Review

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Advances in suicide prevention: critical overview of the gaps in suicide risk assessments, multimodal strategies, medicolegal risks, and the emerging evidence

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Abstract

The CDC reports that the United States has the highest suicide rates in over 80 years. Numerous public policies aimed at reducing the rising suicide rates, such as Aetna's partnership with the American Foundation for Suicide Prevention (AFSP) and the zero-suicide initiative, continue to challenge these attempts. It, therefore, remains imperative to explore the shortcomings of these efforts that hamper their efficiency in reducing suicide rates. Advancements in research over time have sparked scientific skepticism, encouraging re-evaluation of established concepts. The current paper tests prevalent assumptions and arguments to uncover a scientifically informed approach to addressing rising suicide rates in clinical settings.

Introduction

The Centers for Disease Control and Prevention (CDC) has reported some alarming data that the United States is currently experiencing its highest suicide rate in over 80 years. Numerous initiatives in public policy are underway; however, the simultaneous presentation of epidemiological data by the CDC may challenge this assertion. Aetna, a subsidiary of CVS Health, has partnered with the American Foundation for Suicide Prevention (AFSP), aiming to reduce the suicide rate by 20% by the year 2025 through AFSP's Project 2025 initiative.[1] Similarly, implementing Zero Suicide, utilizing a specific set of methodologies and resources, presents an ambitious objective and an inspirational challenge. Despite being labeled as "aspirational," the concept of "zero suicide" raises ethical questions regarding its feasibility, with some bioethicists emphasizing the principle of veracity. The apparent discrepancy between the CDC's data and these ambitious goals seems influenced by policy decisions and ideological perspectives not fully substantiated by empirical evidence (see Table 1).

A pivotal and unresolved inquiry pertains to why, despite decades of research, the suicide rate continues to escalate. Are there particular demographic groups presenting with unique clinical profiles intertwined with complex variables contributing to these sentinel events? Does suicide risk assessment (SRA) rely solely on predictability? Have the established gold standard tools for SRA demonstrated no false negatives, that justify enabling their standalone use or integration with clinical judgment? How do various agencies, associations, and managed care entities perceive SRA from their respective perspectives?

In recent years, numerous questions, concerns, and ongoing debates have emerged regarding how to address issues related to suicidal thoughts, behaviors, non-suicidal self-injury, and death by suicide. Despite groundbreaking work in developing theoretical models and testing them through empirical methods, the prevailing wisdom continues to be challenged as new conundrums arise.

Advancements in research, including genome-wide association studies and cutting-edge methodologies, have uncovered uncomfortable facts over the past few decades. These findings have sparked scientific skepticism, urging a re-evaluation of conventional understandings of these phenomena.

Our current comprehension of suicidal thoughts, behaviors, non-suicidal self-injury, suicide attempts, and death by suicides is evolving, and viewed through a multidimensional lens. These phenomena are often normative and are also associated with various mental health disorders that transcend traditional diagnostic boundaries. They are also recognized as outcome measures or sentinel events, serving as indicators of clinical efficacy and progress in the field.

This analysis uses Socratic questioning to critically examine the evolution of suicide prevention strategies over the past two decades, focusing on tools like the Columbia Classification Algorithm for Suicide Assessment (C-CASA).[2,3] This algorithm emerged during a period when

Table 1. Daunting Epidemiological Trends Prompting the Need for Organized Initiatives to Reconsider the Issue of Suicide

Counterintuitive findings in suicide research
• Suicide Without Warning is relatively common in younger children.
• 50% deny suicidal thoughts in roughly 50% of people who had died by suicide, and 30% of people who had attempted suicide had denied having suicidal ideation in the week or month beforehand.
• Emerging concerns about most deaths by suicide may have been stratified as low risk.
• Contact with primary health care prior to suicide is common even in the final month before death. A significant proportion of deaths by suicides occur within hours, days, or a few weeks of the last hospital, emergency department (ED), or other clinical encounter.
• Each year in the U.S., roughly 300–400 physicians die by suicide.
• U.S. suicide rate reaches highest point in more than 80 years.
• From 2003 to 2017, Black youth experienced a significant upward trend in deaths by suicide with the largest annual percentage change in the 15- to 17-year age group and among girls (4.9% and 6.6%, respectively)
• In a cohort of 813 youths aged 10–24 years, almost three-quarters (71.4%) of suicide deaths occurred on an index attempt. In addition, over 40% of those making index attempts had no prior psychiatric diagnoses, mental health visits, or psychotropic medication trials.

black box warnings were issued for serotonin reuptake inhibitors, particularly concerning their use in pediatric populations. Data from this era indicated that approximately 50% of individuals who died by suicide had interacted with healthcare professionals within 30 days of a significant triggering event. This finding led to the widespread adoption of assessment tools primarily focused on suicide ideation.[4,5]

However, ideation-based approaches have significant limitations, especially as suicide rates among younger populations continue to rise. This trend calls for a thorough re-evaluation of the foundational assumptions and methodologies underpinning current suicide prevention strategies.

This review synthesizes recent empirical findings to provide an updated and comprehensive understanding of the multifaceted factors influencing suicide risk. By integrating insights from diverse studies, it highlights critical issues with ideation-based assessment tools and reductionist approaches. These issues underscore the need for a more nuanced, multidimensional approach to suicide prevention, encompassing a broader range of risk factors and variables.

Furthermore, this review aims to outline the scope and limitations of existing literature and practices, offering clinicians and researchers a clearer framework for evaluating current strategies. It advocates for the development of more targeted, empirically driven research questions to formulate more effective interventions. The goal is to enhance the understanding of suicide risk through a more evidence-based approach, thereby improving clinical outcomes and the overall effectiveness of suicide prevention strategies.

This paper challenges prevailing assumptions and arguments, promoting a balanced, scientifically informed approach to addressing these issues in clinical settings.

Methods

A comprehensive search was conducted across several databases, including PubMed, PsychINFO, Cochrane Library, Google Scholar, Scopus, Medline, and Web of Science, from their inception to May 30, 2024. Additionally, research in PubMed Central (PMC) were included for book chapters and expert opinions relevant to the subject.

The inclusion criteria for this review were designed to encompass any published material focusing on suicidal risk assessment across all age groups, with a particular emphasis on various screening tools and risk factors associated with suicide. We intentionally kept our criteria broad to ensure that the review captured a wide range of studies, including those on children, adolescents, adults, and the elderly. The search strategy employed controlled vocabulary and keywords such as "suicidal risk assessment," "medicolegal," and "suicide prevention," and was conducted in all languages. A manual search was also performed. To ensure the review was current and relevant, the search particularly focused on publications from the last 10 years, aiming to capture the most recent advancements and findings in the field. This approach also helped identify gaps in the current evidence base, highlighting areas that require further research. Ultimately, the goal was to gather a comprehensive and up-to-date collection of studies that could provide valuable insights into effective screening tools, understand various risk factors, and pinpoint areas needing more research to improve our understanding and prevention of suicide.

This search yielded 6218 articles after removing duplicates. Following a review of the abstracts, 17 studies were deemed suitable for the initial draft of this narrative review, as agreed upon by the authors. Additionally, eight other articles were included to support the narrative, comprising three publications identified via manual search, 1 practice parameter, 1 book chapter, and data from CDC. gov, newsletters from psych.org, and the AFSP. Ultimately, 25 articles were used for this review. See Figure 1 for more details.

Results

Unfulfilled commitment or systematic failure: why are empirical studies critical of ongoing suicide risk assessment (SRA)?

The critics of psychiatry have consistently contended that the Diagnostic and Statistical Manual of Mental Disorders (DSM) continues to categorize mental disorders based solely on observable manifestations rather than underlying biological mechanisms. On the other hand, since the inception of DSM III, the practice of categorically classifying symptoms into diagnoses has supplanted the historical approach of delving into the underlying meaning of symptoms. Therefore, an investigation of putative neurobiological correlates of meaning among other variables more commonly used would assist in characterizing clinical symptoms such as onset, frequency, duration, and intensity.[6]

Historical insights in scientific processes underscore the potential for misinterpretation when relying solely on categorical nosology, which often overlooks contextual nuances. Notably, in the DSM-5, suicidal thoughts are predominantly suggested as a symptom of major depressive disorder (MDD) and borderline personality disorder (BPD), thereby potentially diverting attention from other conditions. As the DSM categorical nosology captures distinct psychopathological impediments, suicidal thoughts and behaviors (STB) are present among trans-diagnostic or cross-cutting conditions.

A significant drawback of these classification strategies lies in their heavy reliance on patient-reported symptoms, overlooking factors such as patient resistance to divulge information, disregarding the clinical context of the symptoms, and failing to consider the
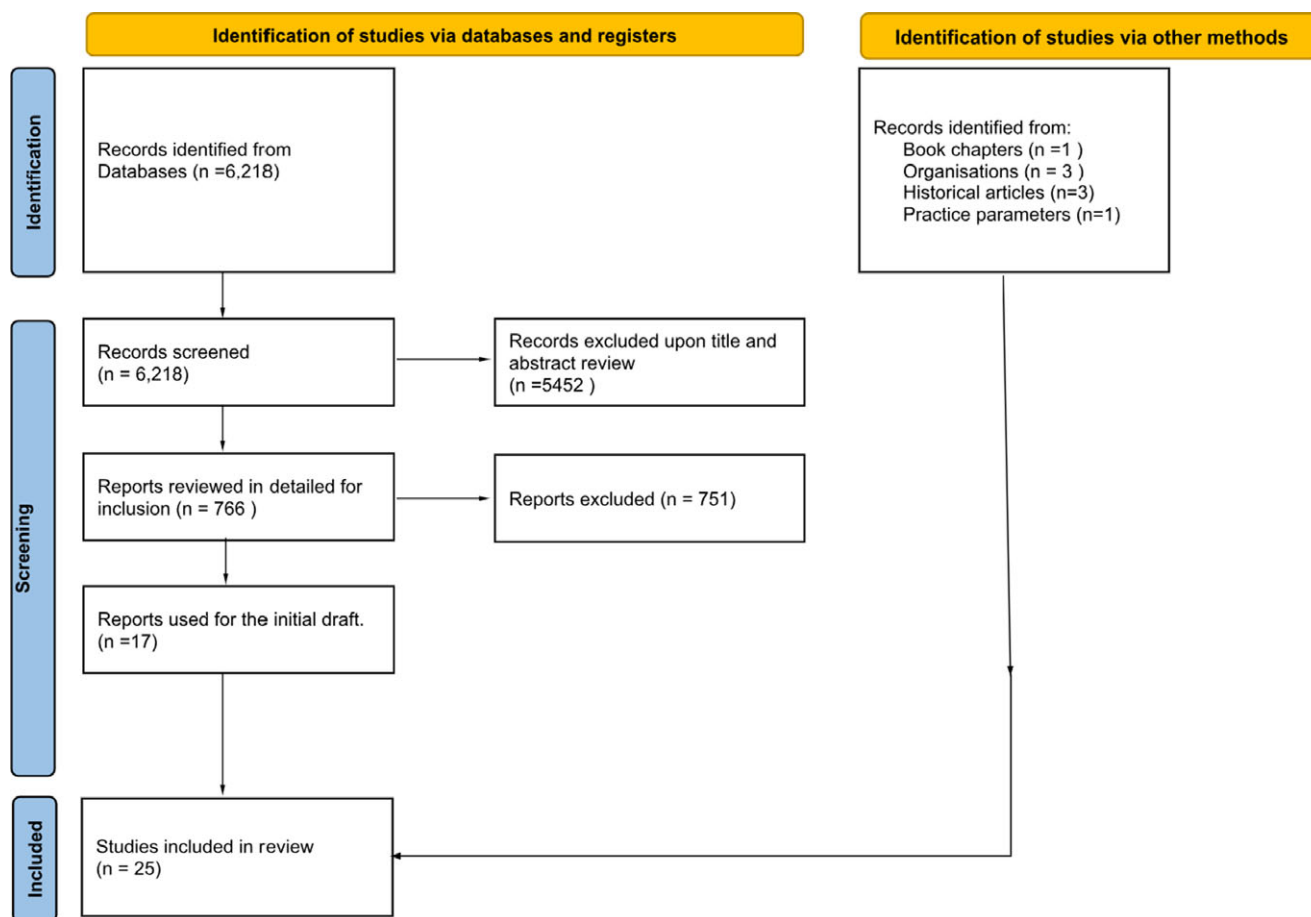
Figure 1. Summary of the review's search strategy.

possibility of concurrent non-affective illnesses. Acknowledging STB significance, the DSM-5 took a significant stride by proposing Suicidal Behavior Disorder (SBD) as a subject for further investigation. This proposal implies the potential inclusion of SBD in subsequent editions pending additional research. Suicidal ideation, previously regarded as a symptom indicative of a specific disorder, is now recognized as a phenomenon not exclusive to any diagnosis.

This inspires numerous critical questions and examinations regarding the gaps in research and the application of clinical protocols and guidelines. Over the past two decades, there has been significant progress in understanding warning signs, risk factors, systematic screening methods, and using risk assessment scales. Despite death by suicide being a rare but highly significant event, troubling statistics persist, such as 45% of individuals who died by suicide have visited a primary care physician within 30 days before their death.[7] Despite the increasingly nuanced understanding of risk factors in recent years, there remains a widespread consensus among researchers about systemic failures in suicide prevention efforts. Given the rarity and unpredictable nature of suicide, unfortunately, many deaths by suicides remain beyond preventive measures.

The prevailing approach in the past few decades has heavily emphasized the development of risk factor profiles. Additionally, there has been a notable inclination toward utilizing measurement scales such as the Ask Suicide-Screening Questions (ASQ) and Columbia Suicide Severity Rating Scales. However, there lack of consensus, or a panel dedicated to continuously evaluating the need

for updating and assimilating emerging evidence into the clinical standard of care.

These assertions and challenges are crucial to examine because, despite substantial funding for research, the epidemiological trends of death by suicide continue to rise. Sophisticated meta-analyses examining the use of measurement rating scales over the last 50 years have found equivocal effects on suicide rates. The critics argue that stratifying individuals in clinical settings based on high, low, and medium risk has not been substantiated as an effective method for assessing risk, particularly considering that a significant proportion of deaths by suicides occur among those deemed to be at low risk.

While it is important to maintain some structure in assessment processes for providing a comprehensive overview of information flow, data gathering, and collateral information, questions persist regarding medical decision-making. Focusing solely on a few factors remains a highly reductionistic approach, leaving numerous gaps that could lead to serious outcomes.

SRA tools: blind dove sometimes finds a pea

Individuals with mental health conditions are already at heightened risk compared to those without such conditions. Extensive research has identified specific risk factors associated with STB at both individual and group levels. However, conducting such assessments can pose challenges, particularly when dealing with specific patient populations. Among these are individuals with developmental

delays, intellectual disabilities, autism spectrum disorder, or those who are nonverbal. These populations may require tailored approaches to effectively screen for suicide risk due to potential communication barriers, cognitive differences, or unique behavioral patterns. These challenges involve strategies employing specialized assessment tools and techniques that accommodate diverse communication styles and cognitive abilities. It also requires a multidisciplinary approach involving professionals with expertise in developmental psychology, psychiatry, and behavioral analysis. With advancements in developmental psychology elucidating the trajectories of STB, increased awareness of media contagion, and recent insights into the risks associated with autism spectrum disorder (ASD), a wealth of knowledge has been amassed. However, there remains a notable gap in utilizing SRA tools to integrate this information.

A meta-analysis spanning the last five decades of research reported that the predictive value of existing SRA tools is only marginally superior to chance, with the Area under the Receiver Operating Characteristic (ROC) Curve ranging from 0.56 to 0.58.[8] The United States Preventive Services Task Force (USPSTF) has concluded that the current evidence is insufficient to determine the benefits and harms associated with screening for suicide risk among adults, including pregnant and postpartum individuals, as well as older adults.

Two meta-analyses have indicated that suicide risk assessments possess a positive predictive value (PPV) of around 5% in the long term.[9,10] Studies focusing on "structured clinical evaluation" have shown no superiority over predictive instruments, with validity decreasing when professionals override statistical predictions.[11] Despite various strategies employed in SRA, they seem to lack utility in accurately predicting risk, which calls for further investigation of the current practices. It would further help in mitigating the moral emotional responsiveness of self-reproach the clinician might face in the case of a patient's suicide completion.[8,12]

Risk factors and warning signs: cart before the horse

When examining individuals with mental illness through a transdiagnostic, dimensional framework, it becomes apparent that the risk of STB is heightened. However, the traditional practice of stratifying risks into high, moderate, and low categories lacks empirical substantiation and is viewed as overly simplistic. The commonality of known risk factors has led to questioning their utility, with concerns raised that their utilization may paradoxically elevate rates of STB due to reduced clinician engagement stemming from heightened anxiety. Remarkably, approximately 95% of individuals classified as high-risk will not die by suicide, while 50% of suicides originate from lower-risk categories, indicating a significant limitation in the accuracy of risk assessment methods over the past four decades.

The rarity of such events and the limitations of our current tools imply that so-called "high-risk" groups will predominantly include individuals who are falsely identified, while the majority of those who die by suicide will have been classified as low-risk. In alignment with this perspective, the UK's National Institute for Health, and Care Excellence (NICE) has advised against the use of assessment tools and scales aimed at providing crude indications of suicide risk levels (Table 2).

Numerous studies have consistently revealed a higher incidence of suicide among male adolescents compared to females, a pattern replicated across diverse cultural contexts. However, the underlying factors contributing to the elevated suicide rate among males remain poorly understood, as does the underrepresentation of nonaffective illnesses in suicide data. Suicide is recognized as having a

Table 2. List of Cutting-Edge Research that Highlights Significant Concerns Regarding Tools for Assessing Suicide Risk

Authors	Findings	Clinical implications
Lotito M, Cook E 2015[23]	SRA remains a challenge largely since suicidal behavior is multifactorial.	Assessment of other factors is critical.
In-Chul Baek et al. 2021[24]	SRA does not report predictive validity and is often based on past attempts.	Tools do not account for personal circumstances, unemployment, divorce, or childhood trauma.
Scott A. Simpson et al. 2021[25]	92 643 patients were analyzed; 11 (0.01%) patients died by suicide within a month after the ED visit.	The C-SSRS screener is insensitive to suicide risk after ED discharge. Most patients who died by suicide screened negative and did not receive psychiatric services in the ED.
Lily Brown et al. 2020[26]	Participants (n = 1376, mean age 36.8, 55% female, 76.8% white) completed the C-SSRS during the ED visit and were followed for 1 year	Psychometric evidence for the C-SSRS was mixed
Robyn Thom et al. 2020[27]	The screening scales possess limitations in their ability to effectively identify individuals at risk, often relying on validation through comparison with other assessment tools rather than direct data on suicidal behavior.	A positive screening outcome or any other clinical red flags emphasize the need for a thorough suicide risk evaluation performed by a trained clinician. It is crucial to acknowledge that even in ideal circumstances, our ability to predict which patients might attempt or die by suicide remains restricted.
Bernard P. Chang 2015[28]	Assess the correlation between different suicide-screening instruments and clinical judgment, and their impact on subsequent psychiatric admissions and short-term adverse events in the ED.	Both clinical impression alone and suicide screening tools demonstrated limited predictive value for near-term events. The findings from this study emphasize the urgency for the creation of ED suicide screening tools that can effectively identify patients with suicidal ideation who are at the highest risk.
Franklin JC et al. 2017[8]	The predictive accuracy of current SRA tools developed over the past five decades is marginally higher than random chance, with an area under the Receiver Operating Characteristic (ROC) Curve ranging from 0.56 to 0.58.	Meta-analysis underscores the necessity for several fundamental changes in future studies.

Table 3. Critical Question for Ongoing Dialectical Debates in Suicide Prevention

Critical Questions	Observations and Evidence	Clinical Utilities
Ideation-based screening tools	Half of the patients deny when asked about Suicidal Ideations.	This raises questions about the fidelity of using these tools.
1–7 days after Discharge Risks	Studies point toward the highest risk among discharged patients from the inpatient unit	There is a lack of any guidance on follow-up post-discharges.
2022–2023 Trends?	80 years higher deaths by suicide in the USA. Red states have a higher rate of death by suicide in men.	Global trends skewed higher rates (75%) in low- and middle-income countries.
Case fatality rate of methods	Firearms, hanging, pesticides, and OTC drugs.	Access to lethal means, securing bridges, firearms, and controlling OTC medications and pesticides.
Psychological autopsies	Recall bias, lack of informed consent, and breaching autonomy.	Elevates the prevalence of deaths by suicides linked with mental illness
Mental health emergencies	ED visits for suspected suicide ideation and attempts have risen year-over-year among adolescents ages 12–17, especially among girls.	The increase in individuals seeking mental health treatments underscores the necessity of implementing a collaborative care model to ensure that assessments are conducted within the purview of trained professionals.
Columbia-suicide severity rating scale screener	The C-SSRS screener is insensitive to suicide risk after ED discharge. Most patients who died by suicide screened negative and did not receive psychiatric services in the ED.	Categorical tools heavily rely on the presence or absence of suicidal ideation. It is notable that 50% of recent deaths by suicides happen within 30 days of the last clinical contact, with half of those individuals denying any ideation. Consequently, the US Preventive Services Task Force (USPSTF) concludes that there is currently insufficient evidence to evaluate the trade-off between benefits and harms of screening for suicide risk in children and adolescents.
Skewed toward affective illness	Though MDD is the leading cause, however eating disorders, personality disorders, schizophrenia, anxiety disorders, and substance use disorders continue to remain at elevated risk.	Psychiatric comorbidities amplify the risk of adverse outcomes, including physical health complications. For instance, individuals with psychiatric comorbidities such as cancer, multiple sclerosis (MS), systemic lupus erythematosus (SLE), end-stage renal disease (ESRD), stroke, and chronic pain are at a heightened risk. Studies indicate that the risk of physical health complications, including chronic pain, doubles in these populations.
Risk factors	Identifying risk and protective factors in an assessment does not have predictive value, but it may be used to mitigate the modifiable risks and plan interventions as part of a more informed decision-making	Future suicide prevention cannot rely on explicit expressions of risk.
Errors in reporting	Opioid death, murder suicide, suicide by cops.	True estimates may need to incorporate other means of death by suicide.
False positives	Frequency of false positives limit utility?	Disproportionate use of resources who may not need them.
Screening gives what?	No improvement in the accuracy of SRA over the past 40 years	Public Health crises may need integrated efforts to develop coherent policies.
Socioeconomics	Growing disparities in income, unemployment, housing, climate changes, etc.	Emile Durkheim concluded that suicide was inversely correlated to social integration. Involve other stakeholders and partnerships.
Training GAPS		
Special groups	First responders, incarcerated, physicians, LGBTQ, Social context "Werther effect."	Studies into demographics and phenotypes that have disproportionately higher deaths by suicide.
Suicide attempts	10–30 times higher than death by suicides and 100–200 times per death by suicide in adolescents and emerging age youths 15–24.	Prevalence acts as a limiting factor on the positive predictive value (PPV) of any diagnostic or screening tool, as lower prevalence in the population reduces the probability that a positive result accurately reflects true disease presence. Effective treatment strategies should focus on two key areas: (1) targeted interventions for subpopulations, where the prevalence of the condition is higher and thus interventions may be more impactful, and (2) broader, general interventions for unselected clinical populations, where individualized assessment and flexible treatment options can address a range of potential risk factors and presentation variations. By addressing both specific and general needs, treatment approaches can optimize outcomes across diverse patient groups.
Self-harm	Are there scales and risk factors that may predict suicide after self-harm?	The four identified risk factors, while intriguing, are unlikely to offer significant practical utility due to their prevalence in clinical populations. None of the scales have gathered adequate evidence to justify their application. Relying solely on these scales or placing excessive emphasis on identifying risk factors in clinical settings could lead to false reassurance, posing potential negative outcomes.

Table 3. *Continued*

Critical Questions	Observations and Evidence	Clinical Utilities
Suicide prediction and ethics	The idea of risk assessment as risk prediction is a fallacy and should be recognized as such.	The overemphasis on risk prediction has the potential to harm patients, clinicians, and the organizations in which they work [creating] a sense of unease among clinicians and a culture of blame when things go wrong.
Managed care tools	Medicare Milliman Clinical Guidelines (MCG) and APA guidelines must align.	Medical Decision-making based on clinical observations trumps guidance as it is unique for the individual and requires narrative rationale.

multifactorial etiology, and suicidal thoughts are viewed as symptomatic of various disorders or illnesses rather than being specific to any condition. Consequently, suicidal risk assessments tend to be skewed toward affective illnesses, often overlooking co-occurring phenomenology or underlying etiological factors.

Policies without evidence and limits of clinical decision-making

In 2004 APA practice guidelines stated that *"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."*.[13]

Given that an average of 44% of suicide completers were in contact with primary care in the month before they died, and 80% in the preceding year; there was a major shift in the policies that were developed mandating risk assessments to prevent deaths by suicides.

Ongoing scientific investigations aim to grasp the intricate relationship between diverse risk factors and suicidal thoughts and behaviors (STB). These factors encompass a wide spectrum, including developmental stages, age, gender, presence or absence of intellectual disabilities, cognitive distortions, personality traits, religious affiliations, family dynamics, trauma, bullying, and various life events. The exhaustive and ever-expanding nature of this list highlights the challenge of staying updated without actively engaging with empirical research. This raises questions about how mental health professionals can stay abreast of cutting-edge research and which trained practitioners possess the expertise to navigate this complex field. Such inquiries are particularly relevant to professionals but are limited to advanced-level practitioners, crisis intervention specialists, and oncologists providing end-of-life care to terminally ill patients.

Additionally, there exists a wealth of diverse research literature on suicide, covering topics such as the influence of cultural phenomena like "13 Reasons Why," the impact of cannabis laws, the vulnerability of individuals experiencing prodromal psychosis, factors contributing to discharge against medical advice, occurrences of STB among preschoolers, data indicating a surge in suicide rates among Black youths, and the role of conflicts within families as precipitating circumstances for suicide. It is imperative for clinicians working with individuals with mental illness to recognize the multifaceted and complex nature of these disorders (see Table 3). By employing a comprehensive mental decision-making framework, clinicians can better understand how various factors intersect across diverse populations. During clinical interactions, prioritizing the individual and conducting thorough assessments including dimensional ratings of psychopathology using the triangulation method and, inculcating a conscience-sensitive approach is essential for effective evaluation, treatment, and management of these risks (Table 5).

Moreover, mental disorders inherently heighten the risk of suicide, and individuals seeking assistance often exacerbate clinicians' anxiety, particularly when they score high on assessment tools. This scenario frequently delves into medicolegal considerations, potentially triggering involuntary commitment processes that necessitate capacity assessments, which could dissuade individuals from seeking help. The burden of proof in such cases is typically set at a clear and convincing standard, surpassing that of other civil legal proceedings, thereby entailing state-specific due process requirements (Table 4).

The clinicians should assess risk based on a reasonable degree of medical certainty. While also outlining the limits of confidentiality to keep the patient safe and considering the medicolegal complications. It becomes imperative to take informed consent and assent with complete documentation as a point of reference for both patient and clinician. Although this process is intricate and impacts patient-physician relationships, it remains perplexing that managed care entities may still exercise discretion in denying care despite ongoing involuntary treatment mandated by mental health courts. The discrepancy between court-mandated treatment and managed care criteria raises questions about why court orders may supersede the standards used by managed care, especially considering the adherence to due process during commitment proceedings. The efficacy of involuntary commitment in yielding better outcomes remains ambiguous. Nonetheless, given the evolving empirical evidence over the past four decades, the involuntary commitment process, which is contingent upon state jurisdictions, may warrant re-evaluation and reform. One notable legislative initiative is the Pennsylvania state Gabby Law under ACT 65. It represents a novel approach by granting adolescents aged 14 and above, along with their legal guardians, autonomy in making mental health-related decisions.

Ethics of suicide assessments

Amidst the backdrop of German idealism, Kant's Groundwork of the Metaphysics of Morals (2002) emphasizes the duty to preserve life. Nonetheless, in the United States, libertarian ideals occasionally clash with this principle, particularly concerning individuals at risk of suicide. There exists a prevailing notion that suicide deaths are solely attributed to mental illness, leading to the adoption of overly paternalistic measures that suspend autonomy and free will under the assumption that individuals cease to exercise these capabilities due to their mental health condition. However, these interventions often lack empirical validation and result in coercive and restrictive actions, thereby raising significant ethical concerns. The pervasive blame culture exacerbates the pressure on clinicians, giving rise to medicolegal challenges and feelings of guilt and shame among survivors and healthcare professionals, despite evidence suggesting otherwise.

Social norms tend to pathologize suicide, providing government health professionals with legal justification for intervention. Historical contexts reveal harsh penalties for attempted "self-murder," yet seminal works like Emil Durkheim's offer a more modern, sociological perspective, challenging the punitive religious narratives of the

Table 4. Examining the Differences and Commonalities in Suicide Prevention Guidelines across National and International Organizations Brings Us to a Fundamental Question: What Defines the Standard of Care? This Inquiry Seeks to Understand how Varying Recommendations Shape Practices and Whether a Universal Standard Can Effectively Accommodate Diverse Cultural, Legal, and Healthcare Contexts

Organization	Stance on SRA tools
The U.S. preventive Services Task Force (USPSTF)	The recommendation also highlights the lack of current evidence regarding the effectiveness of SRA and documentation, noting that available evidence is either of poor quality, conflicting, or insufficient.
American College of Emergency Physicians	The recent recommendation advises against using the six-question Columbia Suicide Severity Rating Scale (C-SSRS) in isolation to guide disposition decisions for patients with suicidal ideation.
Department of Veteran Affairs: Universal screening for all VA	In 2018, the VA introduced the Suicide Risk Identification Strategy (Risk ID) for standardized screening and evaluation. Initially three steps, it targeted Veterans due for annual depression and/or PTSD screens. In November 2020, it was streamlined into two steps, along with a new policy mandating annual screening for all Veterans receiving VA care, aiming to enhance suicide risk detection across various care settings.
The Joint Commission, USA	The Joint Commission mandates hospitals and critical access hospitals to screen patients for suicidal ideation through its National Patient Safety Goal (NPSG) 15.01.01, effective in 2019. This includes using evidence-based processes, screening all patients with behavioral health conditions, employing validated screening tools, and conducting suicide risk assessments for those screening positive for suicidal ideation.
American Psychiatric Association Practice Guideline for the Assessment and Treatment of Patients with Suicidal Behaviors 2003	The guidelines are currently awaiting an update.
National Institute for Health and Care Excellence.UK	NICE advises against scientifically classifying individuals into low or high-risk categories for suicide. Instead, they recommend conducting a comprehensive assessment to understand the complexity and individual circumstances surrounding suicide risk. This approach allows for a more nuanced understanding of the factors contributing to risk and enables tailored interventions and support for each person. NICE emphasizes the importance of ongoing monitoring and support for all individuals, regardless of perceived risk level. The guidelines warned clinicians should "not use risk assessment tools and scales to predict future suicide."
National Institute for Mental Health (NIMH)	In 2008, the National Institute for Mental Health (NIMH) initiated a multi-site study aimed at creating a user-friendly tool to identify young patients at risk of suicide. This resulted in the development of the Ask Suicide-Screening Questions (ASQ) Toolkit.
Substance Abuse and Mental Health Services Administration (SAMHSA)	SAMHSA recommends SAFE-T Suicide Prevention: A structured framework aiding healthcare professionals in assessing and managing suicide risk through five steps: Identify risk and protective factors, conduct an assessment, determine risk level, and develop a treatment plan.
U.S. Food and Drug Administration (FDA)	FDA advises assessing suicidal ideation in trials to recognize, treat patients, and detect changes. C-SSRS is recommended for its simplicity and effectiveness.

Table 5. Several Effective Strategies Recognized for Their Role in Suicide Prevention

Evidence	Settings/Location
VA checklist	Environment of Safety
Reduction in acetaminophen pack sizes	UK and Denmark Data
Barriers around bridges	Golden Gate Bridge
Postdischarge support	Highest Risk is 1–7 days

past. Research linking suicide to mental illness, notably through psychological autopsies which are themselves critiqued for their inherent biases, has further solidified this association.

Legal avenues, such as the writ of habeas corpus, provide means to challenge involuntary detention and intervention, although these measures have been circumvented through mental health tribunals and legislation. It is often assumed that due to mental illness, individuals lack agency and the state, in applying mental health laws, expects assessment and treatment. This prompts the argument that individuals at risk lack autonomous agency due to

mental illness, thereby compromising their capacity for free will and decision-making.

Discussion

How to integrate emerging evolving evidence and challenges in real-world clinical settings?

As epidemiological trends continue to raise profound questions, it becomes evident that there are significant gaps in how society addresses suicide. Notably, a proportion of individuals who die by suicide succeed in their initial attempts without ever having consulted or received a diagnosis for mental disorders.

Extensive research has pinpointed several high-risk groups, including physicians and individuals with chronic medical conditions, where the presence of mental illness compounds these risks. The process typically begins with scrutiny and monitoring when these individuals seek assistance, often beginning at primary care facilities.

While the prevalence of suicidal ideation is substantial at the population level, it is the recognition of warning signs that initiates the assessment of suicide risk. Understanding the specific settings

where these assessments occur is crucial, as is recognizing the expertise and capabilities of those conducting the assessments. Given the multifaceted nature of suicide assessments, a deep understanding of medical, psychiatric, developmental, cognitive, and psychoanalytic principles is indispensable for achieving comprehensive outcomes.

Relying solely on Suicide Risk Scales (SRS), which typically utilize binary data with yes or no responses, is insufficient. SRS, being ideation-based, often overlooks contextual factors and is associated with a significant number of false negatives, which are linked with sentinel events.

Suicide, being a rare and challenging event to study empirically, has been widely acknowledged in the literature as unpredictable. Given its complex, multifactorial nature and its association with various psychiatric illnesses that transcend traditional diagnostic boundaries, the formulation of medical decision-making utilizing multimodal interventions remains a fundamental strategy.

It is noteworthy that successful suicide prevention strategies often involve more than just assessing suicidal ideation. For instance, interventions such as erecting barriers on structures like the Golden Gate Bridge, implementing the VA Environment of Care checklist in inpatient units, reducing access to acetaminophen in the UK and Denmark, and securing firearms have proven effective. Notably, firearms remain the most lethal method of suicide as 25% of suicidal acts involve firearms,[14] underscoring the importance of focusing on reducing access to lethal means as a critical area of intervention. There is also a need for red flag law judicial burden of proof to be "clear and convincing," a standard consistent with mental health civil commitment.

There is a pressing need to redefine the concept of the "American Dream" away from ideals rooted in excess, hyper-competitiveness, and the relentless pursuit of perfection, often perpetuated by toxic work environments and the curated realities presented on social media platforms. Embracing a more nuanced perspective and moving beyond oversimplified approaches that emphasize blame cultures, legal liabilities, and an exclusive focus on risk factors is crucial for meaningful progress.

When evaluating individuals with mental illness, it is imperative to consistently consider the potential risk of suicide. Recognizing new warning signs and the impact of significant life events can further heighten this risk, warranting scrutiny. Additionally, proactive measures to secure firearms and restrict access to other lethal means are essential strategies in mitigating suicide risk.

Under the Privacy Rule outlined in 45 CFR § 164.512(j), healthcare providers are authorized to disclose patient information, including details from mental health records if deemed necessary for specific situations. For instance, if a patient poses a credible threat of serious and imminent bodily harm to themselves or others, mental health professionals are permitted to notify law enforcement, family members, school authorities, or other individuals capable of mitigating the risk and preventing harm. This provision allows for proactive intervention to address potential dangers posed by the patient's condition.

Hence, following the comprehensive assessment tailored to the individual's unique circumstances, which encompasses multifaceted aspects of potential threats, it becomes essential to apply the doctrine of foreseeability when devising safety plans. These plans should not only identify protective factors but also address access to mental health services and the removal of firearms, among other pertinent measures.

Given that deaths by suicide manifest trans-diagnostically, foreseeable risks may arise from various sources. For instance, in cases of adjustment disorder, foreseeable risks could stem from conflicts with an estranged partner or the finalization of a divorce. Similarly, individuals with schizophrenia may face risks related to akathisia, while adolescents with autism spectrum disorder (ASD) may be vulnerable to bullying in school. Additionally, individuals with Bipolar I Disorder may experience depressive episodes following the conclusion of a manic phase.

A clear and coherent formulation of foreseeable risks, coupled with a well-defined plan to mitigate them, remains integral to effective suicide risk assessments. Such an approach ensures that interventions are tailored to address specific risk factors and promote the safety and well-being of individuals at risk of suicide.

Addressing challenges and incorporating effective evidence involves identifying barriers and utilizing proven strategies

The adequate discussion has centered on the limitations of relying solely on SRS tools, the shortcomings of insufficiently trained mental health professionals, workforce challenges, and ongoing debates surrounding suicide classification and its dimensional aspects. Transitioning from a focus on ideation-centric assessment to formulating a Multidimensional Definition of Suicide may offer a more nuanced understanding of its complexities. Suicide emerges at the nexus of various factors, including age, gender, race, ethnicity, religion, experiences of shame and humiliation, family history, non-psychotic pathology, neurological conditions, medication effects, parental styles, trauma, legal issues, substance abuse, early onset behavioral disorders, and access to firearms and other lethal means.

What constitutes the standard of care for suicide prevention remains a crucial inquiry. Stratifying individuals into high-risk groups carries the risk of inducing significant anxiety for both the individual and their family. Considering a PPV potentially as low as five percent raises doubts about the potential health benefits for most of this group to outweigh any psychological harm, especially given the lack of evidence supporting effective interventions. Additionally, it is concerning that up to eighty-six percent of individuals who die by suicide are categorized into low-risk groups,[15] which could potentially offer false reassurance to those identified as low-risk.

Unemployment has led to a threefold increase in suicide rates, while social isolation, often described as a "loneliness epidemic," serves as another contributing factor. Furthermore, half of the suicides occurring within a week of incarceration are linked to mental illness. According to the estimates from 2019, 27.2% of all adult suicides occurred in people released from prison within 2 years. The relative risks of suicide also remain high.[16] Interestingly, Durkheim introduced the term "altruistic" to describe suicide, suggesting it is because of social integration rather than solely stemming from illness or despair. This phenomenon is more prevalent in tightly knit societies, notably exemplified in Japan as *kakugo no jisatsu* (suicide of resolve), where it is viewed as a rational act. Additionally, more factors have been now linked with indulging in suicidal acts. The studies assessing the hypothesis that the mind after midnight proposes nocturnal wakefulness is a peril for dysregulated behaviors. It suggests suicides rise at midnight, and the risk is dependent upon age, partner conflict, and degrees of alcohol intoxication.[16] This risk is observed more in young adults and people intoxicated with alcohol. Thus, it is reductionistic to attribute 90% of suicides solely to mental illness.

Navigating the medical decision-making process in the face of evolving standards of care

Based on the comprehensive analysis of existing literature, it becomes apparent that the accurate prediction of suicide, along with the methodological intricacies involved in studying suicidal behavior, and the classification of individuals into low, moderate, and high-risk categories based solely on SRS, lack empirical validation. Despite the proliferation of policies and initiatives, there exists a compelling necessity to subject epidemiological data to rigorous scrutiny, employing scientific skepticism and withholding premature judgments, while upholding our ethical obligation to patient welfare. Our responsibility lies in critically evaluating our methodologies, identifying research gaps, advocating for increased transparency, and dispelling prevalent misconceptions and practices that perpetuate the status quo.

Several notable advancements have occurred, particularly in the precise use of terminology, with ongoing discussions distinguishing between illness and disorder. The preference for "illness" is debated due to its subjective connotations, which mitigate feelings of personal responsibility. Societal campaigns must underscore that individual with mental illnesses, irrespective of suicidal ideation or behavior, are not accountable for their condition, necessitating intensified anti-stigma efforts. Amid the pandemic, there has been some progress, evidenced by increased treatment-seeking behaviors; however, service readiness has often lagged. Challenges persist in identifying those in need of services, compounded by managed care complexities and the expanding role of mid-level practitioners. The APA collaborative care model emerges as a practical, financially viable, and safer solution, involving the formation of expert-led, trained teams to address these complexities effectively.

Given the intricate nature of these assessments, the tendency to shift blame onto mental health professionals poses yet another obstacle to accessing treatments and implementing more restrictive measures, driven by medicolegal concerns regarding failure to predict and meet undefined standards. The potential for coercion in assessment and interventions stems from paternalistic methodologies that supersede free will and hinder open discourse, potentially amplifying the risk of suicide.

The heightened anxiety experienced by clinicians working with individuals diagnosed with borderline personality disorder (BPD), substance use disorder (SUD), and bipolar disorder (BD) is exacerbated by a culture of online reviews and organizational philosophies that reward clinicians based on similar metrics, often resulting in bias. It is imperative to address the scrutiny of reviews, particularly within the psychiatric community, where many well-intentioned clinicians have faced criticism for clinical decisions contrary to patient wishes, impacting both patients and their families. In many cases, inpatient clinicians are compelled to make decisions regarding involuntary commitments, a process fraught with adversarial dynamics that may subsequently lead to lower review ratings, despite decisions being made in the best interests of patients. There is a pressing need to transition toward utilizing more nuanced reviews and ratings for psychiatrists, which should consider the complexity of their work. This shift should incorporate training on how to effectively manage ambivalence, such as clinicians' reluctance to diagnose borderline personality disorder (BPD) or to initiate clozapine treatment after two failed trials in individuals with schizophrenia.

Legislative tort reforms are pivotal in establishing unequivocal guidelines and lowering the threshold for malpractice, particularly given the absence of standardized practices in mental health care.

These reforms ought to be complemented by training initiatives aimed at educating mental health professionals about how the legal system evaluates negligence in cases involving suicide.

Suicide assessment training should be mandated for all healthcare workers, with renewal tied to licensures akin to requirements for child abuse and basic life support training. Focus training modules must address prevalent misinformation regarding HIPAA provisions for disclosures, SSRI-boxed warnings, and other clinical issues. Moreover, the implementation of tort reforms could be contingent upon the successful completion of these training programs and certifications, like defensive driving courses, ensuring a more informed and competent mental health workforce.

It is widely acknowledged that restricting access to lethal means and fostering a safety-oriented environment, as exemplified by VA systems, has contributed significantly to the notable reductions in suicide deaths. Additionally, there is substantial evidence indicating that the period immediately following discharge, typically within 3–7 days, is associated with heightened rates of suicide deaths. However, there are currently no directives, guidance, or recommended standards mandating institutions to establish contact with patient's post-discharge. Addressing these gaps presents an opportunity to enhance outcomes within the realm of possibility and influence.

Furthermore, understanding the legal system's concept of foreseeability is crucial in establishing the standard of care. Foreseeability does not equate to predictability but rather underscores the clinician's obligation to conduct a comprehensive suicide assessment, considering individual changes from baseline, past behaviors, life events, and reasonable treatment options aimed at mitigating suicide risk. It is imperative to perform these assessments comprehensively, incorporating multifactorial aspects, and meticulously document both the assessments conducted and the measures taken to address foreseeable risks.

Initial psychiatric evaluations should include assessing key factors linked to increased suicide risk.

The documentation of an overall estimation of suicide risk, based on both clinical judgment and collected data, is recommended. Variability exists in how suicide risk is documented in medical records, indicating a need for improved clinician knowledge and training. Quality improvement activities should not oversimplify the process of assessing suicide risk factors. The guideline does not intend to represent a comprehensive set of questions for SRA. No standardized scale for assessing risk has been shown to have clinically useful specificity, sensitivity, or predictive value. Many clinicians use free text prose to describe a patient's suicide risk due to the lack of a suitable standardized scale. An alternative approach could be to measure the presence or absence of a body of text under a field labeled "suicide risk estimation" in medical records. However, this approach may not effectively address variability in clinician assessment and documentation practices. It could inadvertently shift focus away from other important patient concerns if the time for assessment is limited. Another approach could involve measuring clinician documentation of standardized risk factors in electronic medical records. This approach may be practical and feasible, addressing specific knowledge deficits but might overlook other critical factors. Suicide and aggression risk assessments often overlap in clinical practice. Ideally, measures to improve specific health condition assessments should be paired with measures to enhance effective treatment utilization.

There is a growing emphasis on mitigating cognitive biases and errors in medical decision-making.[17,18] A recent systematic review

of cognitive biases linked to medical decision-making highlighted the anchoring effect and availability biases as strongly associated with diagnostic inaccuracies.[19] The availability bias refers to the inclination to rely on readily available information,[20] while the anchoring effect denotes our tendency to give undue weight to the initial information received about a subject.[21] The significance lies in how the utilization of risk assessment tools, despite their limited efficacy, may potentially influence clinical decision-making by introducing such biases and cognitive errors, thereby compromising statistical and logical judgment.[22]

Conclusion

In conclusion, the landscape of suicide research and prevention is marked by both significant progress and persistent challenges. Despite being a top priority, the field faces obstacles that hinder the development of effective strategies to address this pressing public health issue. The fragmentation within suicide research, stemming from disjointed efforts among disciplines, underscores the need for greater collaboration and interdisciplinary approaches. By fostering partnerships between psychologists, psychiatrists, sociologists, public health experts, and other relevant fields, we can leverage diverse perspectives and methodologies to develop a more comprehensive understanding of suicide risk factors and interventions.

Moreover, the nosological issues surrounding the classification of suicidal behaviors highlight the importance of standardizing terminology and diagnostic criteria. Consistency in definitions and measurement tools is crucial for facilitating cross-study comparisons and synthesizing findings across different research endeavors. Addressing gaps in SRA requires a nuanced understanding of the multifaceted nature of suicide risk. By incorporating cultural considerations, socioeconomic factors, access to means, and recent life events into risk assessment protocols, we can improve the accuracy of risk identification and tailor interventions to individual needs.

The efforts to standardize training and ensure competency among professionals involved in suicide prevention are essential for delivering high-quality care and support. Continuous education and skill development programs can equip professionals with the knowledge and tools necessary to effectively assess, intervene, and support individuals at risk of suicide. Integrating findings from diverse research streams and translating them into practice is paramount for advancing suicide prevention efforts. By fostering collaboration between researchers and practitioners, we can bridge the gap between theory and application, leading to more evidence-based and culturally sensitive prevention strategies.

Considering these challenges, a coordinated and dynamic approach to suicide research and prevention is imperative. By embracing multidisciplinary collaboration, standardizing practices, and integrating emerging knowledge, we can enhance our ability to identify at-risk individuals, deliver timely interventions, and ultimately reduce the tragic toll of suicide on individuals, families, and communities.

Terms and Abbreviations

Suicidal Thoughts: Considerations about ending one's own life.

Suicide Attempt: Engaging in a self-directed, potentially harmful act with the intention of dying. The attempt may or may not cause injury and could be stopped by the individual or by someone else.

Suicide Intent: The personal belief and wish that a self-harmful act will result in death.

Suicide Means: The tool or object used to cause self-harm with the intention of dying.

Suicide Method: The specific technique or process used to attempt self-harm with the aim of dying.

Suicide Plan: The detailed outline including the method, means, time, place, or other specifics for committing self-harm with the intent to die.

Suicide: Death resulting from a self-inflicted harmful act with the intent to die.

Disposition Toward Suicidal Threat: An individual's inclination to present a suicide risk due to factors such as psychological, social, or biological influences.

Disposition Toward Suicidality: An individual's inclination toward thoughts and actions associated with suicide.

Suicidal Impulse: A sudden, overwhelming urge to end one's life.

Demoralization as a Suicidal Precursor: Extended feelings of hopelessness, loss of meaning, and social isolation, combined with intense psychological distress, which may lead to suicidal thoughts or actions.

Lethality of Suicide Attempt: The degree to which a suicide attempt is likely to result in death, often depending on the method and means used.

Suicide Risk Factors: Characteristics or conditions that increase the likelihood of an individual attempting or completing suicide, such as mental illness, substance abuse, and stressful life events.

Protective Factors Against Suicide: Factors that reduce the likelihood of suicide, such as strong social support, effective mental health care, and coping skills.

Suicide Cluster: A series of suicides that occur closely together in time or location, often within a community or social group.

Copycat Suicide: A suicide that occurs after another suicide is publicized, potentially triggering others to imitate the act.

Suicidal Communication: Any form of verbal or non-verbal communication indicating an individual's intent to end their life, such as threats, notes, or online posts.

Suicide Contagion: The phenomenon by which exposure to suicide, particularly in media or within a community, increases the likelihood of suicide among others.

The Werther Effect refers to the observed increase in suicide rates that often occurs after highly publicized reports of suicides, particularly those involving celebrities or other prominent public figures.

Survivor of Suicide Loss: An individual who has lost someone to suicide, often dealing with unique grief and trauma.

Means Restriction: Efforts to limit access to the tools or methods that could be used in a suicide attempt, such as firearms, medications, or high places.

Trauma-informed journalism is relatively new, even though covering traumatic events—such as natural disasters, sexual assaults, homicides, mass shootings, wars, and suicidal acts—has long been a central aspect of journalistic work.

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