



Gone Too Soon: priorities for action to prevent premature mortality associated with mental illness and mental distress

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Globally, too many people die prematurely from suicide and the physical comorbidities associated with mental illness and mental distress. The purpose of this Review is to mobilise the translation of evidence into prioritised actions that reduce this inequity. The mental health research charity, MQ Mental Health Research, convened an international panel that used roadmapping methods and review evidence to identify key factors, mechanisms, and solutions for premature mortality across the social–ecological system. We identified 12 key overarching risk factors and mechanisms, with more commonalities than differences across the suicide and physical comorbidities domains. We also identified 18 actionable solutions across three organising principles: the integration of mental and physical health care; the prioritisation of prevention while strengthening treatment; and the optimisation of intervention synergies across social–ecological levels and the intervention cycle. These solutions included accessible, integrated high-quality primary care; early life, workplace, and community-based interventions co-designed by the people they should serve; decriminalisation of suicide and restriction of access to lethal means; stigma reduction; reduction of income, gender, and racial inequality; and increased investment. The time to act is now, to rebuild health-care systems, leverage changes in funding landscapes, and address the effects of stigma, discrimination, marginalisation, gender violence, and victimisation.

Introduction

Successful global efforts to reduce mortality from infectious and chronic diseases have increased life expectancy from approximately 52 years in 1960, to approximately 72 years in 2020,¹ yet these efforts have largely failed to address premature mortality from suicide and from the effects of physical comorbidities associated with mental illness and mental distress.² People with any mental illness have shorter life expectancies than those without, by 10·2 years for men and 7·3 years for women.³ The COVID-19 pandemic has exacerbated this disparity.⁴ Although the age-standardised suicide rate decreased globally by 36% between 2000 and 2019,⁵ and overall did not increase in the context of the pandemic,⁶ suicide still claims more than 703 000 deaths annually and remains among the top 20 causes of death. Importantly, low-income and middle-income countries (LMICs) are estimated to bear at least 80% of the global prevalence of mental health conditions and suicide.⁷ Advances to reduce mortality gaps have been hindered by insufficient knowledge, gaps in evidence synthesis, and inadequate implementation, exacerbated by the effects of stigma and discrimination.⁸

Suicide and premature deaths from physical comorbidities associated with mental illness are often considered separately, as they tend to differ in time course (acute vs chronic), modes of intervention (prevention vs treatment), and effect (immediate vs cumulative). However, we chose to address both suicide and other premature deaths together to test the presence of overlap in the factors driving each. Indeed, when causes are shared, solutions might leverage synergistic effects for both sources of premature mortality. We also recognise that suicide can

occur in the context of mental distress (defined as an individual's self-reported mental health complaints and symptoms) rather than mental illness, an important distinction that draws attention to the social, cultural, biological, and psychological risk factors and mechanisms associated with suicide and risk for mental illness itself.

The purpose of this Review is to mobilise the translation of evidence into prioritised actions to reduce premature mortality by identifying key causes, gaps in knowledge, and existing or promising solutions. Convergent challenges to human welfare intensify pressing needs to rebuild health-care systems, leverage changes in funding landscapes, and address public concern for mental health and the stigma associated with mental illness and suicide.^{9,10} The actions outlined here complement the WHO World Mental Health report¹¹ and extend the WHO Live Life implementation guide on national suicide prevention strategies.¹² Our approach is integrative and pragmatic, seeking out key mechanisms, factors, and solutions that can be delivered efficiently with potentially synergistic benefits. We applied social–ecological and lifespan developmental frameworks,¹³ and we emphasised global inclusion and diversity to form an international working group from diverse disciplines and professions and people with varied lived and living experiences (panel 1). We employed roadmapping methods and a focused review of existing literature to identify key factors, mechanisms, and solutions.¹⁴

Methods

The S-Plan roadmapping method was used to identify and prioritise factors behind premature mortality in the

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Panel 1: Lived and living experience in Gone Too Soon

In the Gone Too Soon framework, lived and living experience refers most specifically to direct first-hand experience of suicidality or mental illness, whether in the past or present. These experiences vary widely among people, depending on the severity of mental distress or illness and social circumstances (eg, laws, structures of care, family, and friends). Lived and living experience might also include people directly affected by suicide or mental illness (eg, losing a loved one or living with or caring for a family member or friend). Even more broadly, people with lived and living experience might include those whose jobs or service bring them into direct engagement with those who are suicidal or have a mental illness, such as carers, service providers, police and emergency workers, teachers, and religious or community leaders.

Suicide and mental distress or illness touch the lives of almost everyone, yet the experiences and perspectives of those most directly affected—whose lives are at stake—are often removed from the arena in which the knowledge, understanding, and policy aimed at supporting their needs are created. The exclusion of people with lived and living experience from defining their own experience and needs can exacerbate the stigmatising societal mores and dehumanising cultural attitudes that are too often experienced as social rupture, disempowerment, and marginalisation.

With these risks in mind, in Gone Too Soon we took a collaborative approach including a diverse range of people with lived and living experience across a range of areas studied. This approach was integrated with flexibility throughout the research process, rooted in the motivations, strengths, and support needs of our lived and living experience members. By embracing individual differences, welcoming all ideas, and valuing each contributor for their knowledge and skills (beyond solely their lived and living experience), we established a culture of working that valued all members equally, placing lived and living experience as part of the research team itself rather than something that ultimately remains external.

We hope that this approach yields more innovative, effective, and sustainable outcomes across research, intervention, and policy, which not only better meet the needs of those with lived and living experience, but also address the negative social and cultural conditions that they confront.

physical comorbidity and suicide domains as well as existing or promising solutions to tackle them now or in the next 5–10 years.^{14,15} The process involved collaboration among a multidisciplinary global team of academic, policy, clinical, and lived and living experience experts convened by the mental health research charity, MQ Mental Health Research (figure 1). The Steering Committee adopted a social–ecological framework with

four levels (structural, community, relationships, and individual), formulated target questions to address in that framework, and developed a worksheet to structure information gathering, discussion, and analysis (appendix pp 1–12). MQ Mental Health recruited a group of experts, and the experts, including the steering committee, then submitted completed worksheets, with questions concerning factors related to understanding the driving forces behind and the needs and current solutions to the two domains. Responses to the worksheets were integrated by IfM Engage to identify key themes and cross-cutting factors and solutions in each domain.

In the first online workshop, working groups in each of the two domains discussed the results from the pre-work, and ranked importance of cross-cutting factors. Next, steering committee members ranked the solutions proposed in the worksheets for the top-ranked factors using an impact–feasibility matrix (figure 1). Impact comprised two criteria: depth (extent of change likely to be realised in the medium term, ie, 5–10 years) and breadth (numbers of people expected to benefit in the medium term). Feasibility comprised three criteria: viability (likelihood to succeed at scale across contexts), funding interest (explicit funding sector interest in the type of intervention), and availability (whether established or highly promising evidence-based interventions or practices exist to address the target need). Steering committee members independently scored every solution for each criterion using a four-point scale (1=lowest, 4=highest). Scores were analysed to derive overall priority ratings for each solution. The second online workshop involved working groups in each domain, which considered and critically refined the top-ranked priority solutions, identifying pathways for roll-out, barriers to implementation, target age groups, and the degree of tailoring required for different populations. Synthesising the results revealed solutions to reduce mortality concurrently in both domains. We also selected key papers from publications identified by Gone Too Soon workshop participants as important for understanding and preventing premature mortality. When there were gaps, we searched PubMed and PsycINFO using depression, bipolar disorder, psychosis, schizophrenia, and suicide keywords. Primary substance use disorder and dementia were not included. We also conducted a search in PubMed, Web of Knowledge, and PsychINFO of review studies published between Jan 1, 2012, and Oct 31, 2022 using mental illness, mental disorder, suicide, distress, mortality, and prevention as keywords. All searches were restricted to the English language.

Multi-level convergence among key risk factors and mechanisms

We identified 12 key overarching risk factors and mechanisms associated with premature mortality

(figure 2; appendix p 13). Many factors operated across multiple social–ecological levels. Moreover, we observed extensive overlap across the suicide and physical comorbidities domains, with more commonalities than differences between them. Consequently, we combined these factors in figure 2 and describe them thematically in the following sections.

Multifactorial nature of risk

Stress-diathesis models emerged as a useful way of embracing the multifactorial nature of risk and identifying pathways from structural or social conditions to both physical comorbidities or suicide.^{16,17} Such pathways often comprise psychological factors including feelings of worthlessness, entrapment, defeat, humiliation, shame, burdensomeness, or social disconnection associated with marginalisation, poverty, isolation, or hardship, and their interaction with an individual's stress response.^{18,19}

Social determinants, structural inequalities, and social context

The crucial role of social determinants in premature mortality is widely acknowledged, yet mediating pathways remain understudied. Adopting whole of government and societal approaches are key.²⁰ Across the lifespan, adverse social determinants of health, such as unemployment, economic recessions, few meaningful social relationships, and poor access to education, employment, and housing, create an environment in which individual risk factors are exacerbated.^{21,22} Income inequality and limited financial resources directly affect mental and physical health.²³ People with mental illness are more likely to encounter systematic social exclusion, such as homelessness, which is also associated with premature mortality.⁸ Some minority ethnic groups face disparities in the incidence of severe mental illness and have worse outcomes.²⁴ A recurrent theme was that social exclusion does not just happen, it is a sequela of socially patterned structural forces.

Hence, social context shapes formations of social isolation, a low level or absence of social support, and loneliness. The net effect of reduced social networks, diminished familial and community support, and higher levels of social isolation is to exacerbate mortality risk, both in the general population²⁵ and particularly in racialised communities and minority ethnic groups.²⁶ For suicide, social context also comprises volitional factors such as exposure to suicide and access to the means of suicide, which have been proposed as key to understanding the transition from suicidal thoughts to suicidal acts.¹⁹ Exposure to suicide also extends to media reporting of suicide (eg, the suicides of celebrities are associated with a 13% increased risk of suicide in the general population).²⁷ More research is needed about apparent social transmission effects or influences on help seeking for mental health problems more widely.

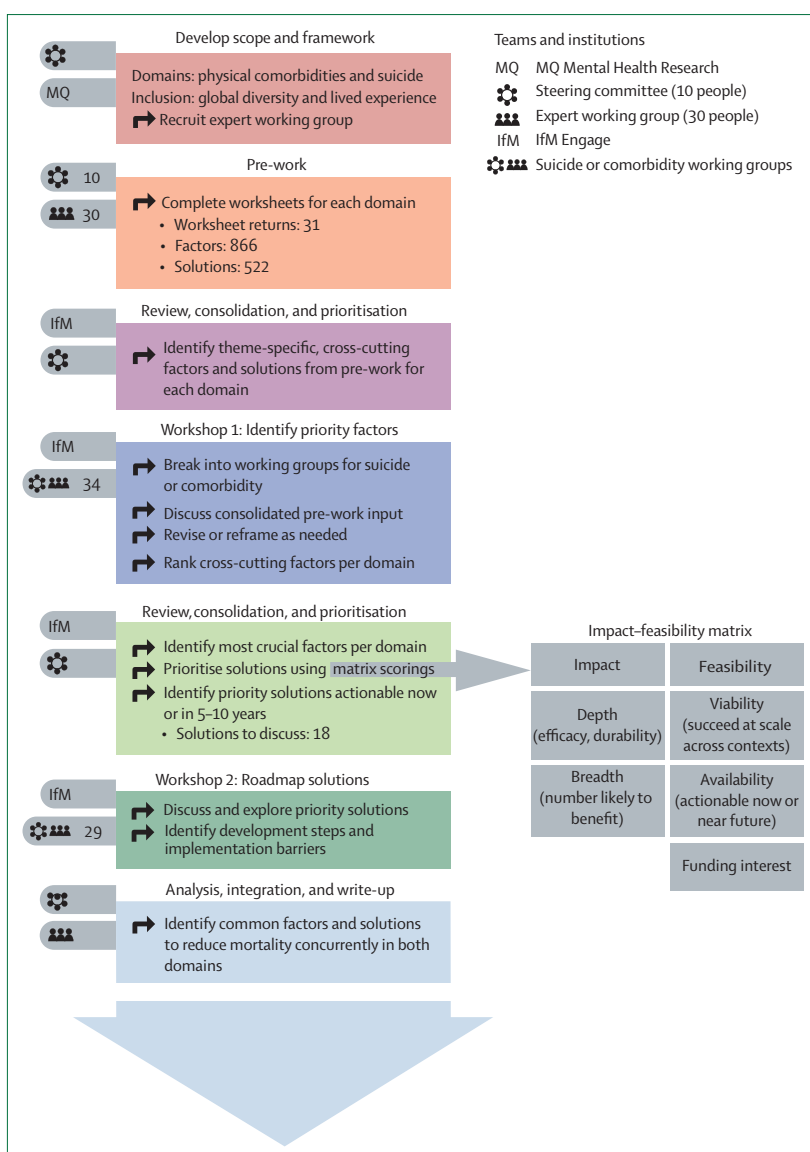


Figure 1: Detailed flow of the Gone Too Soon roadmapping process

The steps and actors involved in the roadmapping process, from developing the scope and framework to the analysis, integration, and write-up.

Counterbalancing some evidence linking social media with suicide risk and poor mental health, especially among vulnerable youth, are its potential protective effects and the size of any effect in isolation.²⁸

Stigma, marginalisation, racism, and mistrust

Stigma, in all its guises, is a pervasive force that affects many other risk factors for premature mortality.⁸ State legislation and policy that actively perpetuate social stigmas and create barriers to accessing mental health care, including the laws in countries that criminalise suicide and suicidal behaviour, are counterproductive and should be repealed.^{8,29} As noted elsewhere, stigma and social exclusion more broadly underlie premature

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See Online for appendix

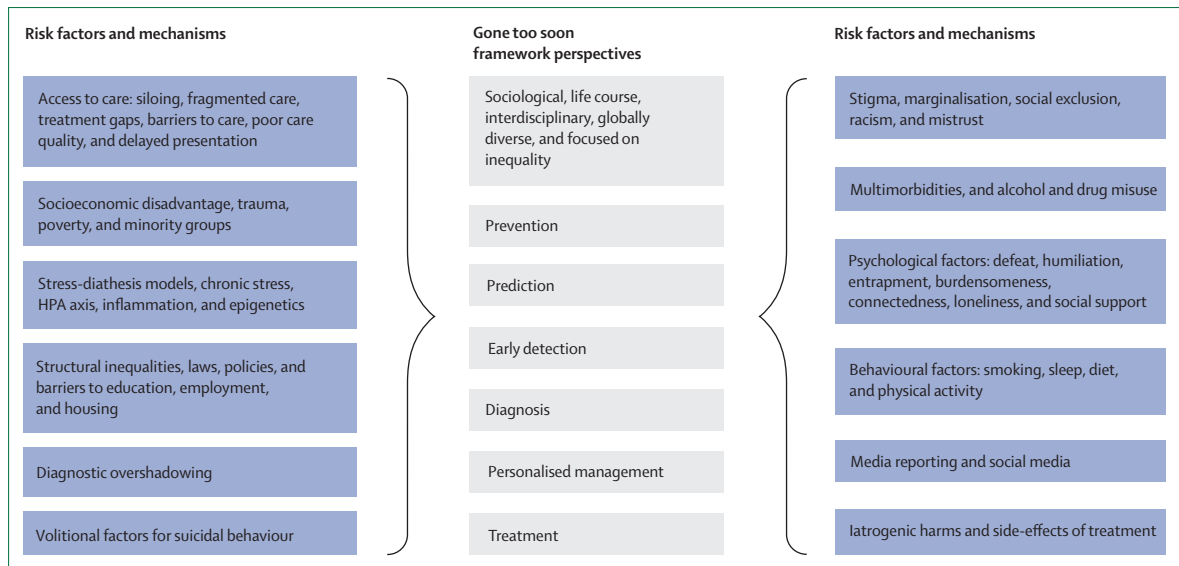


Figure 2: Gone Too Soon framework and priority risk factors and mechanisms

The Gone Too Soon framework (grey panels) comprises social-ecological and life course perspectives and is based on interdisciplinarity and global diversity with attention to inequality. Priority risk factors and mechanisms (blue panels) were identified in the roadmapping process. Most risk factors were shared by both domains, in suicide and mental illness, so are presented together here. HPA=hypothalamic-pituitary-adrenal.

mortality from physical comorbidities by limiting help seeking, resources, and opportunities, and impeding access to close relationships, quality education, housing, health care, training, and employment.⁸ Although psychological and psychiatric approaches to suicide prevention predominate, to be effective, these must be supplemented with sociopolitical approaches, taking greater account of sociocultural dynamics, recognising the inherent inequalities in who dies prematurely, and considering suicide prevention as a matter of social justice.³⁰

Discrimination and racism, acculturative stress, stigma power, colonisation, and other structural inequities demand urgent attention as they lead to a wide range of poor health outcomes.^{8,31-33} Specific factors that precipitate suicidal behaviour vary across groups and societies, although our knowledge about LMICs has many gaps.^{31,34} Suicide risk is high across socially vulnerable populations including sexual and gender minorities, some minority ethnic communities (indigenous populations in particular), people with physical and neurodevelopmental disabilities, refugees, immigrants, and people in the criminal justice system.^{29,35-38} The propagation of stigma and discrimination against people with mental illness persists in some health-care settings, schools, and workplaces, and it promotes mistrust of mental health services.⁸ Arguably, systemic stigma and bias are ingrained in health systems, rendering patients less able effectively to communicate how they are feeling.³⁹ Furthermore, in some countries, professions and providers working in mental health are themselves stigmatised.⁴⁰

Individual factors

Traumatic life events, particularly interpersonal events such as childhood or domestic abuse, are major contributing factors in mental illness, mental distress, and suicide.^{16,17,41} Psychobiological processes and behaviour have key roles in premature mortality for both physical comorbidities and suicide.⁴² Potential mechanisms behind the relationship between early life trauma and suicide risk range from disrupted attachment patterns⁴³ to epigenetic effects.⁴⁴ Psychological factors such as defeat, humiliation, entrapment, burdensomeness, and thwarted belongingness are established correlates of suicide risk that require attention at all levels of the social-ecological framework.¹⁹ Behavioural factors including smoking and substance use, poor sleep,⁴⁵ poor diet,⁴⁶ and inactivity¹⁶ also pervasively affect mental states and underpin links to physical comorbidities. Religiosity might also be associated with higher suicide risk among sexual and gender minority youth, but it is important to note that, for others, religion can be a protective factor.⁴⁷ Furthermore, factors linked to the hypothalamic-pituitary-adrenal axis and inflammation are implicated in both physical comorbidities and suicide, together with vulnerabilities associated with epigenetics and brain metabolites.^{48,49} Potential roles for the gut microbiome and microbial dysbiosis in both sources of premature mortality are also increasingly the focus of investigation.⁵⁰ Recent consortia-driven efforts have begun to identify genetic factors in suicidal behaviour and shared genetic influences on mental and physical health comorbidities.⁵¹

Multimorbidities and alcohol and drug misuse

Comorbidities and multimorbidities are the primary source of premature mortality across the spectrum of mental illnesses, but particularly among those with severe mental illness.⁵² Compared with the general population, people with mental illness have more health-related behaviours that affect mortality risk and have a higher prevalence of multimorbidities, including chronic conditions (eg, cancers, hypertension, ischaemic heart disease, respiratory health problems, cerebrovascular events, and type 2 diabetes)⁵³ and infectious diseases, notably HIV and tuberculosis.⁵⁴ People with mental illness also often have comorbidity with alcohol and substance use disorders and tobacco use, which contributes further to earlier mortality.⁵⁵

Associations between antipsychotic medications and mortality in people with mental illness are complex. Overall, antipsychotic medications, when prescribed for approved usages, have been associated with a reduction in all-cause mortality.⁵⁶ However, the prescription of some antipsychotic medications has been linked with sequelae such as type 2 diabetes and metabolic syndrome, which are, in turn, associated with cardiovascular disease.^{54,57,58} The benefits versus risks of increased mortality vary by the types of medications, comorbidities, and course of the mental illness.^{56,59} Limited access to appropriate medication in LMICs contributes to health disparities in the effective treatment of mental illness and associated physical health conditions.

Among others, physical and mental illnesses are known risk factors for suicide. Underlying mental illnesses such as depression, anxiety, bipolar disorder, schizophrenia, borderline personality disorder, and eating disorders are established correlates of suicide risk.^{17,60} Post-traumatic stress disorder, obsessive compulsive disorder, and substance use disorders might be more important in suicide attempts than in suicide ideation.⁶¹ Moreover, people with serious mental illness are much more likely to die by suicide than the general population.⁶² Although multimorbidity (physical and mental illness) is associated with suicidal ideation, more research on suicide attempts and suicide is required.

Although opioid misuse and its recent escalation are beyond the scope of this Review, the co-occurrence of substance use and mental illness among adults with opioid use disorder is common and merits urgent attention.

Access to care: silos, fragmentation, gaps, and quality

Systematic underfunding of mental health services compared with physical health services is a major global problem, as is segmentation of mental and physical health care into silos.⁶³ Treatment gaps (eg, availability of and access to high-quality treatments for major depression) and understaffing are substantial in high-income settings and even greater in low-income and middle-income settings.⁶⁴ Interventions for psychosis in

LMICs, for example, cannot simply graft practices from high-income North American and western European settings onto complex pluralistic care pathways that include traditional health practitioners.⁶⁵ Deficient access to mental health care at a community level (with barriers such as transportation, waiting lists, lack of language, and cultural sensitivity), particularly in LMICs, is also associated with suicide mortality.^{11,12}

People with mental illness and people who are at risk of suicide are more likely to be overlooked and receive poor health care or none at all.⁵² In diagnostic overshadowing, health-care professionals misattribute physical health presentations to an existing mental health condition, which delays people with such conditions from receiving health care for their somatic conditions,⁶⁶ and people with existing physical health conditions also experience misattribution of mental health presentations. Indeed, diagnostic overshadowing has been linked directly to avoidable deaths⁶⁶ and might be relevant for suicide mortality, as suicide risk is underdetected in clinical settings.⁶⁷

The inadequate care provided to people with mental illness also leads to poorer physical health outcomes and premature mortality.⁶⁸ Substandard care can take multiple forms, including inadequate screening, lengthy waiting lists related to workforce issues and underinvestment, poor health insurance coverage, and poorly integrated care. Furthermore, for some physical health conditions, preventive population screening programmes have been implemented successfully in the general population, but less so for people with mental illness.⁶⁹ For instance, access to life-saving coronary revascularisation procedures following a cardiac event is reduced in people with diagnosed mental illness, especially schizophrenia.⁷⁰ A review of studies from the USA found that poor-quality care is particularly evident in people diagnosed with mental illness on low incomes and receiving health insurance benefits.⁶⁸ Yet even in settings in which care provision is free at the point of contact, with pay-for-performance schemes also operating to financially reward primary health-care practitioners to deliver better quality care, only modest improvements in physical health outcomes in people with mental illness have been observed.⁷¹

Actionable solutions

In this section, we identify 18 solutions across three organising principles and provide examples to tackle multi-level convergence in the sources of premature mortality (panel 2). Best practices for adaptation, refinement, and evaluation in applying solutions to different global contexts are evolving.^{76,77}

Integration of mental and physical health care

Consistent with WHO's World Mental Health Report, the integration of health services emerged as a key overarching principle for reducing premature mortality.¹¹

Panel 2: Organising principles and related actionable solutions for comorbidities of mental illness and suicide, as identified and prioritised through the roadmapping process

Integration of mental and physical health care

Eliminate silos in health care

- Eg, integrated primary youth mental health-care services;⁷² group therapy improves depression and HIV treatment⁷³

Improve collaborative care models

- Eg, task-shared integrated collaborative care for patients who use addiction services in South Africa^{74,75}

Improve care-provider training and capacity-building

- Eg, EMERALD multinational programme⁷⁶ and WHO–UNICEF EQUIP training programme⁷⁷

Access to primary care services with capacity to treat mental and physical health problems

- Eg, integrating mental health therapy into primary care;⁷⁸ RESHAPE stigma reduction for health-care workers in Nepal^{79,80}

Improve screening, early identification, and treatment of comorbidities

- Eg, Garrett Lee Smith Youth Suicide Prevention Program;⁸¹ portable MRI in low-income and middle-income countries⁸²

Prioritisation of prevention while strengthening treatment

Policies to restrict access to lethal means and decriminalisation of suicide

- Eg, banning pesticides in Sri Lanka^{12,83}

Media and social media engagement to tackle stigma and prevent suicide

- Eg, engagement of the Malaysian media community on safe reporting of suicide⁸⁴

Policies targeting upstream factors to regulate tobacco and support adequate diet and nutrition

- Eg, WHO recommendations for tobacco cessation and management of substance use disorders⁵⁴

Work-based interventions to promote healthy workplaces

- Eg, Mental Health in the Workplace guidance⁸⁵

Early intervention, education, and public mental health awareness and training

- Eg, postnatal home visitation to support parenting and infant healthy development⁸⁶

Community-based interventions and peer engagement

- Eg, Communities That Care Plus: a community-based planning and implementation system for youth in the USA⁸⁷

Improve access to effective treatments and personalised medicine

- Eg, access to psychosocial treatments for suicidal thoughts and behaviour⁸⁸

Optimisation of intervention synergies across social–ecological levels and the intervention cycle

Strategies to reduce stigma, discrimination, marginalisation, gender violence, and victimisation

- Eg, Women-centred advocacy, and home-visitations programmes;^{89,90,91} stigma reduction strategies⁸

Action to reduce income inequality, such as income support and acute cash transfers

- Eg, national cash transfer programme in Brazil⁹²

Increase investment in mental health

- Eg, investment in mental health and suicide prevention saves lives and is cost-effective⁹³

Redesign health systems to focus on factors that cause illness and improve treatment

- Eg, integrated care for severe mental illness in Ethiopia;⁹⁴ guidelines for high-performing hospitals⁹⁵

Harness digital opportunities and big data

- Eg, passive sensing on mobile devices to improve mental health services in Nepal;⁹⁶ app co-design

Better understanding of interplay between biomarkers and psychosocial risk factors

- Cortisol–trauma relationship in suicide risk;⁹⁷ biomarkers of environmental risk factors in depression⁹⁸

However, offering integrated care (ie, mental health care to people within general medical services and physical health care for people under the care of mental health services) is challenging; it requires reorganisation of health systems, provider training to instil appropriate expertise in both physical and mental health, and agile systems for referral. Yet the integration of health services

not only facilitates early detection of both physical and mental health problems and their shared risk factors,⁹⁹ but also saves costs and improves care.^{11,100} Policy makers need to prioritise such delivery at the level of primary care, which would support prevention efforts such as smoking cessation, vaccination, and the detection and treatment of infectious and chronic physical health

conditions in people with mental distress or illness.^{10,79} Evidence of the benefits from integrated care schemes has been encouraging yet inconsistent, and differs by setting and country.^{74,101} A blueprint for designing and scaling up integrated primary youth mental health-care services has shown promise.⁷² We recommend that the implementation of such programmes should proceed based on country-specific or locality-specific priorities and resources.¹⁰⁰

Task shifting (ie, moving tasks from highly specialised to less specialised health workers) and cross-training interventions with community health workers can address staff shortages, which are particularly acute in LMICs. Widely embraced, albeit with mixed results, this approach has been applied successfully in Ethiopia.⁹⁴ Within LMICs, multi-country initiatives have also led to context-adaptable quality improvement tools that enhance competency in suicide screening and reducing the risk of harm.^{76,77} Additionally, cross-training in mental and physical health addresses the problem of diagnostic overshadowing. Importantly, integrated training can combat the pervasive unease, stigma, and bias presently surrounding suicide, self-harm, and mental illness. Comprehensive community-based programmes that include gatekeeper training, screening, and early intervention can effectively reduce youth suicide risk, particularly in rural communities.⁸¹ Employment of peer workers in community and clinical mental health services improves user outcomes.¹⁰² Indeed, peer-led engagement in innovative research, models of clinical care and support, and prevention should be prioritised.

Care-provider training underpinned by lived experience engagement should be considered because it yields improvements in engagement, diagnosis, and treatment.⁷⁹ For example, vignette-based and picture-based training of health-care volunteers at community centres in Nepal increased case identification of mental illness by almost 50%.¹⁰³ Integrated care furthermore lowers barriers to early detection and treatment for comorbidities between mental and physical health conditions. For instance, a 2022 systematic review found that collaborative care reduced depression and improved quality of life in patients who had both depression and diabetes.⁷⁴ There also is evidence from South Africa for integrated collaborative care packages for patients with coexisting depressive and alcohol use disorder symptoms.⁷⁵ Moreover, interventions in diet and exercise to combat chronic conditions such as obesity or cardiovascular disease can reduce risks to mental health, probably by targeting shared underlying physiological processes (eg, inflammation, blood chemistry, and endocrine profiles).^{104,105}

Prioritisation of prevention while strengthening treatment

Prevention—ie, promoting population mental health—is central to the second organising principle. Many

prominent contributing factors to premature mortality are amenable to public health approaches that intervene upstream to decrease risk and improve health trajectories. Indeed, effective interventions exist (eg, poverty reduction, access to education, community safety, and accessible health care) that target many of these factors. Fostering appropriate early care and education, such as through home-visiting programmes,⁸⁹ can also reduce prevalence of early trauma and enhance healthy cognitive–emotional development.

Regulation of tobacco and alcohol and promotion of adequate nutrition provide synergistic benefits for physical and mental health.^{55,106} Taxes on tobacco and alcohol and tobacco-free environment policies are effective preventive measures to reduce consumption of these substances.^{107,108} Likewise, public health campaigns about the dangers of tobacco smoking are effective preventive measures, as are regulations and restrictions on advertising, packaging, and sales.¹⁰⁹ Indeed, a multi-component school-based health promotion intervention in India to promote adolescent health has also shown promise,¹¹⁰ highlighting an important role for early intervention. Cash transfer or food subsidy programmes effectively reduce food insecurity.¹¹¹ However, complex interactive drivers of food insecurity in mental distress and eating disorders are understudied in LMICs and merit attention; practice guidelines concerning eating disorders are available.¹¹² Healthy workplace initiatives are extending the promotion of mental and physical wellbeing to everyday settings.⁸⁵ Likewise, community-based interventions can aid in reducing stigma and remoteness from health care for diverse and marginalised groups, tackling health-risking behaviours and providing social support that fosters wellbeing across domains, although this area needs more evaluation.^{87,113}

Complex cultural–societal factors shape laws and discourse around suicide and mental health; therefore, such factors warrant careful consideration.⁸⁴ Nonetheless, restriction of access to lethal means (eg, firearm regulation, pesticide bans, and structural interventions) has been effective globally in suicide prevention, although legal and political barriers to policy implementation require scrutiny.^{31,114} Further priorities include both the engagement and regulation of traditional media for suicide prevention and shared responsibility between governments and social media companies to minimise online harms. The effect of decriminalisation of suicide is mixed, although criminalisation has been associated with increased suicide rates, particularly in LMICs and non-Muslim countries.¹¹⁵ Continued criminal sanctions for suicidal behaviour despite technical decriminalisation, as happens for instance in the UK, must be addressed.¹¹⁶

Furthermore, the extent to which mental health and suicidal behaviour interventions are effective in different risk groups (eg, men vs women and minority ethnic groups) and settings (eg, LMICs) needs evaluation as a

matter of urgency. The scalability and accessibility of evidence-based interventions for suicidal thoughts and behaviours¹¹⁴ must be prioritised, including psychosocial interventions (eg, cognitive behaviour therapy, dialectical behaviour therapy, the collaborative assessment and management of suicidality, and safety planning) and pharmacotherapy (eg, clozapine and lithium).^{16,17} Safe prescribing and monitoring are imperative. The role of side-effects in suicide risk needs closer inspection, as do effects of medications for mental and physical health conditions (eg, benzodiazepines and interferon alfa-2b).^{117,118} Risks of iatrogenic cognitive deficits (eg, from electroconvulsive therapy) and treatment-emergent suicidal ideation and behaviour (eg, medication-induced akathisia) exist and need to be weighed against the benefits (eg, rapid or life-saving treatment of

electroconvulsive therapy for those with severe depression).

Thus, personalised care with targeted mechanisms of action and fewer side-effects is crucial. It is also important to reach outside of health services to increase the accessibility of psychosocial interventions in community and social services, schools, and workplaces. Compassion must be embedded in all aspects of service provision, and continuity of care for those in suicidal crisis is vital. Interventions also need to be expanded to include factors considered outside the remit of traditional mental health care, including infectious diseases such as HIV/AIDS. For instance, group therapy has been shown to improve both symptoms of depression and adherence to HIV treatment in Uganda.⁷³

Although prevention is crucial, innovation continues to be needed in detection, diagnosis, and treatment of conditions leading to premature mortality. There is a need to advance research for personalised medicine approaches (adopting a biopsychosocial standpoint), identify new predictive indicators, and leverage new opportunities in digital technology and big data. These strategies will enable the formulation of more personalised management and treatment plans, as will embedding the expertise of people with lived experience across research, innovation, and practice. Finally, paying more attention to protective factors is long overdue.

Optimisation of intervention synergies across social-ecological levels and the intervention cycle

The third principle addresses the multi-level convergence of factors that drives premature mortality. Such an approach optimises prevention by providing new opportunities to identify synergistic interventions from the individual to the structural levels. For example, societies with priorities and policies that reduce income inequality have populations with better mental and physical health.¹¹⁹ Targeted income strategies such as cash payments have been found to support brain development, improve mental health, and reduce suicide risk.^{92,120,121} Such strategies also address linkages of poverty, shame, and entrapment to suicide, mental illness, and its comorbidities. These strategies generate society-wide benefits in social cohesion, productivity, and wellness.¹¹⁹ Moreover, efficiencies realised through integrated health care⁷⁸ might help to support much needed investment increases in mental health. The effect of interventions directed at reducing stigma, discrimination, marginalisation, and gender violence at any level reverberates across the social ecosystem.

Together, the expansion of telehealth since the onset of the pandemic and the emergence of digital innovations (eg, wearable technology, portable apps, remote sensing, and e-health interventions) as novel means to build effective personalised interventions are providing unprecedented opportunities that should be harnessed

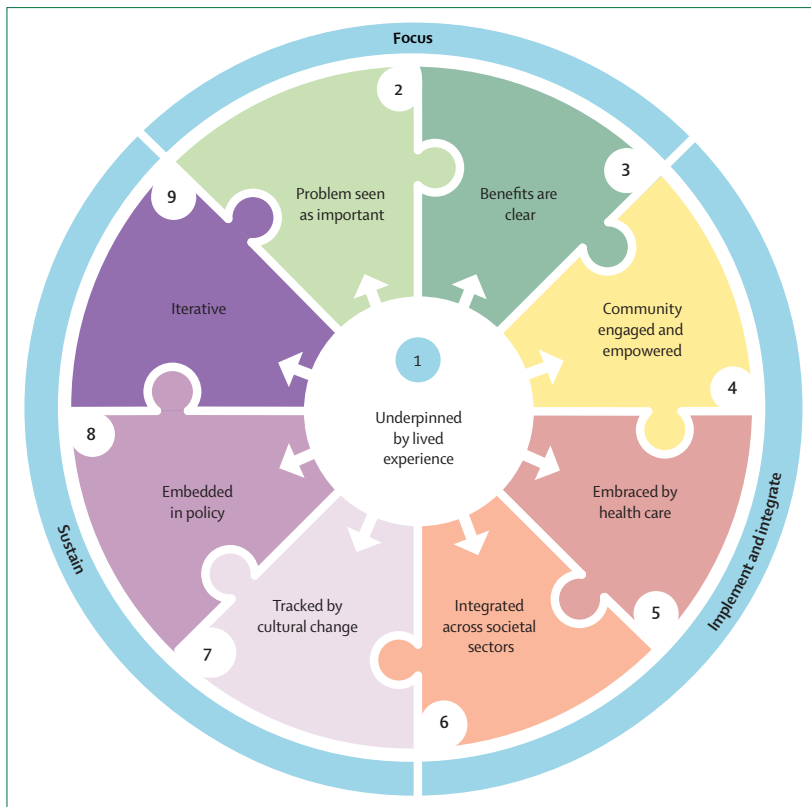


Figure 3: Implementation cycle

(1) Lived and living experience is central to all success factors in cycles of implementation. (2) The problem and the solution must be seen to be important and they need to be promoted to create global, national, and local interest. (3) Economic and predictive modelling with cost and benefit analyses are needed to show the value, including improved morbidity and mortality. (4) Success requires community collaboration in ways that work for the public, to create and share culturally valued, evidence-based, and accessible knowledge and practices around specific conditions and solutions. (5) The health-care system and clinicians must be committed to reduce barriers to implementation and to be ready to change. (6) Solutions will require participation from systems outside health including housing, welfare, not-for-profit organisations, venture capital businesses, industry, and educational institutes. (7) To sustain success, continued education and literacy of and feedback from the public and consumer groups is needed, and (8) new solutions must be enshrined within national policies and be funded; the creation of infrastructure, responsibility, and oversight through government-based authority is crucial to promote integration across multiple sectors, to understand and act on the need for equity, and engage cultural diversity; and to maintain a cycle of further research and innovation. (9) The process is iterative: new solutions need to be continually monitored, evaluated, and improved.

to expand access to mental and physical health care. Promising examples include passive sensing via mobile devices to enhance the detection of depression in mothers in Nepal.⁹⁶ However, ethical protocols for real-time digital monitoring of physical and mental health such as response to acute suicide risk status require consensus.^{88,122} Therefore, it is important to proceed tentatively, weighing potential benefits against concerns about privacy, access to technology, and the potential effect of misclassification.

Looking to the future, machine learning analyses of big data incorporating genetic, epigenetic, biochemical, neuroimaging, and psychological factors; real-time digital phenotyping; and electronic clinical records hold promise as the next frontier in personalised medicine, prediction of comorbidities, and suicide prevention research.¹²³ Evidence suggests that modelling trials embedded in routine health-care records can efficiently test the relative efficacy of intervention options for specific populations (eg, stratified by polygenic risk).¹²⁴ However, once again we urge caution, for algorithms not designed and tested with under-represented communities have the potential to widen racial disparities.^{125,126} In short, we emphasise that ethics, evaluation, contextualisation, and scalability are integral elements in real-world applications of these innovations.¹²⁷ Co-designing with people with lived and living experience is also essential.

Principles for implementation and change

The success of the proposed solutions will be maximised if action is guided by robust principles for implementation and change. We suggest nine action principles to guide implementation (figure 3), recognising that enacting many of the priority solutions will require direct participation of those with lived and living experience, policy makers, clinicians, health and technology industries, and the community. We highlight the additional intricacies introduced by the complexity of national and local health systems, the need for multiple cultural adaptations, and the nature of mental illness or mental distress.

In our view, the most important element in successful implementation is the collaboration of a diverse range of lived and living experiences of mental illness and suicidal behaviour. Placing lived and living experience at the centre of the implementation cycle promotes solutions that are fit for purpose; co-design ensures solutions are agreed upon; lived and living experience facilitates dissemination to core networks; and the voice and advocacy of lived and living experience drives change. Not every implementation driver in figure 3 will be essential to each priority solution. People with mental health conditions should have their human rights protected and be treated with due dignity, compassion, and respect, including when in crisis and including concerns about iatrogenic harms of interventions in

crisis contexts (such as police involvement or involuntary treatment).

Fortunately, there are useful models for improving health care, integrating physical health systems, and developing new health models to draw upon.^{128,129} These models, guided by the three action principles, should help to put our solutions into practice. Finally, for prevention to make a difference, oversight, leadership, and integration are required at public health, governmental, and community levels so that an overall coherent strategy is implemented across multiple stakeholders, all of whom need to be brought into achieving effective change.

Conclusion

Too many people die prematurely from suicide and the comorbidities associated with mental illness and mental distress. Beyond the moral imperative to prevent premature mortality, the economic case is clear from economic models showing cost-effectiveness of health-promoting interventions.⁹³ Many of the key risk factors are both known and shared by mental illness and suicide. Appropriate solutions to address these factors are actionable now or presently. Simultaneous globally co-ordinated action to mobilise knowledge and implement change is essential to prevent premature mortality and achieve parity in lifespans between people affected by mental illness and suicide risk, and the general population. As a first step, all countries should ensure that their laws and policies are consistent with human rights so that people living with, or at risk of, mental ill-health have the same rights to care as those with physical health needs. Although outside the scope of this paper, our findings might speak to the wider societal context of warfare, climate change, forced migration, human rights violations against women, and deinstitutionalisation. We in the mental health community of clinicians, researchers, people with lived and living experience, policy planners, and carers need to translate our understandings in policy and practice, to effect widescale transformation.

Contributors

RCO'C and CMW co-led the MQ Mental Health Science Gone Too Soon Expert Group for Reducing Premature Mortality. RCO'C and CMW collated all contributions and drafted the manuscript. All members of the Expert Group Organising Panel (RCO'C, CMW, HC, CYM, NB, JD, KCK, LFC, PT, JD-M, MA, and NA) contributed to the design, conceptualisation, writing, and delivery of the manuscript, and were involved in the roadmapping pre-work, workshops, and associated synthesis. NA led the roadmapping and synthesised the feedback from the pre-work and workshops. All other members of the Expert Group (PB, KB, RGF, SG, OG, DH, AJ, WK, MK, DK, OJK, SK, BK, AKL, CL, EM, RM, VM, TN, DO, JP, ARP, BP, HR, SS, DS, LV, and PSFY) contributed to the manuscript by providing feedback as part of the pre-work or workshops. All authors reviewed and approved the final version of the manuscript.

Declaration of interests

AKL reports grants from the American Foundation for Suicide Prevention, US National Institute of Justice, US National Institute of Health, Robert Wood Johnson Foundation, and WK Kellogg Foundation. AKL reports reviewer honoraria from the US National Institute of Health. ARP is an equity owner of SafeSide Prevention, which receives fees for

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