Suicide prevention: reflections on progress over the past decade

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Interest in preventing suicides has increased greatly in recent years. In this Personal View, we consider the general global developments related to suicide prevention that have occurred in the decade since *The Lancet Psychiatry* was first published in 2014. We then review specific advances during this period, first, in relation to public health initiatives, and second, with regard to clinical developments. Finally, we examine some of the challenges that currently confront individuals and organisations responsible for designing and implementing suicide prevention measures.

Introduction

WHO estimates that over 700 000 people globally die by suicide every year and emphasises the need for countries to have policies for suicide prevention.[1] This need is underlined by the huge burden of suicide for family members, friends, work colleagues, and other individuals who are close to those who die.[2] Since its inception in 2014, *The Lancet Psychiatry* has had a strong focus on research on suicide and self-harm, with 134 articles with the term suicide in the their title published between 2014 and the end of 2023. This focus has also been reflected in the editorial team's support for a *Lancet Psychiatry* Suicide Symposium—part of the Annual British Isles Research Workshop on Suicide and Self-Harm held by the Centre for Suicide Research at the University of Oxford. This Personal View is a review of the progress that has been made over the past decade in relation to suicide prevention. We consider general developments concerning suicide prevention activities, specific suicide prevention initiatives, and relevant clinical advances. We also discuss ongoing and probable future challenges.

General developments

In 1996, the UN encouraged countries to develop national suicide prevention strategies.[3] The number of nations with such policies has increased markedly in the past 10–15 years. This increase probably in part reflects the UN Sustainable Development Goal to reduce the number of deaths from non-communicable diseases (including suicide) by a third by 2030[4] and the WHO target of reducing the global suicide rate by a third by 2030.[5] We are aware of 22 countries that had such strategies in 2014, whereas by 2023, this number had increased to 45. These strategies, although often differing considerably in their emphasis, usually include a combination of public health and clinical approaches. In practice, the biggest reductions in suicides usually result from public health initiatives. Evaluation of the possible effect of countries having national suicide prevention strategies on suicides has proved challenging, including assessing whether specific components within strategies have been effective.[6,7] However, encouragingly, global estimates of annual numbers of suicides have decreased in recent years, with WHO statistics showing a reduction in global age-standardised suicide rates from 11·0 per

100 000 population in 2010 to 9·0 per 100 000 in 2019.[8] There have, however, been exceptions to these positive trends, including some countries experiencing rises in suicides among young people, especially among young women.[8,9]

One novel development has been the introduction of World Suicide Prevention Day on Sept 10, an initiative that began in 2003 and has become more prominent in recent years. It is coordinated by the International Association for Suicide Prevention. World Suicide Prevention Day has the aim of increasing public awareness of suicide and its prevention, focusing particularly on how people in distress can get help and how people who are concerned about someone can support them.

Historically, suicidal acts were considered criminal behaviour in many countries. This was the case in the UK until 1961. Over time, an increasing number of countries have decriminalised suicide. During the past 10 years, suicide has been decriminalised in, for example, India, Pakistan, and Singapore. However, several countries retain a criminal position on suicide (eg, Bangladesh, Uganda, and Qatar). The criminalisation of suicide is clearly a very important issue for humanitarian reasons. It is also highly important for suicide prevention because when suicide is criminalised it is likely to have profound effects on the likelihood that people who are experiencing suicidal thoughts will seek help, on the provision of help and, of course, on enthusiasm for developing national (or local) suicide prevention strategies.

In the past 6–8 years, there has been a focus on more rapid means of obtaining data on suicides. This focus is partly to address the delay in most countries in official suicide statistics becoming available, due to the time taken to investigate potential suicides by coroners or equivalent officials, and the complexity of the subsequent processes for assembling and reporting the data. This assembly of near real-time data on suicides has mostly been based on data collection by agencies dealing directly with unexpected deaths, especially police and medical officials, sometimes in collaboration with coroners or equivalent agencies.[10] When such agencies are not usually responsible for final decisions about suicide verdicts, deaths thought to be due to suicide are referred

to as suspected suicides or probable suicides.[10,11] The value of having such data was highlighted by the COVID-19 pandemic, at the beginning of which there were some dire predictions about its potential effect on suicides,[12] raising the possibility that public health measures to contain the impacts of the pandemic would be overwhelmed. Because of the difficulty of using official statistics to assess whether this possibility was true, the availability of near real-time data provided a basis for an international study[13] that showed that the COVID-19 pandemic did not have the feared impact on suicides across 21 (mostly high-income) countries during the initial months of the pandemic; indeed 12 countries saw a decrease in suicides in this period. With similarly sourced data, but for 33 countries (again mostly high-income), a second study[14] showed a similar pattern during the first nine to 15 months of the pandemic, with a few exceptions in specific sex/age groups. The development of (near) real-time surveillance of suicides has been an important step that is likely to have considerable benefits for future research and policy evaluation, and the identification of short-term increases in suicides and local suicide clusters.[11] Although for some countries, such as Japan, the data represent official suicide figures, unpublished evidence from other countries for which this is not the case indicate good concordance between real-time and official suicide statistics.

A major advance in both policy development and research on suicide prevention over the past decade has been the involvement of people with lived experience of suicide or self-harm. This involvement includes input to the conceptual thinking behind projects, the actual design of work, ongoing monitoring of progress, and consideration of results and authorship on outputs from projects. Particularly important contributions of people with lived experience have been to the content of therapeutic interventions and also the development of components of evaluation of effectiveness that are most relevant to affected individauls.[15] An example of the latter might be encouragement in a trial of treatment for individuals who self-harm to focus less on repetition of self-harm as an outcome and more on measures of wellbeing and satisfaction with life.[16] Involvement of people with lived experience should, when possible or relevant, include representatives of groups who are at particular risk of self-harm or suicide, such as people who identify as lesbian, gay, bisexual, transgender or queer,[17] ethnic minorities, and first nation people.[18]

Specific suicide prevention initiatives

One of the most effective approaches to preventing suicide is restricting access to specific methods for suicidal acts, especially those that are commonly employed (panel 1).[19,20] In several low-income and middle-income countries (LMICs), suicidal acts frequently involve ingestion of pesticides, with deaths often due to use of highly toxic pesticides. Such was the extent of this involvement that in 2007, pesticide ingestion was estimated to contribute approximately 30% of global suicides.[21] In recent years, removal of more toxic pesticides from sale has had major beneficial effects on population levels of suicide[22] (eg, since the late 1990s in Sri Lanka[23] and since 2006 in China[24]),and has probably been a major contributor to the decrease in the WHO estimate of global suicides rates noted earlier. Although such initiatives can clearly be effective, method substitution can limit their effectiveness, especially if emerging methods also have high case fatality rates. This might have been the case in India, where reduction of more toxic pesticides was associated with a very large decrease in rates of suicide involving pesticide ingestion, but a major increase in rates of suicides by hanging.[25]

Prevention of suicides that occur in public places has long been a focus of attention, although these constitute fewer of overall suicides (10–15%). This focus has been partly due to the considerable preventability of many such deaths and because of the impact these deaths can have on the individuals who witness them. During the past decade, the erection of barriers on bridges and cliffs popular for suicide by jumping has resulted in fewer deaths from those sites, with only slightly increased use of other such sites in the same areas,[26,27] and increases in help-seeking when this has been an added component of the initiatives.[27] There has also been increased attention to prevention of suicides on rail networks. Data from Japan showed that installation of platform screen doors on a rail system reduced suicides at the platforms by 76%.[28] However, such installations are expensive, especially if their introduction to older rail systems is considered, and are largely only applicable to underground subway systems. In the past few years, attention has also been paid to training railway staff to recognise people in distress and to offer help.[29]

> **Panel 1: Topics covered in relation to public health measures and clinical developments**
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> **Specific public health suicide prevention initiatives**
> - Restriction of access to methods for suicide
> - Prevention of suicide in public places
> - News reporting of suicides
> - Positive messaging about coping with adversity
> - Social media influences on suicidal behaviour
> - Detection and management of suicide clusters
> - Prevention programmes in educational settings
> - Help for people bereaved by suicide
>
> **Clinical developments**
> - Therapeutic risk management and safety planning
> - Interventions for people who have self-harmed
> - Increased recognition of neurodevelopmental disorders associated with suicide
> - Specific treatments for people who might be at risk of suicide: ketamine, lithium, and electroconvulsive therapy

Economic downturns, unemployment, and poverty can have major negative influences on suicide rates. Conversely, economic policies aimed at providing support for people most affected by these influences can help counter their effects on suicide rates.[30] In Brazil, a cash transfers programme (Bolsa Família) was introduced as a suicide prevention measure in 2004,[31] allowing families living below particular income thresholds to receive supplementary income (with adherence to some family public health requirements). The programme was evaluated for 12 years until 2015 and showed that people receiving support through the scheme had less than half the risk of suicide compared with people with similar characteristics but not recieving support.[31] This example, and others,[32,33] show the importance of governments' economic policies in relation to suicide prevention.

Some types of news reporting on suicides are well recognised as having deleterious effects that can lead to further suicides, especially when the reporting is dramatic or prominent, details the suicide method used, or concerns a celebrity.[34] Most national suicide prevention strategies include emphasis on reporting suicides in ways that are less likely to contribute to further deaths. These initiatives have been accompanied by the production of guidelines for the media, such as the media resource from the International Association for Suicide Prevention and WHO.[35] Guidelines appear to have resulted in improved reporting.[36–38] However, reporting on suicides in some countries—especially in LMICs—remains poor.[39,40]

In the past decade, increasing attention has been paid to positive aspects of reporting that might discourage suicide. In particular, stories of hope and recovery have been promoted, with some evidence of their effectiveness for suicidal ideation.[41] The potential effect of broadcasting messages that encourage people who are suicidal to seek help and messages that indicate that recovery from crises is possible has been powerfully shown in the USA, through increased use of a national suicide helpline and reduced national suicide numbers following extensive broadcasting of a hip-hop song by Logic in 2017 and 2018.[42] The song included a story of recovery from a suicidal crisis and had the helpline telephone number as its title.[42]

The proliferation of social media has had major relevance to both promotion and prevention of suicide and self-harm. Evidence has accumulated showing that portrayal of suicidal acts online can influence similar behaviour in others,[43] with imagery related to specific suicidal acts being an important mechanism.[44] The power of social media also offers potential for suicide prevention, such as through providing relevant information and promoting safety mechanisms. Since 2018, #chatsafe guidelines have been developed, which aim to educate young people on how to safely communicate about suicide on social media. These have been shown to improve individuals' confidence in communicating about suicide online and responding to someone who is suicidal.[45,46] Specific interventions for people who have sought suicide-related information online offer another potential approach. Single-session interventions delivered through Tumblr for these individuals have been shown to reduce feelings of hopelessness and increase a wish to stop self-harm in such young people.[47] Such interventions have the advantage of potentially being able to influence large numbers of individuals and, with appropriate, culturally sensitive modifications, of being applicable in LMICs. A further approach is to use official mechanisms to prevent transmission of potentially dangerous material online and to encourage closer collaboration between online social media companies and national suicide prevention organisations, as was recently implemented through the 2023 Online Safety Bill in the UK.[48] Evidence of the impact of such developments is awaited.

There is increasing evidence that suicides might occur in clusters, especially in young people.[49] Traditionally, such occurrences have mainly been considered in terms of time-and-space or point clusters, in which multiple suicides occur over a short period of time in specific locations, either in a community or within institutions (eg, schools and universities, psychiatric units, and prisons). However, particularly with the advent of social media, temporal clustering of suicides in geographically separated locations (even in different countries), referred to as mass clusters, has become more common. There has been considerable development of guidance on addressing clusters over the past decade.[50,51] Although such guidance seems to have improved the organisation of responses to suicide clusters, there is little evidence that this has prevented suicides, especially those occurring in mass clusters (for which organisation of a response can be extremely challenging).

The past decade has also seen an increasing focus on the introduction of suicide prevention programmes in educational settings, particularly schools. These initiations have partly been based on the fact that suicides and self-harm occur in these settings, but also on the potential longer-term benefits of such programmes. Some programmes have had an emphasis on increasing mental health awareness and the need for both self-care and trying to help others who might be facing difficulties. Evidence of effectiveness has been found for the Youth Aware of Mental Health programme in terms of reducing suicidal thinking and self-harm.[52] Other programmes have been more specifically focused on suicide. For example, Signs of Suicide, in which students learn about suicide warning signs and are trained to seek help from adults either for themselves or for friends with such warning signs. Attendance at these classes has been reported as being followed by a reduction in "suicide attempts".[53]

The past 10 years have seen greater recognition of the impacts of suicide on the family members, friends, and

colleagues of people who have died,[54] with more awareness of the increased suicide risk in individuals who are very directly affected.[55] This awareness has resulted in considerable developments in several countries in terms of provision of help and support for people who are bereaved. In the UK, for example, police attending deaths likely to have been due to suicide will usually give family members and others copies of a supportive resource known as Help is at Hand.[56] When relatives and others wish for it, the police will also supply contact details for local bereavement support organisations with special facilities for people bereaved by suicide. Some will facilitate actual referral to such organisations. However, despite evidence for the benefits of bereavement support,[57] we do not know whether such interventions decrease the risk of suicide in bereaved individuals.

Clinical developments

Suicide is strongly associated with mental disorders,[58] and a substantial proportion of people who die by suicide are psychiatric patients who are currently in care or have been in care within the previous 12 months.[59] However, during the past decade, there has been increasing recognition that predicting which individual patients with mental disorders are likely to die by suicide, whether by clinical judgement or the use of prediction scales, is nearly impossible.[60] This difficulty also applies to individuals who have self-harmed.[61] There are several reasons why. First, the incidence of suicide is low, even in high-risk groups. Second, the predictive power of variables, both alone and in combination, is poor. Third, the majority of suicides occur in patients rated as being at low or moderate risk.[62] For these reasons, policies on clinical care in the context of suicide prevention have been shifting in emphasis from focusing on patients who are assessed as being at greater risk (often erroneously) to ensuring that a combination of therapeutic approaches likely to improve patients' problems and individualised means for crisis management are delivered to all patients. This approach doesn't mean ignoring risk, but includes, first, focusing attention on addressing patients' immediate and longer-term problems and, second, safety planning.[63] The latter has been a particularly notable development over the past decade.[64] Safety planning includes a collaborative planning process between clinicians and patients resulting in clear and modifiable plans to assist patients if they start to experience a crisis that might be developing. Accumulating evidence from trials in both psychiatric services and emergency department settings indicates that safety planning can reduce suicidal behaviour.[65–67]

An important relationship exists between non-fatal self-harm and subsequent suicide, for which there has been increased evidence in both adults[68] and children and adolescents.[69] This evidence has contributed to greater attention in suicide prevention strategies being placed on clinical management of individuals presenting to hospital following self-harm, including their aftercare.[61] This attention includes efforts to ensure that as many such patients as possible receive a psychosocial assessment of their problems and needs by a mental health professional. Effective therapeutic interventions delivered as part of aftercare have been identified on the basis of systematic reviews of results of trials. In adults, this evidence has focused particularly on short-term provision (ie, 4–10 sessions) of cognitive behavioural therapy-based interventions, which was shown in a systematic review[70] to reduce repetition of self-harm and also depression, hopelessness, and suicidal ideation. However, many countries face challenges in implementing this type of therapy, partly due to shortages of appropriately trained staff. In the same systematic review,[70] dialectical behaviour therapy for people with a history of multiple episodes of self-harm was found to reduce the frequency of repetition of self-harm. Evidence of effective therapeutic interventions in children and adolescents is less conclusive, except for dialectical behaviour therapy for adolescents.[71] However, this therapy is only indicated for a subgroup of young people, particularly those who repeat self-harm in the context of emerging personality difficulties.

The association of suicidal thoughts and behaviours with some neurodevelopmental disorders has received considerable attention. These disorders include autism[72] and ADHD.[73] Although substantive evidence for methods of prevention of suicidal behaviour in these disorders is awaited, there is early support for a reduced occurrence of suicidal acts in individuals with ADHD who are receiving medications commonly used for this condition.[74]

Considerable attention has been paid to the potential antisuicidal effects of treatment with ketamine, particularly in patients with suicidal ideation in the context of depression. There is evidence of short-term beneficial effects on suicidal ideation of ketamine administered intravenously.[75,76] Additionally, evidence from uncontrolled studies suggests that once weekly oral ketamine when given over a month might have a sustained positive effect on suicidal ideation.[77] However, whether this effect applies to suicidal behaviour is unknown.

There has been longstanding interest in the potential role of lithium in reducing risk of suicide and self-harm in people with bipolar disorder.[78] Two studies based on national registry data, one from Sweden[79] and the other from Denmark,[80] have supported the role of lithium as an antisuicidal agent compared with other mood stabilisers (while also highlighting its general positive effects on progress of the disorder as assessed by relapse necessitating psychiatric hospital admission).[80] However, by contrast, general use of lithium for people with bipolar disorder has declined, at least in high-income countries,[81,82] suggesting that this potential means of reducing the high risk of

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Panel 2: Challenges to suicide prevention

- Inequalities between suicide prevention activities in higher-income and lower-income countries
- Evaluation of suicide prevention activities, including rarity of outcome, difficulty of conducting controlled studies, and influence of other major factors, such as economic downturn or the emergence of dangerous methods for suicidal acts
- Inadequate attention to public health measures
- Neglect of key influences on suicide (eg, alcohol misuse, domestic violence and abuse, gambling, and loneliness)
- Inaction around suicides by firearms
- Emergence of novel suicide methods
- Impact of climate change and mass migration

suicide in patients with bipolar disorder might not be being fully used.

Electroconvulsive therapy (ECT) is of clear benefit for people with treatment-resistant depression.[83] But evidence that it can prevent suicide has been scarce, perhaps in part due to the difficulty of conducting relevant trials and the rarity of suicide even in such a high-risk group of patients. However, in a 2022 Canadian retrospective cohort study of hospitalised patients with depression, in which propensity score matching was used to obtain matching with control patients, the risk of suicide in patients receiving ECT was significantly reduced.[84] This result provides support for the belief that many psychiatrists hold that ECT has a role in suicide prevention in severely depressed patients.[83]

Challenges

Although there have clearly been some important advances in knowledge about suicide and in suicide prevention activities during the past 10 years, several major challenges remain (panel 2). Perhaps the most important is the inequality regarding suicide prevention activity between low-income and high-income countries. Although an estimated 77% of global suicides occur in LMICs,[8] suicide prevention policies within these countries are somewhat sparse. This situation seems to be improving, however. If some of the contributors to suicide in these countries were tackled, major gains could be made. The impact of reducing the availability of highly toxic pesticides provides one good example.

Evaluation of suicide prevention activities presents other major challenges.[85] One is the relative infrequency of suicide compared with more frequent related phenomena, such as self-harm or suicidal ideation. This infrequency means that to be meaningful, studies usually must be large. Additionally, conducting investigations with parallel control groups is difficult and often impossible when suicide is the outcome measure because of the size of the population required. Therefore, reliance is often placed on before-and-after studies, in which, for example, the occurrence of suicides after the introduction of an initiative (eg, a barrier on a bridge popular for suicide or withdrawal of toxic pesticides) is simply compared with the occurrence beforehand. Comparisons can, when possible, also be made with occurrence data for suicides in other similar locations over the same period as that of the initiative. Even then, the periods involved in the comparisons often have to cover several years in order to be able to detect an effect. A related approach, especially when the occurrence of suicide has been changing over time, is to project timelines on the basis of data before the introduction of an intervention to the period after the introduction and then compare the results with the actual temporal occurrence of suicides. This approach was used to assess two initiatives to try to prevent suicides by poisoning in the UK, the first being the withdrawal of co-proxamol, a particularly toxic analgesic,[86] and the other the introduction of smaller packs of paracetamol.[87]

Added complexities in the evaluation of individual suicide prevention initiatives include that they usually do not occur in isolation from other prevention activities and that temporal changes in suicide rates are influenced by a wide range of other and often powerful factors (eg, disruptions to national economies). But opportunities to identify important suicide prevention influences can also sometimes result from major changes that occur for entirely unrelated reasons. One such example was the very large beneficial effect seen on suicides in the UK in the 1960s and 1970s when the national gas supply gradually changed from toxic coal gas to non-toxic North Sea gas, resulting in a reduction in national suicide rates by approximately a third. Before this initiative, use of domestic gas was the most frequent method of suicide in the UK.[88] A more recent example was the removal of railway level crossings in Victoria, Australia, beginning in 2015, to improve transport performance, which resulted in reduced suicides around these sites compared with sites where level crossings remained.[89] These serendipitous effects can influence future suicide prevention activities.

Another challenge is that the primary focus in some national suicide prevention strategies is on clinical initiatives. Although these initiatives are undoubtedly important, the biggest shifts in suicide numbers come from effective public health policies, especially those aimed at improving nations' mental health, tackling major drivers of suicidal behaviour, restricting access to commonly used methods of suicide, and encouraging positive methods of coping with adversity. Yet there has been little attention paid to prevention related to some major public health influences on suicide. One example is alcohol misuse.[90] Recent evidence from Scotland for the benefits of a national minimum alcohol pricing policy on deaths[91] is an important indicator of a measure that could reduce suicides. Domestic violence and abuse is another major contributor to many suicides, especially

of women, including in both high-income countries[92] and LMICs.[93] Improvements in the social status of women, especially in societies where discrepancies in social standing between the genders are very marked, would probably make a major contribution to reducing suicides related to domestic violence and abuse. But more immediate initiatives, such as increased provision of support and, where necessary, alternative accommodation for individuals under threat and their children, could also contribute to reducing the number of suicides from this cause.

Over the past decade, the extent to which problems related to gambling influence many suicides, especially in men, has become more apparent,[94] with ease of access to online gambling sites being a likely contributory factor. Preventing individuals from accruing substantial debt from gambling through size of betting restriction initiatives and the provision of easily available help for people who recognise that their betting might be becoming unmanageable could help reduce some of the more severe effects of gambling on mental health, and hence reduce this important contribution to suicidal behaviour. Loneliness is a further important factor associated with suicide. In developing policies to reduce loneliness, differences in the probable links between loneliness and suicide risk according to gender, age, the presence of a psychiatric disorder, and personal circumstances need to be taken in to account.[95,96]

The increasing suicide rate in the USA runs contrary to the overall global trend. Over half of suicides in the USA in 2021 involved the use of firearms,[97] naturally raising the question of why limiting firearm ownership is not a national priority in the country. Commercial interests, cultural factors, and the influence of the firearm lobby are probably major explanations. However, viewed from outside the USA, this situation seems scandalous. The synthetic opioid crisis in the USA is a further probable contributor to the country's persistently high suicide rates, although distinguishing opioid misuse deaths from suicides can be challenging, raising the possibility that some deaths recorded as accidental might in fact be suicides.[98]

Another challenge reflecting method availability is the emergence of novel methods of suicide, especially when these are promoted via the internet or traditional media.[99] National suicide prevention policies should encourage vigilance for such developments and efforts (including international collaboration) to mitigate their effect.

There are of course other probable contemporary contributors to population suicide rates, including the impacts of climate change and mass migration—themselves strongly inter-related. Both these growing factors are likely to contribute to feelings of despair, especially when the impacts involve the loss of property, livelihoods, or hope for the future. Although addressing these potentially massive factors is perhaps beyond the capacity of national suicide prevention policies, it is nonetheless important that we carefully monitor how these factors might influence suicide.

Finally, one special future challenge to suicide prevention efforts might be the increasing inclusion of persistent, debilitating mental health problems in medically assisted death policies in some countries.[100] This inclusion is of course in marked contrast to suicidal behaviour being categorised as a criminal offence in other countries. There will probably be increasing debate about the extent to which implementation of medically assisted death interventions might be viewed as posing a challenge to the objectives of suicide prevention activities.

Conclusions

The past decade has been a time of increased attention to suicide prevention in many countries, with evidence that some initiatives have had substantial benefits. This trend should encourage greater attention to such activities internationally, especially in countries where suicide prevention has not yet been prioritised. Prioritisation might become more possible as more countries decriminalise suicidal behaviour and as evidence grows regarding effective prevention strategies. Given the complexity of factors that can contribute to suicide (including social, economic, interpersonal, mental health, and media influences), development of suicide prevention policies needs to include whole-of-government collaboration, as there are no departments for which input will not be appropriate. Specific suicide prevention strategies must also crucially be carefully evaluated in terms of both implementation and effectiveness. Although the latter can be particularly challenging, it is highly important, not only in terms of establishing whether specific strategies in a country have resulted in lives saved, but also in terms of helping illuminate what strategies might be effective in other countries. Experience, including during the past decade, has also highlighted the fact that new challenges to suicide prevention are very likely to arise and that planning of prevention activities therefore needs to be a continuous process, with ongoing careful monitoring of evolving trends and thoughtful development of potential prevention initiatives.

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