicides in the military in 2020, but the DoD saw it as continuation of a current, distressing, upward trend in the military and did not attribute it specifically to the pandemic (DoD, 2021). The suicide rate among active duty soldiers has gradually increased over the past decade, though the rate in 2021 was lower than the rate in 2020 and similar to the rate in 2019 (DoD, 2022).

There was a significant increase in suicides among veterans in 2021, which the Department of Veterans Affairs attributed to "greater financial strain, housing instability, anxiety, depression levels, and barriers to health care" (Hersey, 2023). The percent increase among veterans was substantially higher than the increase among non-veterans during this same time period (11.6% veterans vs. 4.5% nonveterans) (Hersey, 2023; U.S. Department of Veterans Affairs, 2023).[68] Female veterans, homeless veterans, American Indian and Alaska Native veterans, and veterans in the criminal justice system were disproportionately affected. For example, during the Covid-19 pandemic, the age-adjusted increase in suicides for female veterans was four times higher than that for male veterans (24.1 vs. 6.3%), and 166.1% higher than the suicide rate of women who had never served in the military. The Office of Women's Health at the Department of Veterans Affairs Office of Women's health is investing in programs for women veterans at risk for suicide. These include better support for mothers during the postpartum period, offering gun lock at women's clinics, and trauma-informed care training for clinicians (Hersey, 2023; U.S. Department of Veterans Affairs, 2023).

Dr. Christine Moutier,[69] Chief Medical Officer at the American Foundation for Suicide Prevention, published an article in *JAMA Psychiatry* in October 2020, which discussed how increased suicide rates are not an inevitable outcome of the pandemic. Rather, there are

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[68] As a group, veterans had more mental health problems than non-veterans during the Covid-19 pandemic (U.S. Department of Veterans Affairs, 2023). A systematic review of 23 studies found that during the COVID-19 pandemic, there was a significant increase in the prevalence of alcohol use, anxiety, depression, PTSD, stress, loneliness, as well as suicidal ideation among veterans (Li et al., 2023; U.S. Department of Veterans Affairs, 2023). Veterans most at risk for these adverse consequences were those experiencing "pandemic-related stress, family relationship strain, lack of social support, financial problems, and preexisting mental health disorders" (Li et al., 2023). "Higher household income and greater community interaction and support" appeared to be protective (Li et al., 2023).

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

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 a 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.

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 988 Suicide & Crisis 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 31% (Curtin et al., 2023; KFF, 2024).

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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