Invited Editorial

Suicide: Some Innovative Trends, Breakthroughs, and Challenges Ahead

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Suicide is a tragic culmination of the interaction of a wide array of factors, including biological, sociocultural, environmental, and psychological causes. Suicide claims approximately 1 million lives worldwide every year; despite this suicide receives relatively less attention than it deserves, resulting in a lack of emphasis in research and fragmented preventive approaches. Understanding and utilizing the correct terminology in regard to suicide is important. This includes definitions for suicide, suicidal behavior, suicide attempts, suicidal ideation (SI), suicide loss survivors, attempt survivors, nonsuicidal self-injurious (NSSI) behavior, and commonly unacceptable terminology. The term survivor in the suicide prevention field is not used in the same way as other fields, for example, cancer survivors. Rather, the term refers to individuals who have lost loved ones, colleagues, and friends to suicide. Instead, individuals who have survived their own suicide attempts refer to themselves as individuals with lived experience. Individuals demonstrating NSSI behavior, while they may not be suicidal in the moment, they are exhibiting such behavior although half of this population will attempt to take their own lives at some later point in time.

Unacceptable terminology is an issue; for example, the term suicidality is particularly problematic, as it often applies to a broad range of concepts and is too vague for a definition of an individual's behavior. For the public at large, the cultural shifts in advocacy have created a movement away from pejorative terminology, such as "failed" or "successful" attempts, as they indicate valence toward the individual's actions that are in direct opposition to our intended conversation. As an additional point, the phrase "committed suicide" is not one that the suicide prevention community utilizes anymore, as it is indicative of historically religious or moral implications instead of health-driven outcomes.

From the perspective of the clinician, it is important to understand that risk factors do not always reveal themselves immediately. Suicide risk changes overtime. It is important to continually "tune in" to individuals, especially during times of change, which can help to identify individuals at risk throughout their care, not just when they are exhibiting clear SI. A good understanding of and highlighting protective factors specific to the patient is important. While dealing with patients through the lens of what makes them special or unique can provide a reminder to patients about their importance, their value, and the positive in their lives.

Research shows that suicide is multifactorial. Factors discussed that elevate suicide lifetime risk includes personality disorders/traits, substance use/abuse, impulsivity, access to lethal means, suicidal behavior, life stressors, psychological vulnerability, family history, hopelessness, neurobiology, and serious or other psychiatric illnesses. It is important to note that there is a difference between risk factors, which endure over time, and warning signs that may signal imminent suicide risk. A further discussion of specific warning signs, coalescing around talk, behavior, and mood changes follows.

Routine screening for suicide risk and helping those at risk receive appropriate care may help to prevent many suicide deaths. However, we assume that screening accurately identifies those at imminent risk and that patients who are suicidal are willing to seek treatment. Further, the assumption is made that established interventions are effective. None of these assumptions are certain, but all three have the potential to lower suicide rates with success likely to be greatest when all three are implemented consecutively.

Certain medications have been found to have antisuicidal effects independent of their action on the primary psychiatric

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Received : 25 November 2019 **Revised :** 29 November 2019
Accepted : 29 November 2019 **Published :** 16 December 2019

Access this article online

Quick Response Code:

Website: www.amhsjournal.org

DOI: 10.4103/amhs.amhs_160_19

How to cite this article: Pai NB. Suicide: Some innovative trends, breakthroughs, and challenges ahead. Arch Med Health Sci 2019;7:151-3.

disorder. Examples are lithium in mood disorders, clozapine in psychosis, and ketamine for mood disorders. However, engaging individuals who are suicidal to seek and remain in treatment is challenging. Many refuse the care altogether; others drop out after only a few sessions. Moreover, most of those who die by suicide did not receive any mental health care in the months before their death.

Cognitive behavior therapy and dialectical behavior therapy are some of the evidence-based suicide-specific psychosocial treatments reducing suicidality in certain populations. They are effective in reducing the onset of SI, posttreatment suicide attempts and reattempts, hospitalizations, and emergency department (ED) visits apart from the medical risk of self-injurious acts.

Stabilization-oriented interventions such as safety planning and crisis response planning are increasingly popular, as they have been shown to result in significantly fewer suicide attempts, lower SI, and greater treatment engagement. These include, to identify personalized warning signs and to determine internal coping strategies that distract from suicidal thoughts and urges. To identify family and friends who are able to distract from suicidal thoughts and urges. Further to identify individuals who can help to provide support during a suicidal crisis including a list of mental health professionals and urgent care services that can be contacted during a suicidal crisis.

Whereas we have the information needed to identify those patients most at risk for suicide and effective screening tools; these assessments do not take place routinely. This is proven by the statistics that within 1 month of a suicide attempt every three out of five individuals had a health-care visit of any type, and two out of five of these had a mental health visit. Several key barriers contribute to this gap. First, until recently, suicide care has not been seen as a core responsibility of health-care settings. This unfortunate and unacceptable trend is rationalized in many ways, such as "of course suicide is a tragedy, but there is really nothing we can do." Second, myths about suicide have been accepted as true in health-care settings. For instance, one widespread myth is that asking people about suicide encourages them to complete it. This myth contributes to a failure to ask about suicide risk. Third, most health-care professionals are not aware of newly developed brief interventions for suicide, leading to the assumption that they should not ask about suicide, because there is nothing practical that can be done in ordinary health-care settings.

The reasons for this gap between science and practice are many. There is an absence of standardized assessment protocols across health settings. Nonmental health clinical professionals are concerned about their ability to find treatment services for individuals who are at risk. There is also a general lack of awareness and acknowledgment of "critical assessment windows," which are the time periods when these people are the most at risk of suicide ideation. These time windows include the week after a visit to the ED for substance abuse, the week after discharge from psychiatric hospitalization, and the 1st weeks after starting an antidepressant. These are crucial time periods but there is no standardization of screening practice, which results in missing the opportunity to intervene. Frequently, when someone dies by suicide, we hear "he fell through the cracks." Health-care settings are well positioned to help prevent this from happening. However, care for people with suicide risk is highly variable, common gaps in care for individuals at risk of suicide do exist, and recommendations are needed to close these gaps.

Current practice for people who acknowledge suicidal thoughts or feelings often revolves around a decision of whether to hospitalize them or send them home, perhaps with a future appointment for mental health treatment. Unfortunately, neither of these options often adequately address the risks of suicide or the needs of suicidal people. Inpatient care may keep people safe for the few days they are hospitalized. However, very brief stays are not long enough to get many suicidal people through their period of elevated risk, and they are often discharged while still in a state of elevated risk. In addition, hospitalization usually does not directly address suicidal thought patterns, relying on the hope that treatment for other psychiatric problems is sufficient. However, this may not be true. As a result, suicide rates for the days and weeks immediately after hospitalization are extremely high.

In view of the diversity and heterogeneity of epidemiologic patterns and risk or protective factors for suicide, prevention programs should be closely examined to determine whether they are directly relevant to local situations. Given the limited resources provided, understanding and implementing suicide prevention programs are extremely challenging and rewarding in terms of making a considerable impact on preventing a large number of suicides.

What Can We Do?

Timely supportive contacts (such as calls, texts, letters, and visits) should be standard for people with significant suicide risk after acute care episodes or when ongoing services are interrupted (e.g., a scheduled visit is missed). These caring contacts with high-risk individuals have been demonstrated to be effective in reducing suicide.

Promising Biomarkers to Predict Suicide Risk

Predicting suicidality (SI, suicide attempts, and suicide completion) in individuals is a difficult task. Widespread use of risk prediction tests as a part of routine or targeted health-care assessments will lead to early disease interception followed by preventive lifestyle modifications or treatment. Given the magnitude and urgency of the problem, the importance of efforts to implement such tools cannot be overstated. Research newly reported in the Journal of Molecular Psychiatry[1] could help doctors to identify women who are most at risk for suicide, using biological markers that can be measured in the blood and a newly developed clinical assessment. van Heeringen and Mann[2] discuss the stress–diathesis theory of suicide, in

which a predisposition or diathesis interacts with stressful life experiences and acute psychiatric illness to cause suicidal behavior. The theory explains why only a small minority of individuals are at risk of taking their own lives after exposure to such stressors. Postmortem and neuroimaging studies have identified structural and functional changes in the brains of individuals with a history of suicidal behavior that may affect the regulation of mood, response to stress and decision-making, and these include biochemical deficits in serotonin function and the hypothalamic-pituitary-adrenal axis stress response. These abnormalities could be used in the future to develop biomarkers that may help predict who is at risk of taking their own lives and that may serve as a target for treatment.

Breakthroughs

Noting the rapid antidepressive effects of ketamine, the research has demonstrated its effectiveness in emergency room settings reducing SIs. A sustained decrease in SIs at 10 days postinfusion has also been reported.[3] Specific genetics risk factors for suicide can not be distinguished from coexisting psychiatric conditions; this has led researchers to study interactions among multiple genes. Comprehensively understanding epigenetic modifications of gene activity, in addition to identifying those genes linked to suicide risk could lead to more effective diagnostic tools that could, in turn, enable more effective interventions for those at highest risk.

Challenges Ahead

Despite the progress in suicide prevention globally, we still face numerous challenges. The accuracy and reliability of suicide statistics are an ongoing issue of concern in a considerable number of countries. Ongoing challenges include insufficient resources, ineffective coordination, lack of enforcement of guidelines, limited access to surveillance data on suicide and attempted suicide or self-harm, and lack of independent and systematic evaluations.[4] Many challenges remain; first, our ability to predict suicide is still not much better than chance, and although there has been a welcome focus on suicide prevention interventions (both at the public health and clinical level), many gaps in our knowledge remain. Finally, we are optimistic that the new developments and the field's determination to overcome the identified challenges will combine to save more lives across the globe.

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