Lancet Psychiatry Commission on Youth Mental Health

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Executive Summary

Mental ill-health, the number one health and social issue impacting the lives and futures of young people for decades, has entered a dangerous phase. Accumulating research evidence indicates that in many countries the mental health of emerging adults has been declining steadily over the past two decades with a further major surge of incidence driven by the COVID-19 pandemic, the measures taken to contain it, and the aftermath of that global disaster. This alarming trend signals a warning suggesting that global megatrends and changes in many societies around the world over recent decades have harmed the mental health of and increased levels of mental ill-health in young people.

Mental illnesses are characterised by a peak age of onset of 15 years, with 63–75% of onsets by 25, which represents the epidemiological inverse of physical illnesses. Unless treated effectively, they are a major cause of premature death from physical illness and from suicide. Even when they do not kill, they are the largest and most rapidly growing cause of disability and lost human potential and productivity across the lifespan. In 2011, the World Economic Forum reported that, among the non-communicable diseases, mental illness was the major source of loss of gross domestic product (GDP) globally. These human impacts and economic losses largely stem from the timing of their onset in the lifecycle, combined with worldwide neglect of mental illness due to stigma and discrimination within health care and medical research. It has been described as a scandal and a form of "self-harm" inflicted by society upon itself.

There are encouraging signs that the danger is being sensed and some responses are emerging. The US Surgeon General has labelled the deteriorating situation a "youth mental health crisis" and is formulating strategies to combat it in the United States. Yet, the crisis is a global one and it demands forensic analysis of the megatrends (major, long-lasting societal changes e.g., environmental, social, economic, political or technological) and the malleable risk and protective factors that are influencing it, and a global strategy that can catalyse national and local action plans to counter it. The stakes are high in terms of the cohesion and prosperity of societies around the world and are not limited to health outcomes alone. The concept of "mental wealth" has been formulated to capture the enormous potential

benefits that could flow from better promotion of mental health and well-being, combined with early intervention and high-quality treatment of young people with emerging mental illness, and extended for as long as necessary. With the recognition that the cost of modern health care is becoming unsustainable, logic, rather than emotion, will need to determine how finite resources are allocated. Health care is rationed already in a covert fashion and, worldwide, mental illness is the greatest loser in this rationing game. The widespread delivery of low value health care of many kinds should be reconsidered in relation to the value proposition of saving the lives and productive futures of young people. The rising tide of mental ill-health in young people makes continuing neglect of their needs intolerable.

Part 1: The Changing Landscape of Youth Mental Health

A new paradigm, indeed a new field, of youth mental health is being created and assembled with a focus on 12–25 year olds. The Lancet Psychiatry Commission on Youth Mental Health examines the changing landscape and the underlying megatrends influencing this change. The damage that some of these megatrends, such as rising intergenerational inequality, unregulated social media, wage theft and insecurity of employment, and climate change, is inflicting is deep and widespread within societies. The highly correlated domains of distress, diagnosable episodes of mental ill-health with a need for care, and more severe, sustained or recurrent forms of mental illness are at an all-time high. Arguably, young people represent the "canaries in the coal mine" and are showing the most serious warning signs and symptoms of a society and a world that is in serious trouble.

Part 2: Conceptual Frameworks and Trajectories

To inform a new field of youth mental health, youth-appropriate conceptual building blocks and perspectives are needed, including new developmental thinking and clinical staging. Mental health care for young people must be sensitive to this age group's specific biological, cognitive, social and cultural changes. The physical, cognitive and behavioural differences between young people and adults are likely to influence the way in which mental health problems present and indicate the need for different intervention approaches.

Part 3: Models of Care

The principles, core features and strategies seen as necessary for designing, testing and scaling up new models of youth mental health care are widely accepted. Integrated youth primary mental health care lies at the heart of this reform front and many countries have laid the foundations for this new paradigm of health care. However, considerable barriers and gaps remain across all resource settings, but particularly in lower resourcesettings, which must be addressed.

Parts 4 and 5: The Economic and Political Imperative

This leads naturally into perspectives on the economic dimension of youth mental health and the politics of reform. Youth mental health care as well as prevention and promotion provided in a timely and proportional way can be highly cost-effective. Implementation strategies have been created but require much greater force and sophistication. To achieve transformational reform, a combination of approaches, including strong economic arguments, emotionally engaging storytelling, real-world solutions, high-profile societal 'champions', media support, and targeted campaigns, are needed.

The commissioners have attempted to adopt an inclusive approach to this global problem, while recognising that much of the data and practical reform has been limited to high and middle resource settings. The authorship and the inclusive model this commission has sought to honour includes authors from low resource settings to formulate a staged approach to building systems of care across low-high resource settings. Strategies for enhancing youth mental health systems will need to differ between low resource settings, where most of the world's young people live, and the highest resource settings, where nascent reforms remain too little too late. The stakes are very high given the state of the world and how dependent societies are on the capacities and contributions of their young people. As long as adolescents and emerging adults continue to be a vital resource that is wasted, languishing in precarity, and denied respect and nurture, society itself will become more precarious. The youth mental health crisis is more than a wake-up call; it may be our last chance to take action.

Part 1: The Changing Landscape of Youth Mental Health

Introduction

Mental ill-health is an umbrella term which includes time-limited episodes of ill-health with a need for care as well as more sustained, recurrent and variably more disabling forms of ill-health which the term mental illness tends to capture. Mental ill-health is not only the major threat to the lives and futures of young people but, as identified in this Commission (Panel 1) and detailed in this section, there is alarming evidence that its prevalence and impact are steadily increasing in many high resource settings where hard data are available[1-4]. The US Surgeon General has labelled the deteriorating situation a "youth mental health crisis" and is formulating strategies to combat it in the United States. Levels of distress, alienation and loneliness have also risen steadily, and while they may not warrant a health service response, they are a broader reflection of societal dysfunction that the public health crisis of youth mental health represents. Nearly three decades ago, with the retreat of the major physical illnesses, particularly infectious diseases, which had affected young people throughout history until the second half of the 20th century, Michael Rutter[5] highlighted that mental ill-health, or "psychosocial disorders" as he put it, were now by far the principal cause of burden of disease in many parts of the world. [6] He noted that young people had become physically more healthy than at any time in history, largely due to the retreat of infectious disease, but their mental health was worse than ever. While there are some growing environmental, economic and lifestyle threats to physical health, the trend of deteriorating mental health is more striking and has continued and even accelerated over the past two decades[3]. The epidemiology of mental illness is unique with the peak onset of most mental illnesses during the transitional period from childhood to mature adulthood. [7] This onset period is inextricably linked to the momentum of complex and dramatic biopsychosocial change that permeates and surrounds this transition.

Panel 1: Methodology and approach used in preparing this Commission

The initial consultation meeting for this Commission occurred in July 2019. The meeting brought together experts by experience and researchers with expertise in youth mental health across a range of specialties including clinical psychology, psychiatry, neuroscience, epidemiology, social science, economics and service reform. Attendees were identified

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through international networks such as the International Association for Youth Mental Health (www.iaymh.org) which links people from over 60 different nations and through literature searches.   They participated in a range of discussions focused on the overarching themes and outcomes of the Commission, the inclusion of young people, and key information that should be included or considered in each section of the Commission. Attendees were from Australia, Europe, the UK, North America, and Asia. The need to include a range of perspectives during the development of the Commission was acknowledged, and this is reflected in the authorship, which uniquely includes young people with lived experience as Youth Commissioners and Youth Authors, as well as experts working in or originally from low resource settings.

The Commission provides a synthesis of evidence across five key topics that are considered important by the authors in formulating a blueprint to transform prevention and care for young people at risk of, or experiencing, mental illness. We have used evidence from systematic reviews and meta-analyses where available and appropriate and have cited publications that we deemed relevant in capturing the current state of knowledge across the five topics.

Emerging adulthood

The term emerging adulthood captures the scope and direction of the developmental momentum during the whole of this exquisitely sensitive period from puberty through to the mid to late twenties. [8,9] This transition has expanded in recent decades and can be argued to now incorporate and transcend the constraints of the older term "adolescence". Emerging adulthood involves dramatic visible changes in biological maturity, mirrored by less outwardly visible changes in brain structure and function, in psychological development and in social and vocational spheres (see Part 2). Developmental tasks include the evolution of a stable sense of self, individuating from the family of origin, and establishing independence and ultimately a family of one's own. This is daunting, even for the mentally well; stress, adversity, risk, uncertainty and loss are constant and necessary companions within the ecosystem of growth. Such developmental challenges are increasingly complex and protracted, and there is rising concern that a series of megatrends that have arisen over the past two decades are harming the mental health of children and young people in transition to adulthood. A number of such trends have been observed, including changes in the social construction of the transition, the extension of education and the lifespan, the later age of marriage and childbirth, and a new raft of destabilising social, technological and economic changes in society, including globalisation, neoliberalism and consequent rising

inequality, the rise of the smartphone and unregulated social media[10,11], pressure to achieve academically[12], challenges of Artificial Intelligence over future educational and occupational expectations, serious erosion of the rights of younger workers, and climate change. [13-16] These trends differ in degree across the globe but have been validated by the voices of young people and examined recently by Twenge[17], Duffy[18] and Pennington. [14] There is evidence of delayed onset of sexual activity, delayed and reduced use of alcohol and illicit drugs except in marginalised groups, and a trend to slower maturation, including if and when economic independence is attained. [15,19,20] While commonalities are preserved across the generations, it is a very different story to be a young person navigating the transition to mature adulthood these days than it was even 20 years ago. [15,21,22] It is readily acknowledged that these trends have been defined, and indeed much of the data indicating a serious decline in the mental health of young people has been collected in the richer "WEIRD" (Western Educated Industrialised Rich and Democratic) nations or High Income Countries (HIC), that is from high resource settings located in the Global North, though globalisation means that such trends may be or become equally relevant in the "non-WEIRD" rest of the world, or Low and Middle income Countries (LMIC), where by far the majority of children and young people are growing up[3]. This is discussed in more detail below.

Where mental ill-health emerges during this life stage, it typically disrupts development and maturation, undermining the attainment of key milestones. These include identity and relationship formation, educational and vocational attainment, financial independence, and a culturally appropriate level of personal autonomy. [23,24] Key demographic and socioeconomic changes have amplified this threat, transforming it into what has been termed a "perfect storm". [25] Childhood mortality has fallen dramatically over the past century, the birth rate has reduced and life expectancy has extended. The latter increases greatly the dependence of society on the health and productivity of young people. At the same time, in non-WEIRD, lower and middle resource countries the whole population is usually much younger than in WEIRD high resource countries; for instance, the United Nations estimated the mean age of the population of the sub-Saharan Africa Region to be 18·7 years for 2020 and that the birth rate and life expectancy will have fallen as a result of

the COVID-19 pandemic, [26] albeit temporarily. In comparison, the mean age in Italy was 45·7 years in 2020. [27] While the age dependency ratio is decreasing in non-WEIRD countries, the reverse is occurring in WEIRD nations. [28]

More than ever, we need to prevent or reduce premature death and disability in young people in no small part to enable them to shoulder the financial and social burden of the dependent older population. Particularly in the WEIRD nations of the Global North, with ageing populations, we simply cannot afford the loss of productivity wrought by preventable, untreated or poorly treated mental ill-health in young people. In the economically developing non-WEIRD world, young people represent much larger proportion of the population and are an abundant, vibrant resource on whose contributions and development the prospects of entire nations are dependent. Furthermore, as pointed out by Moffit and Caspi (2019), [25] mental ill-health in young people is a potent yet largely ignored risk factor for age-related medical illnesses later in life. Hence, effective prevention and treatment of mental ill-health in youth will ultimately help to reduce the total burden of disease over the life course. The potential return on investment is enormous and is one of the best buys in health and social policy reform. [29]

The threat of mental ill-health to young people
Mental ill-health represents the principal threat to the health, well-being and productivity of young people who are in transition from childhood to mature adulthood. Improvements in global childhood mortality have shifted the main period of health risk from before puberty to the mid-twenties. However, mental ill-health now accounts for at least 45% of the overall burden of disease in those aged 10-24 years. [6] In Europe and also globally, mental disorders are among the leading causes of disability among this age group. [30-32] Suicide is the number one leading cause of death among young people (15-24 years) and adults (25-44 years) in Australia, [33] New Zealand (15-19 years), [34] and India (15-39 years). [35] It is the second leading cause of death in Canada (15-34 years) [36] and the United States (10-14 and 25-34 years). [37] Worldwide, trends are variable, however while still much more common in males, where modest increases are still occurring, in many countries rates are increasing more rapidly in young women. [38,39] it remains the fourth most common cause of death for those aged 15-29

years. [40] Suicide rates in adolescent males increased in Brazil between 2001 and 2015[41], however the Global School-based Student Health Survey revealed that rates of self-harm and suicide attempts may have been decreasing in 12 -15 year olds in 12 LMIC settings up until 2017[42]. Indigenous young people in many countries (Australia, Canada, USA and India) have substantially higher rates of suicide than the general population. [43] Furthermore, mental disorders and self-harm are increasingly common during this transition, with onset peaking at 15 years[44] and at least 50% of emerging adults developing a threshold disorder with a need for care by the age of 25 years. [23,45] A recent systematic review and meta-analysis studied the proportions from 192 epidemiological studies of 708,561 individuals who had onset of any mental disorder. [7] By ages 14-, 18- and 25-years the proportions were 34·6%, 48·4%, 62·5% of the total, emphasising the burden of mental ill-health in young people. [7] Despite this compelling evidence of need, only a small minority of young people can access even minimally adequate care even in high resource settings, [46-48] and primary forms of prevention are daunting, elusive and typically a very low priority. In low and middle resource settings, availability and access to mental health services for young people are grossly inadequate. [49] These settings are characterised by low rates of recognition and treatment of mental disorders[50] and a lack data on the prevalence of mental disorders. [51] Poverty, armed conflict, violence, displacement, and environmental stressors and disasters tend to be endemic in these settings and contribute to significant psychiatric morbidity, particularly depression, anxiety, and conduct-related difficulties. [52]

The neglect of youth mental health can be partly ascribed to the stigma-based neglect of mental health worldwide. [53] This is amplified by the perverse and self-defeating ambivalence that society continues to display towards young people and their needs. [18,54] The lack of action on climate change, an unregulated and unsafe digital world and social media environment, and social exclusion as reflected in insecure employment, reduced access to affordable housing and intergenerational inequality have combined to create a bleak present and future for young people in many countries. [55-58] These harmful megatrends over the past two decades reflect a lack of concern or support for young people and have undermined their economic security and hope for the future. In many non-WEIRD or LMIC countries, these megatrends may be greatly overshadowed by even more immediate

threats to survival through war, conflict and severe poverty and lack of food security and shelter, which impact powerfully not merely on physical but also mental health.

Global youth mental health crisis

Monitoring trends in mental ill-health requires robust epidemiological strategies and evidence, which to date has mainly been possible in WEIRD (HIC) nations[30,32]. Such trends are unlikely to show linearity or show the same pattern for different age groups, different countries or for different forms of psychopathology. With this caveat however, it is now clear that at least in many WEIRD nations where epidemiological trends are being accurately mapped, the youth mental health landscape has been deteriorating further over the past decade or more[1] (Figures 1-3). Well before COVID, substantial evidence indicated that young people were facing a rising tide of mental ill-health, including anxiety, depressive symptoms, psychological distress, self-harm and suicide, with increases beginning in the early 2010s. [4,59-62] In the UK, emotional problems are emerging earlier and showing a trend towards increasing prevalence as indicated in two cohort studies conducted a decade apart. [63] More alarmingly, the recent national study of mental health and wellbeing in Australia (2020–2022) revealed a 50% increase in prevalence of diagnostic level mental disorders in 16–24 year olds since 2007, reaching an annual prevalence rate of 39% in 2020–2022, a trend even more marked in young women. [62] Based on face-to-face interviews and classified according to the ICD-10, this large, nationally representative study revealed that the 12-month prevalence of anxiety, affective and substance use disorders in 16–24 year olds was 32%, 14% and 7.8%, respectively (other diagnoses, such as eating and psychotic disorders, were not assessed). [62] In 2007, the respective rates were 15%, 6% and 13%.[64]
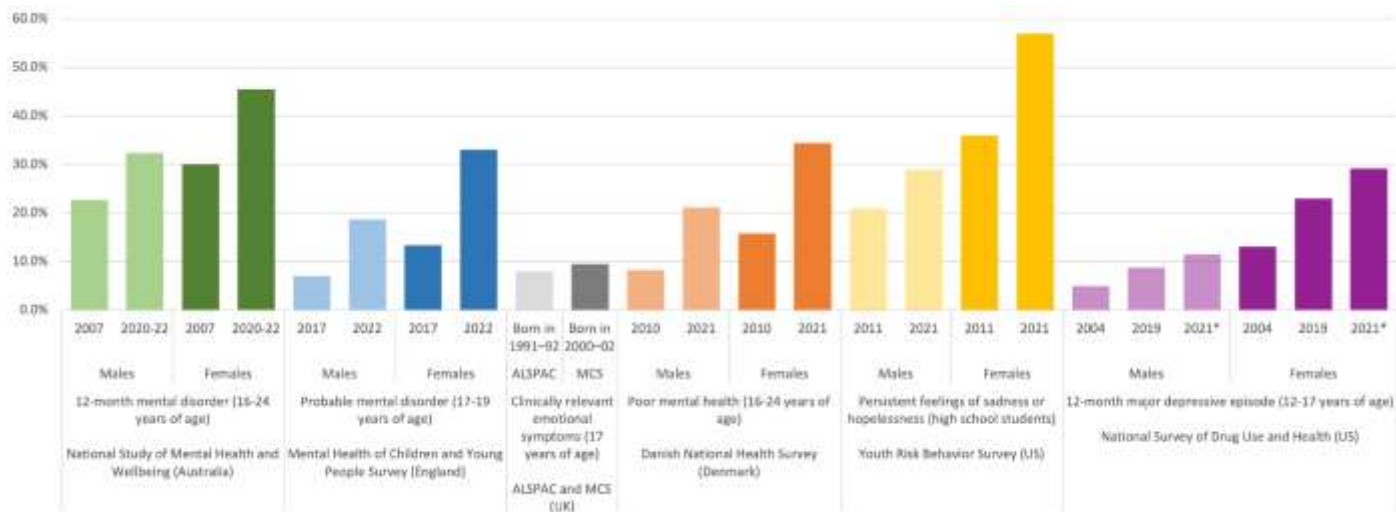
Figure 1: Youth mental health trends by country and sex. Measures used in each survey:

National Study of Mental Health and Wellbeing: World Health Organization's Composite International Diagnostic Interview, version 3.0.

Mental Health of Children and Young People Survey: Strengths and Difficulties Questionnaire.

Avon Longitudinal Study of Parents and Children (ALSPAC) and Millennium Cohort Study (MCS): Strengths and Difficulties Questionnaire (emotional subscale). Trends by sex unavailable.

Danish National Health Survey: 12-Item Short Form Health Survey, version 2.

Youth Risk Behavior Survey: Survey item: during the past 12 months, did you ever feel so sad or hopeless almost every day for two weeks or more in a row that you stopped doing some usual activities?

National Survey on Drug Use and Health: survey measures the nine symptoms associated with major depressive episode as defined in the DSM-5. Survey questions adapted from the depression section of the National Comorbidity Survey Replication Adolescent Supplement (NCS-A). *2021 estimates are not comparable with estimates from 2019 and earlier as 2021 estimates are based on multimode data collection while estimates from 2019 and earlier are based on in-person data collection alone.
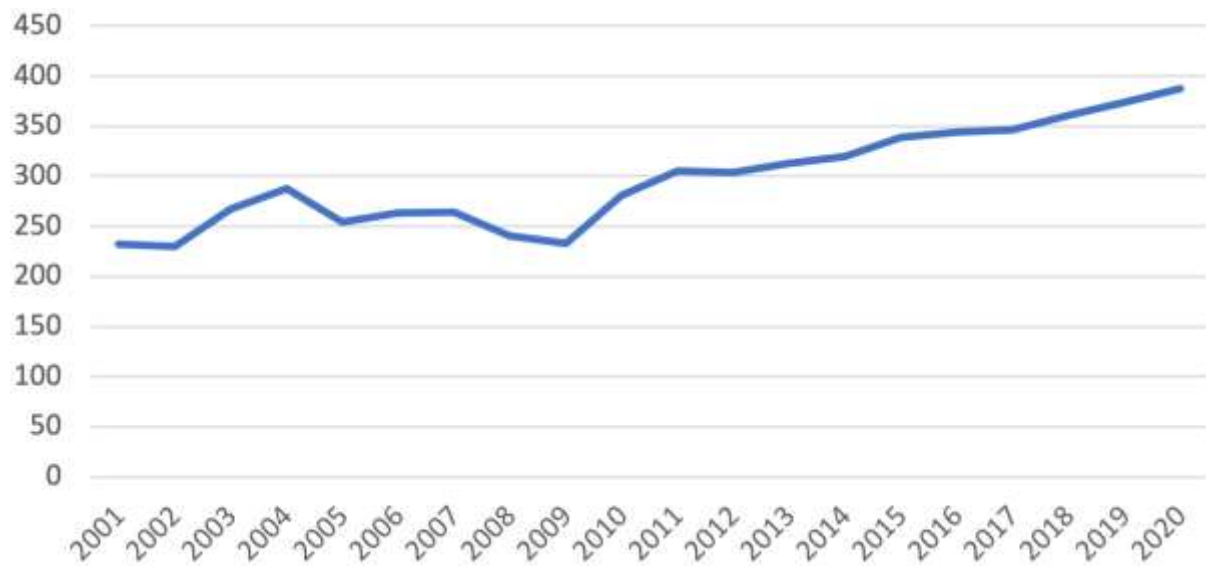
Figure 2: Rate of emergency department visits for self-harm per 100,000 among 12-25 year olds in the US. Data taken from the CDC's Web-based Injury Statistics Query and Reporting System.
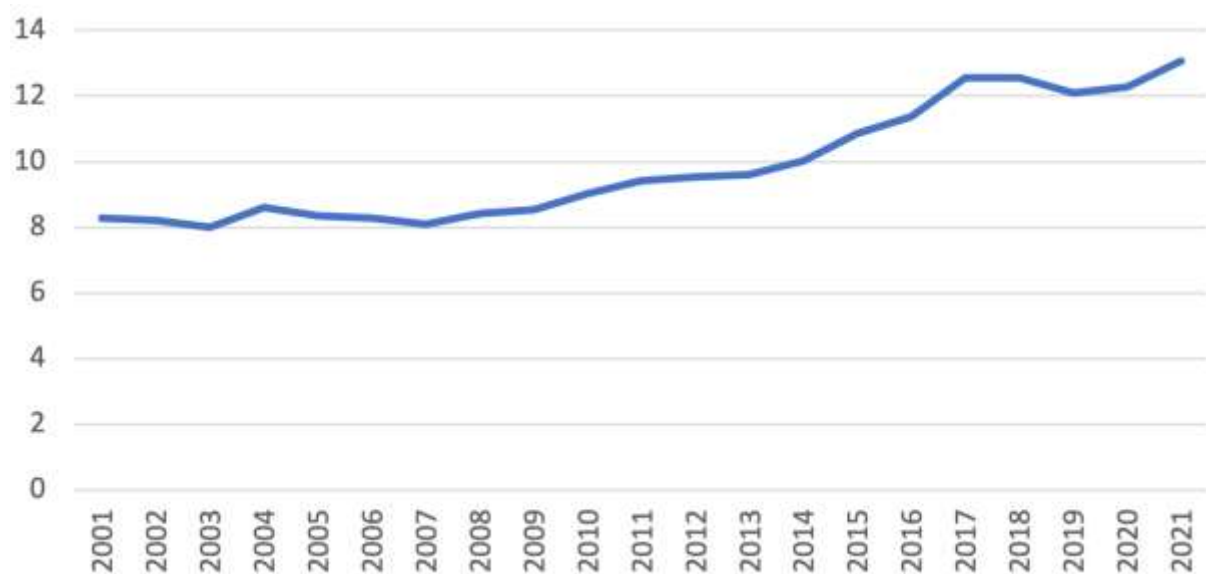

Figure 3: Suicide rate per 100,000 among 12-25 year olds in the US. Data taken from the CDC's Web-based Injury Statistics Query and Reporting System.

The adverse impact of the pandemic on youth mental health is a global trend, occurring in high, middle and low resource settings, [65] and the treatment gap widens across that spectrum. Although some studies early in the pandemic did not report this, [66,67] young people as a cohort experienced a marked increase in distress and disproportionately poorer

mental health outcomes since COVID-19, [68-73] especially those living with social and economic disadvantage. [74] While some surveys have noted an improvement in mental health among young people following a decline at the start of the pandemic, levels of psychological distress remain higher than pre-pandemic levels. [75]

In low resource settings, there is variability in prevalence and time trends of mental illness and related dimensions, such as loneliness, as revealed in a number of recent studies. [76-79] A ecent systematic review of 51 studies of the prevalence of mental health problems in sub-Saharan adolescents showed high levels of mental health need, particularly in vulnerable populations such as those affected by HIV and in post-conflict settings. [80]. The prevalence of common mental disorders in children and young people in Blantyre, Malawi's finance and commercial centre, appear similar to studies from WEIRD settings with similar socioeconomic risk factors. [81] Interestingly, Malawi has developed public mental health policy, including ambitious and targeted 'unconditional cash transfers' to ultra-poor households in order to improve youth mental health, an intervention that shows promise. [82] Similarly, recent epidemiological studies deploying rigorous methodologies have shown high need in disadvantaged populations in Lebanon, [83] in urban and peri-urban youth in Zimbabwe, [84] and in those attending schools in Nepal. [85] The consequences of this picture are enormous, impacting young people, their families and community, as well as the economy at a local, national and global level. Outcomes may be worse than for previous generations, however systematic monitoring of youth mental health trends in low and middle resource settings is relatively lacking in contrast to high resource settings. [86]

Some have questioned whether the widespread rise in prevalence of mental disorders has been inflated through a widening of the boundaries of mental ill-health and by over-zealous or ill-conceived mental health awareness programs, including via unregulated social media platforms such as Tik Tok. This may have led to the inclusion of a cohort of young people who merely suffer from transient or self-limiting distress and may not necessarily have a need for care.,. A related critique in support of this "prevalence inflation hypothesis" suggests that some of the studies indicating high levels of need rely too heavily on self-report and screening instruments which are then used to determine "caseness" through

crosswalks to putative rates of disorder. However, this is an accepted research technique, and there is a range of additional studies using robust interview-based methods which confirm that the major rise in prevalence is largely real and sustained. Greater awareness of mental ill-health might contribute to rising rates either by facilitating help-seeking or even artificially inducing distress through a form of "contagion", that may not in fact need care. [87] Allen Frances in his polemic "Saving Normal", something of a mea culpa for his role in the DSM-IV process, sought to set much narrower boundaries. [88] Lucy Foulkes in her recent book and other work has posed the question of whether, in addition to leading to better detection and reporting of previously unrecognised symptoms and need for care, mental health awareness and universal mental health intervention in schools might also have harmful impacts, including a form of contagion effect, which can also occur via social media. [87,89,90] While a recent well conducted trial failed to support mindfulness as a universal intervention in schools for the primary outcomes of risk for depression, social-emotional-behavioural functioning and well-being, [91] other studies have reported benefits in reducing the number of suicide attempts and severe suicidal ideation[92] and promoting resilience in children exposed to adverse childhood experiences. [93] The evidence generally for universal interventions is weak, though it is challenging to conduct studies with a large enough sample size and consequently sufficient power to detect the very small effect sizes that are achievable if indeed the interventions do work. [94]

While further research may clarify whether there is a contagion effect elevating levels of distress, well-intentioned, yet naïveawareness raising linked with dilute universal "wellbeing" programs in school settings and active screening, in the absence of accessible skilled mental health care for those young people who have already manifest clearcut mental ill-health, can be viewed as irresponsible. Particularly in the light of evidence from methodologically sound interview-based community surveys that the rise in prevalence and need for care is both real and substantial, a head in the sand, or worse, a gaslighting response would be unacceptable and harmful. [4,59,60,62,71,95] The great modern paradox is that, in contrast to past eras, the risk of medical illnesses in young people is dramatically reduced, while at the same time they manifest unprecedented levels of distress, mental ill-health, and mental illness. The erosion of their mental health, alongside their shrinking

social and precarious economic prospects, is beginning to convince mainstream society of the urgentt need to address this global mental health crisis.

The Hero's Journey

A key challenge is how to respond to genuinely increasing levels of mental ill-health that justifies and benefits from evidence-based care, while "doing no harm" through labelling or stigmatising young people who are transiently distressed, or through overtreatment. A second and related challenge is how to ensure that those in need of mental health care can engage in this in a way that protects and enhances their sense of agency. One well-developed perspective that can be deployed is positive psychology. [96-99]

A more fundamental and engaging version of this idea was formulated by the philosopher Joseph Campbell, who recognised the "Hero's Journey" as a monomyth or common theme across all cultures, one with deep relevance to the human condition. [100] It is reflected in many novels, plays, and movies. Perhaps the best known recent examples are "Star Wars" and "Harry Potter". Its ubiquity validates its relevance. This idea has been used therapeutically, as a metaphor in normalising our responses to the level of challenge and threat that we all face during the struggle for maturity. Elements such as "Call to Adventure" (transition to adulthood), "Road of Trials" (struggles during this transition, often navigated with help of experienced older adult), "Achieving the Goal" (actualised adult identity realisation of developmental milestones), "Return" (adopting new adult roles within one's community), and "Application" (making a positive social contribution) will make sense to most people. This creates the space for a positive psychology perspective, that is a strength-based stance to distress and struggle during the transition to adulthood, but one with much greater popular resonance. It also allows us to accept and see value in a soft border, a flexible boundary between mental health and mental ill-health during the struggle, enabling people with and without a need for professional help to reframe their experience. It validates a role not only for the "scaffolding" of the family and the social network surrounding the young person, but also for mental health professionals and treatment of mental "injury" and illness, without these valid needs being perceived as indicating weakness.

Mental distress in response to stressful events reflects a spectrum of underlying processes that current diagnostic systems loosely place in three pragmatic categories: first, a self-limited, non-pathological state (i.e., acute stress reaction); second, a time-limited state where excessive distress is reinforced by preoccupations (e.g., adjustment disorder), with increased risks of progression into the third, which is a pathological "disorder" that can persist beyond the presence of stressors (e.g., major depressive disorder, post-traumatic stress disorder). Initial adaptive stress responses can trigger cascades of changes in networks of symptoms, brain circuits, or molecular pathways that can become entrenched and self-sustaining.

The conceptual blurring between pathological and sub-clinical states, when external stressors are persistent, may increase the use of the "disorder" perspective. The attached stigma may inadvertently impede help-seeking, which is often already compromised. Instead, when population events play a decisive aetiological role, the concept of "psychological injury" would be more fitting when the source of the condition is rightly relocated from the individual to the environment.

Seeing things from this perspective allows us to transcend polarising and unproductive debates concerning labelling and overdiagnosis. The latter have failed to recognise the routine neglect of the need for care, the importance of context, and how this more permeable mindset enables the crucial strategy of early intervention. The Hero's Journey concept thus navigates the space between the concern about labelling common experiences as abnormal and valuing the crucial need for help and support, including expert medical and professional help, however, it has not yet been mobilised for routine therapeutic use. Finally, while it confronts and accepts the extent of the threats and challenges and the possibility of defeat, it holds out the hope of ultimate success even in the darkest times. In this way, it illustrates that resilience, defined as the "capacity of a dynamic system to adapt successfully to disturbances that threaten system function, viability, or development", [101] rather than being an *a priori* quality, actually emerges from facing this inevitable adversity during the journey to adulthood. In highlighting the key role of cultural resources,

supportive environments and mentorship, including professional help, it also enriches the traditional one dimensional and individualistic nature of the popular concept of "resilience" which all too often means that young people tend to be blamed for failure and mental ill-health[102]. The Hero's Journey is also compatible with the concept of post-traumatic growth. [103] The hope this concept nurtures is a crucial element in any effective approach to the mental health care of young people. Haidt[11] has similarly argued that the related concept of "antifragility" [104] applies to the development of children and adolescents. He states that children need to be exposed to setbacks and failures in order to be able to develop strengths and resilience. However, the reality is substantially more complex with both underlying vulnerabilities and the potency and duration of social and environmental stressors influencing whether or not such exposures are health promoting consistent with an antifragile effect, or whether such as with persistent bullying, they can be toxic and even fatal.

Part 2: Conceptual Frameworks and Trajectories

Introduction

As highlighted in Part 1, adolescence and emerging adulthood can be defined as the period of life between puberty and adult independence, roughly corresponding to 10–24 years. [22] This is a period of profound biological (hormonal and neural), psychological and social change. Socio-cultural expectations of this age group differ widely between (and even within) cultures and countries: financial and social independence occurs much earlier in some than in others. Nevertheless, there is some indication that similarities exist between the development of behaviours typical of this phase, such as risk-taking and sensation seeking, across contexts. [105] Emerging adulthood is also a vulnerable period for the onset of mental illnesses: 63–75% of mental illnesses first appear before the age of 25, [7,45,106] with onset during this period associated with greater duration of illness and diversity of comorbid disorders. [45] Furthermore, the physical, cognitive and behavioural differences between young people and adults are likely to influence the way in which mental health problems present and suggest different approaches for interventions. The shifting socioeconomic sands of the past two decades have added another dimension to understanding risk and protective factors in the onset and persistence of mental ill-health. Here, we consider the

range of perspectives relevant to understanding the genesis, complexion, pattern and scale of mental ill-health in young people.

Biological perspective

The start of traditional adolescence and emerging adulthood is characterised by puberty, which results in reproductive maturity. There is evidence that the increase in sex hormones at puberty plays a role in brain development, [107-110] social outcomes[111], and mental health. [112-114]

A rich body of research using brain imaging has demonstrated that the human brain undergoes substantial and protracted development across adolescence. [115] Research studies using magnetic resonance imaging (MRI) have demonstrated structural brain development that is characterised by a decline in cortical grey matter volume from late childhood to the mid-twenties, and a gradual increase in cerebral white matter volume between childhood and mid-adulthood. [116,117] These changes in the brain's macrostructure, as observed in MRI scans, are proposed to correspond to microstructural developmental processes, including the development of axons and the reorganisation of synapses. These processes are crucial for brain development and are mechanisms of neuroplasticity, and are dependent partly on genetics and partly on the environment as well as their interaction. [118]

Different brain regions develop at different rates (Figure 4) [117,119] and mature at different ages. [120,121] For example, on average, subcortical regions involved in emotion and reward processing develop earlier than prefrontal regions involved in decision making and self-regulation, although it should be noted there are large individual differences in this pattern. [122,123]
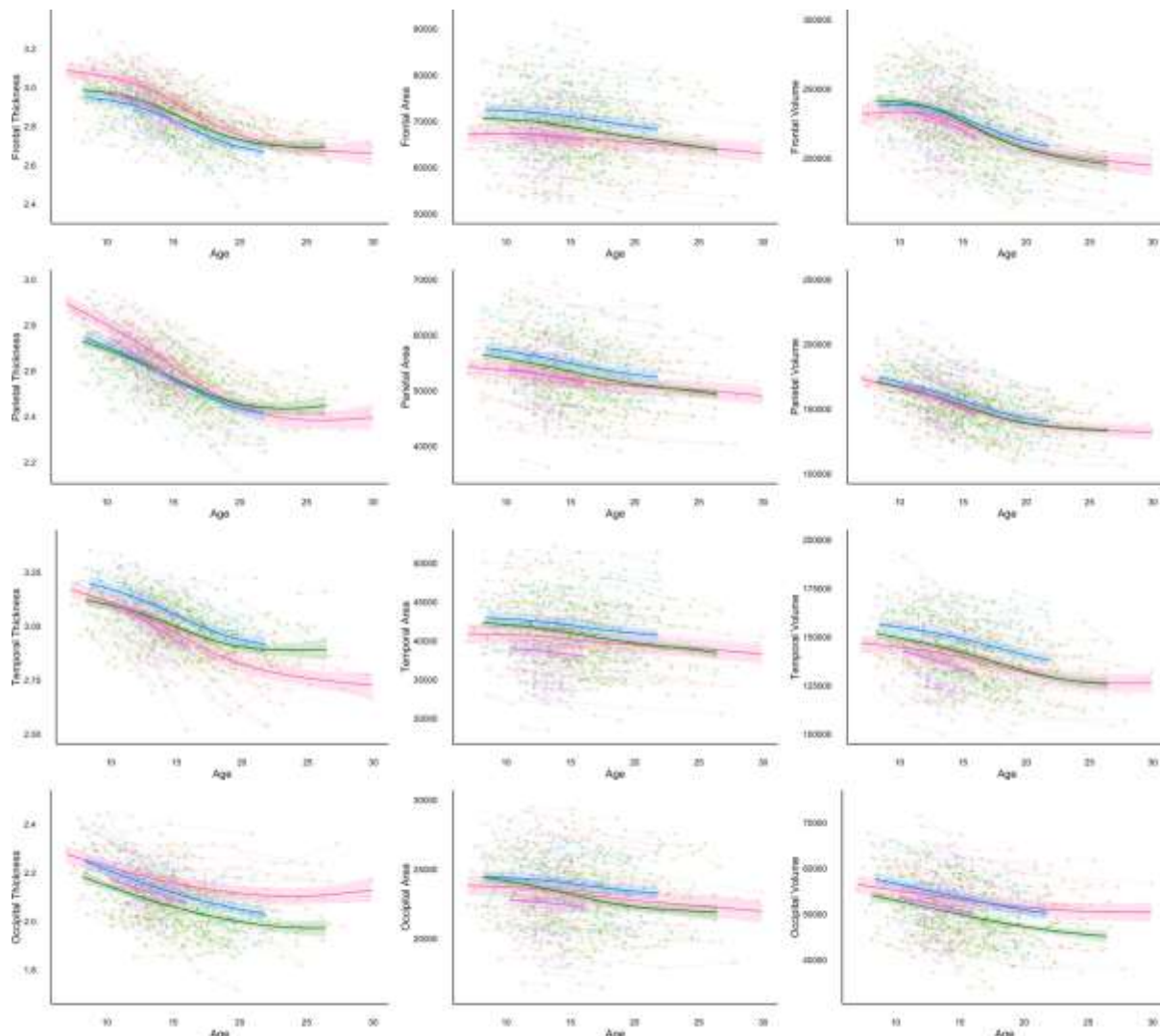
Figure 4: Development of lobar cortical thickness, surface area and volume, controlling for sex, in four longitudinal cohorts (pink, National Institute of Health, USA; purple, Pittsburgh, USA; blue, Oslo, Norway; green, Leiden, Netherlands). Figure reproduced from Tamnes et al (2017) [117] under a Creative Commons Attribution 4.0 International License (https://creativecommons.org/licenses/by/4.0/).

Social and cognitive perspective

Significant changes in social exposure and orientation take place during adolescence as more time is spent with peers than with family[124-127] and the influence of friends or peers increases whilst the influence of parents or adults decreases (Figure 5). [128,129] Adolescents are particularly sensitive to peer rejection[130-132] and social approval. [133] The heightened susceptibility to social influence in adolescence, combined with increased concern about social rejection, increases the likelihood that adolescents will conform to their peers in

order to gain social acceptance and to avoid the 'social risk' of being excluded by their peer group. [134-136]
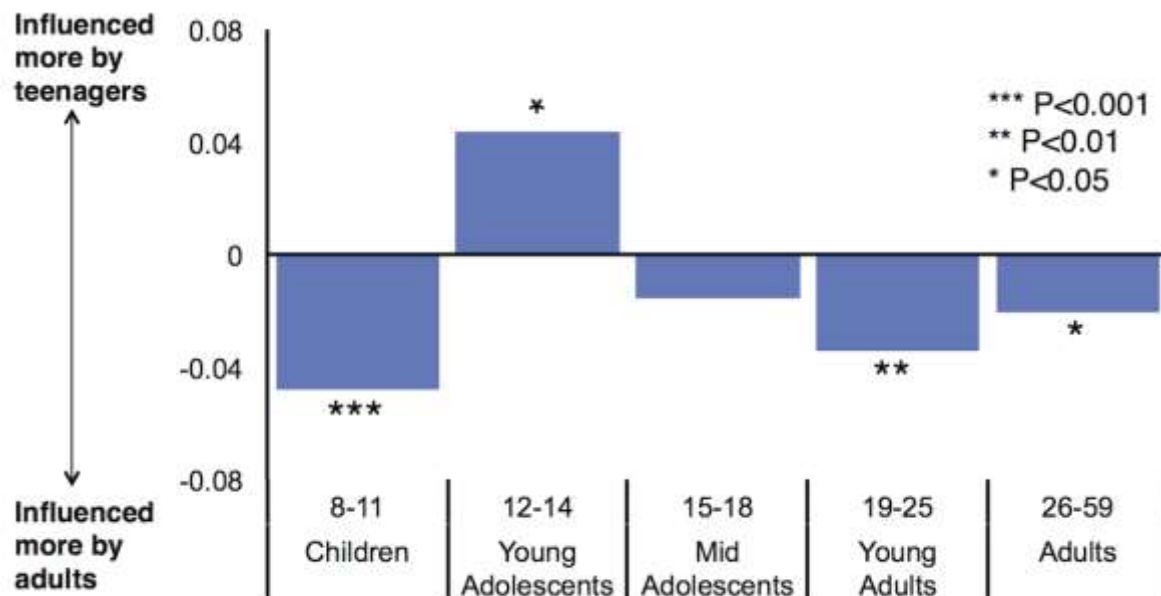

Figure 5: Social influence on risk perception in five age groups. Children (aged 8-11 years), young adults (19-25 years) and adults (26-59 years) were more influenced (purported) by adults than by teenagers. Mid-adolescents (aged 15-18 years) were equally influenced by adults and teenagers. Young adolescents (12-14 years) were more influenced by teenagers than by adults. Asterisks indicate significant differences from zero ($*p < .05$, $**p < .01$, $***p < .001$). Data from Knoll LJ, Magis-Weinberg L, Speekenbrink M, et al. *Psychol Sci* 2015; 26: 583–592. Figure reproduced from Blakemore (2018) [135] with permission.

At the same time, cognitive skills such as planning and future thinking, inhibiting inappropriate behaviour, emotion regulation, decision-making and certain forms of memory continue to improve during adolescence (Figure 6). [137-142] Mentalising, the ability to understand other people's minds and emotions, and the ability to take another person's perspective, are still developing. [143,144] These cognitive advances, at a time when the body, brain and social environment are changing, provide adolescents with the cognitive machinery to reflect on themselves, their place in the social hierarchy, and their futures.
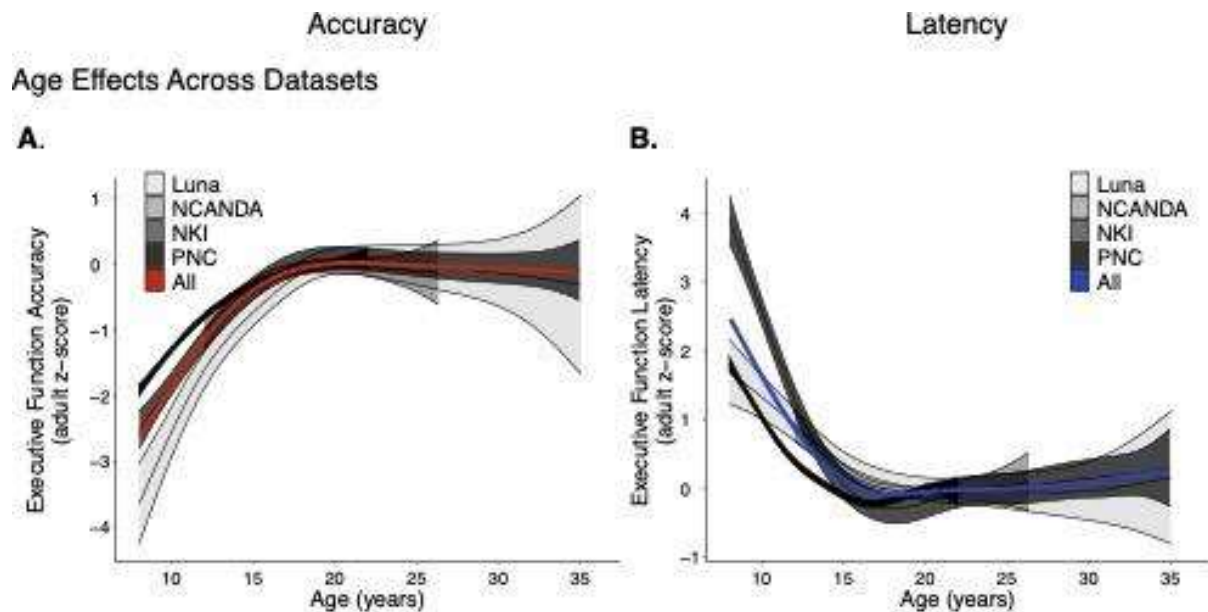
Figure 6: Developmental trajectory of executive function across datasets and tasks in adolescence.
Accuracy (A) and latency (B) composite from four datasets: Luna (N = 196; 666 total visits), National
Consortium on Alcohol and Neurodevelopment in Adolescence (NCANDA, N = 831; 3412 total visits),
Nathan Kline Institute-Rockland Sample (NKI, N = 588), and Philadelphia Neurodevelopmental
Cohort (PNC, N = 9151). Each measure within each dataset is z scored to the performance of adults
(participants 20–30 years old). This demonstrates that performance on executive function tasks
improves (becomes more accurate and faster) during the teenage years, and plateaus in the
twenties. Figure reproduced from Tervo-Clemmens et al (2023) [138] under a Creative Commons
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The boundaries between biological, cognitive, social and cultural changes are not clear cut.
The biological changes at puberty lead to changes in appearance, and this results in young
people being treated differently by society and those around them. As they go through
puberty, young people are often given more autonomy and responsibility, and put under
increasing societal and social pressure to look and act certain ways. At the same time,
environmental input affects the way the brain develops. For example, with changing social
expectations comes exposure to new experiences, such as alcohol and other drugs, which
might in turn influence brain development. [145]

Entering into peer and intimate relationships is a key feature of emerging adulthood and
marks a shift from an exclusive dependence on the family of origin. This results in changes in

the quality and strength of the bonds with parents and siblings and can create tensions and stress for everyone in the family. The scaffolding around the emerging adult is crucial to the safe and successful navigation of this developmental phase but is in flux and constantly evolving. [146,147] If it is fragile or crumbles then this poses risk for mental ill-health. Conversely, mental ill-health, and especially sustained mental illness, can severely damage this scaffolding, causing tensions within the family and the peer network to diminish or even collapse. Positive mentoring relationships beyond the family and surrogate peer relationships can mitigate these effects. [5] The development of a sense of self and identity beyond that of a dependent child is a key developmental task.

One aspect of this is sexual and gender identity. While there is much greater acceptance of lesbian, gay, bisexual, transgender, gender diverse, intersex, queer and asexual (LGBTIQA+) sexual identity and diversity in some WEIRD countries, there is a very long way to go. There is no doubt however that the prevalence of mental ill-health and suicidal risk is substantially higher in LGBTIQA+ and gender diverse young people specifically. [148-150] There has been a significant increase in the number of young people identifying as gender diverse in recent years[151] but controversy has arisen within the medical and psychiatric field as to how to understand (including the reasons for, and source of, the increase) and respond to this trend. [152] Regrettably this issue risks becoming drawn into ideological culture wars, undermining a scientific and human rights approach.

Cultural factors

Cultural factors, and especially the sociocultural landscape that young people grow up in, influence the expression of youth mental health, and can include such diverse factors as religion, cultural traditions, technological change, economic inequality, and future uncertainty. The globalisation of cultural influences mediated via the digital revolution and social media and the advent of powerful influencers may be diluting some of the more traditional cultural factors.   Nevertheless it remains is crucial to move beyond a predominantly Westernised approach to the discussion, [153] since culture can provide a lens through which to better understand how young people think about mental health, whether they seek help for mental health problems, and how young people and mental health

professionals interact with one another. [154] Importantly, many of these cultural impacts can rapidly change, as has been the case for digital communication and social media. Cultural factors, including religion, can have a major impact on the emergence, recognition and interpretation of mental ill-health in young people. For example, there is evidence that our understanding of emotions is dependent on our cultural background; recognition of emotions is better between members of the same cultural group[155], and perceiving and expressing emotions is determined by the prevailing cultural models. [156] Furthermore, the development of these social abilities is strongly influenced by culture via interactions between genes, environment, behaviour and the brain. [157,158] Immigration and acculturation modify and complicate the influence of cultural factors. [159]

Particularly among immigrants, racialised, marginalised and Indigenous youth, [160] cultural connectedness and strong or positive cultural identity help increase resilience, [161,162] self-esteem, self-efficacy, self-clarity, [163,164] life satisfaction, well-being, and mental health. [160,163,164] Cultural identity can also protect against suicide risk, depression, problematic substance use, and other mental ill-health. Using data from 200 Indigenous communities in British Columbia, Canada, Chandler and Lalonde[165] showed that cultural continuity (e.g., cultural facilities, language, governance) was strongly associated with significantly lower suicide rates. Spiritual wellbeing has been found to be protective against depression, but negative religious coping (e.g., feeling abandoned by God) can also negatively impact mental health. [166]

Culture also influences how risk factors interact with social support and help-seeking behaviour to determine youth mental health outcomes. Attitudes about mental health services, such as receptivity to care, anticipated and real negative consequences from others, self-consciousness, and stigma tolerance, have been linked to mental health help-seeking and to the utilisation of formal mental health services. Mental health stigma is often more intense in collectivistic compared to individualistic communities. [167] Non-white Americans often express greater public and/or self-stigma than White American groups, [166] tend to emphasise non-biomedical interpretations of behavioural, emotional, and cognitive problems, and are critical of mental health services. [168] Similarly, undergraduate students in

Japan report greater reluctance to seek professional help than those in America. [169] These intercultural differences result in variation in the timing of help-seeking and from whom that help is sought. Further, factors such as lack of adequate health coverage in countries without universal publicly funded health care, culturally insensitive views by mental health service providers, and the use of culturally inappropriate screening measures and treatment approaches may also serve as institutional barriers to care. [170]

In view of the evidence and studies above, cultural differences help in shaping beliefs and perceptions about mental health, influencing an individual's decision to seek help and choice of a formal mental health provider. Culture must be carefully considered in the identification, development and adaptation of appropriate prevention and intervention strategies. [171]

The downward drift in youth mental health: Global political, socioeconomic, and structural megatrends

The previous set of perspectives may well be evolving over recent generations, but are likely to be responding to other deeper and more potent forces driving the youth mental health crisis. A range of recent global megatrends can be identified as candidates and targets for prevention. Patel (2023)[172] has made a powerful argument from a human rights perspective that asserts the right to be protected from known harms to mental health. He contends that these harms are the result of policies that create and sustain a range of forms of structural forces which undermine mental ill-health. This echoes the work of Wilkinson and Pickett[173] on the impacts of inequality, including intergenerational inequality and wealth transfer, violence of all kinds, the marginalisation of many groups, displacement due to war, conflict and climate. Young people are uniquely sensitive to the prevailing social, political and economic conditions, and structural forces, and their effects endure to influence mental health across the life span. While these forces are not new, there have been major shifts and megatrends with more severe impacts on young people than ever before as the US Surgeon General recognised. [4] Global crises and disasters whether natural or man-made, such as earthquakes, wildfires, tsunamis,warsand conflict, and economic depressions are well known to be associated with predictable harmful effects on thethe mental health of

the population. However it appears that the present mental health health crisis is impacting heavily and selectively on young people and we need to understand why and formulate policies to mitigate it. Vikram Patel's robust stance in the 200th anniversary issue of the Lancet and other recent literature[174] suggests that the appetite for such an approach may be growing.

"It is not possible to act on the goal of mental health as a universal human right without squarely acknowledging how the policies that have contributed to these powerful structural forces are intentional and ideologically motivated. The colonial and neoliberal economic policies that led to the devastation of marginalised populations and environments, and to grotesque levels of inequality, must be called out and confronted. And, as with any human rights discourse, we must acknowledge that such policies are, fundamentally, an ideological and political choice".
Vikram Patel 2023[172]

Four decades of neoliberalism has resulted in what has been termed "precarity", resulting in a growing section of society, "the precariat". [175] In WEIRD countries at least, this political and economic megatrend unleashed in the 1980s has produced rising intergenerational inequality and a serious erosion of job security for young people entering the workforce, wealth transfer from the younger to the older generations, reduced prospects of home ownership with the added insult of a rental accommodation crisis, and rising student debt. [14,176] Alison Pennington, [14] an Australian economist, describes the subjective effects of these changes immediately after finally securing a stable job:

"I'd been deprived of the ability to secure life's basics. I'd been anxious, defensive and sick for so long. That was all I knew. But with a stable job for the first time in my life, I could feel my brain being reconstituted....I gained agency over my life".

She goes on to carefully analyse all the economic forces released by neoliberalism that are heavily implicated in the harm caused to the mental health and well-being of young people. While conditions of work have sharply declined and caused chronic insecurity and distress,

the proportion of young people not in employment, education and training (NEET) is also substantially higher in young people with mental ill-health, reflecting a chicken-and-egg dynamic. [177] A related trend, which young people themselves frequently report is academic pressure, which varies across and within cultures[12,178,179]. Many of these young people are consigned to a life of precarity and marginalisation within the poverty trap of welfare benefits. A caveat here is that these dynamics and welfare systems are less evident in non-WEIRD (or LMIC) countries where most of the young people in the world actually live. The data are not yet readily available to make a judgement.

Climate change is also a significant existential concern for young people. Young people will suffer most because they will have to live through the climate crisis, and there is an implicit pressure on young people to solve it even though political power does not rest with them. Recent studies on eco-anxiety in young people show large individual differences, but generally substantial climate anxiety. [180,181]

Social media use increases dramatically in adolescence, and this too might affect the way that the brain develops and could contribute to social pressures, mental ill-healthand level of life satisfaction (Figure 7). [182,183] The evidence is still emerging, and so far indicates a potentially potent role, however it suggests the relationship between social media and mental health is complex and bidirectional. [183,184] While social media and the rise of smartphones, which now also permeate the societies of young people in low and middle resource settings, [185] offer new avenues for prevention and intervention, there are widespread and growing fears regarding their public health impact on youth mental health. [10,17,56,61,186]While the temporal association is strong, data from longitudinal and well controlled experimental studies are still limited. Nevertheless, there are many who argue that action is urgently needed to regulate this potential source of harm Building upon the work of Jean Twenge[10,17], Jonathan Haidt has argued strongly for this issue to be taken much more seriously as a key megatrend undermining the mental health of children and young people. [11] Similarly the unprecedented economic power of those who control this technical revolution, the so-called "cloud capitalists", who currently lack any constraint, has been exposed in a recent work by Yanis Varoufakis, and the adverse impacts of these

technologies can be linked back to a deeper wave of economic and neoliberal forces. [187]

Haidt and Twenge contend that smart phones are the only change that can account for the timing and pattern of the youth mental health crisis and that urgent action is required on many levels. However, despite the evidence they have assembled, and the consensus among many political leaders and the wider public, the causal constellation is likely to be significantly more complex. The issue risks becoming unnecessarily polarised. Smart phones and social media are likely to be merely one element, even if potent, in a wider and more pervasive set of harmful megatrends which are yet to be fully understand and tamed. [18,56]
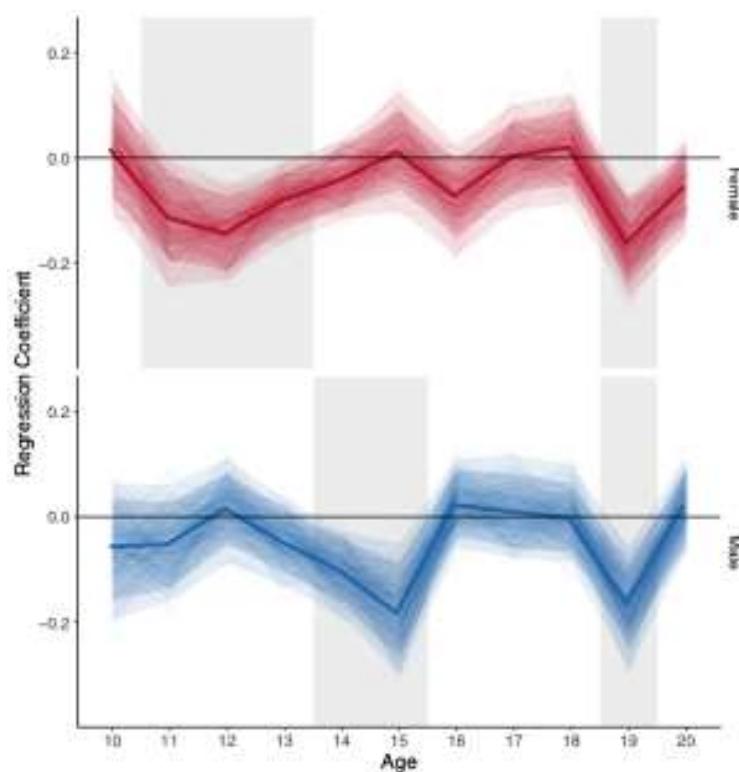

Figure 7: How social media use predicts life satisfaction in longitudinal data from 17,409 participants aged 10-21. Results from the cross-lagged path connecting estimated social media use to life satisfaction ratings one year later, estimated through a Random Intercept Cross-Lagged Panel Model. Results show how much an individual's deviation from their expected social media use at a certain age predicted a deviation from their expected life satisfaction ratings one year later, in females (top/red) and males (bottom/blue). The grey boxes indicate those ages where the path became statistically significant ($p < 0.05$). For females aged 11-13 and 19, a window of sensitivity to social media is shown where increases in estimated social media use from expected levels predicted a decrease in life satisfaction ratings from expected levels one year later. For males, similar windows of sensitivity are shown at ages 14, 15 and 19. Figure reproduced from Orben et al (2022) [183] under a

Developmentally congruent clinical frameworks

Clinical frameworks in youth mental health (and their operationalisation) need to reflect the state of constant evolution and flux which is occurring within the biological, cognitive, and social landscape outlined above. They also need to adopt a preventive and pre-emptive stance. The onset of mental ill-health in emerging adults is complex. Commonly, young people experience a mixture of sleep disturbance, motivational changes, anxiety and mood dysregulation, which influence each other in myriad ways, as emphasised by network theory. [188] These experiences and behaviours are influenced by individual differences in development of self and interpersonal functioning, along with social and cultural variation as to how they are understood and communicated. Symptoms emerge and subside as "microphenotypes", which typically do not follow clear trajectories to discrete diagnoses such as schizophrenia or bipolar disorder: early-phase conditions have pluripotential (multiple end-stage) outcomes, and heterotypy (shifts across diagnostic categories) and syndromal comorbidity are the norm rather than the exception. [45] The need for care precedes the emergence of traditional diagnostic picture or late "macrophenotypes". [189] This contradicts long-standing assumptions that mental disorders constitute stable categorical entities whose form is retained from initial onset to later, more stable presentation. It also highlights the limitation of current diagnostic systems, which are likely to reify (artificial) end points of developmental trajectories.

These patterns of emergence underline an urgent need for novel approaches to define "disorders", "caseness" and "need for care" in young people. Transdiagnostic models[190,191] recognise the fluid nature of mental illness in this age group and make a distinction between early clinical stages, which, are assumed to have lower rates of progression to severe, persistent or recurrent disorders, from later stages, which are characterised by high rates of persistence, impairment and disease extension. [192] Clinical staging[190,193-196] (Figure 8) is one such emerging heuristic framework which allows the boundary between health and illness to be defined and managed such that interventions can be proportional to need and

overdiagnosis, overtreatment and undertreatment can be minimised. [193,195-198] Clinical

staging, with its longitudinal perspective, is congruent and synergistic with many

developmental and related conceptual frameworks, and allows the exploration of

mechanisms underpinning the onset and course of mental ill-health. This framework places

people along a multidimensional continuum of health to illness, capturing elements of risk,

onset, course, and prognosis. Staging frameworks can also guide preventative or therapeutic

interventions: less intensive approaches being appropriate at earlier stages and

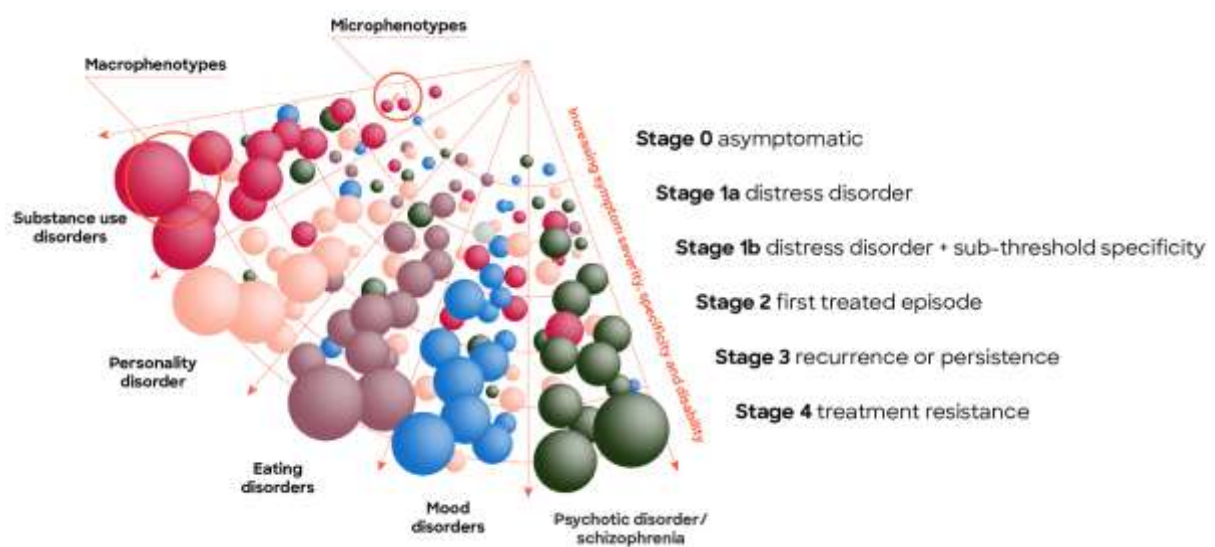interventions with a higher risk/benefit ratio being reserved for later stages.

Figure 8: Heuristic clinical staging model for mental disorders. The model illustrates clusters of early

symptoms (microphenotypes) and their potential progression into clear, and often comorbid,

syndromes (macrophenotypes). Progression across stages is characterised by increasing symptom

severity, specificity and disability (represented by sphere size). Spheres and colours represent

phenotypes. Adapted from McGorry and Mei (2021) [199] with permission.

In addition to their differing symptom presentations and stage of illness, which are often

moderated by their developmental stage, young people also require very different

approaches to and cultures of care based on their developmental stage. For example, the

needs of a 19-year-old with recent onset of illness are radically different than those of a 45-

year-old with long standing and disabling illness, in terms of psychosocial support, approach

to psychopharmacology, medical needs, educational, vocational and employment

assistance, family support and hope and optimism for recovery. Such patients should not be

mixed in residential or community care. Clinical services (and indeed the entire system more broadly) therefore need to reflect this differing set of needs and the vital need for realistic optimism and hope, but also how services are delivered – available at times that suit a young person's lifestyle, and in a setting that is more welcoming, holistic and less narrowly clinical. [29,200-202]

Together, these concepts and approaches can set the scene for the development of mental health care for young people that is fit for purpose through being sensitive to their specific needs, and focused on providing a continuum of high-quality interventions that facilitate recovery and prevent persistent impairment.

Part 3: Models of Care

The origins and status of contemporary mental health care

Mental health care around the world has been characterised by severe misunderstanding, prejudice and neglect, which sadly continues to this day. [203] Only 2% of health budgets globally are devoted to mental health care[204] and, even in the richest countries, less than half of the need is addressed, while quality of care lags well behind that found in physical health care. [205] People with a range of mental illnesses die 15-20 years earlier than the general population, [206] primarily from physical morbidity, and the seeds of this premature mortality are sown from the onset of illness and often even prior to that. Suicide is also much more prevalent in those with mental illness than in the general population, [207] which represents a major source of preventable premature death that remains a low priority in all regions of the world. Many (physical) non-communicable diseases (NCDs) which, due to their much later timing in the life cycle, have less impact on the health and wealth of society, remain a dramatically higher priority in health budgets, primarily for political and emotional reasons, notwithstanding diminishing returns.

The neglect of mental illness as a major source of preventable premature deaths has been described as a scandal. [208] Until recently, most societies only responded to severe forms of adult mental illness and did so through the 19th century asylum model, which, when it

began, was a humane advance. [209,210] A global wave of deinstitutionalisation has swept this model away in many WEIRD nations\HICs (but not all) with the goal of integrating mental health care with physical health care. Unfortunately, so far, this reform, in many respects, has failed. A successful outcome to the dramatic reduction in residential hospital care, which was the hallmark of deinstitutionalisation, was wholly dependent upon the creation and growth of a well-designed and funded ecosystem model of community-based health care, stable and secure housing and financial security to replace the old asylums. [211] This failed to systematically occur in any highly resourced country, and cramped and poorly designed general hospital inpatient units and emergency rooms have generally been overwhelmed and unable to provide humane evidence based care. [212,213] The new adult systems continue to be largely restricted to middle-aged and older adults with persistent and disabling illnesses, meaning that only those younger people who display extreme problems or risk, or those who accumulate a track record of chronic disability, are able to force their way in to secure even a time limited tenure of care. This analysis is not to suggest that poor access to inpatient or residential care for young people is the major flaw of the post-institutional era, quite the contrary. It is the failure to assemble modern systems of community based care offering early intervention and evidence based care that has created the systemic dysfunction, unnecessary suffering and widespread unmet need that now exists.

In parallel, child and adolescent psychiatry has emerged as a model of care in mostly HICs and high resource settings . However, it is sparsely funded, even within the already under-resourced mental health care system. In LMICs, Child and Adolescent Mental Health Services (CAMHS) hardly exist except perhaps to an extent in higher resource segments within these countries. Even in the highest resourced countries, these services are overwhelmed, with only a small percentage of children and adolescents able to gain any access to care. [214] Recent studies have confirmed that even when care is accessed from CAMHS services, very few patients make a successful transition to adult mental health services, since that the destination for that transition is to traditional older adult models of care that are not personalised to the clinical and development needs of the young person. [215,216] For example, the TRACK study in the UK highlighted the damaging gap in care

between the upper boundary of child psychiatry at 16–18 years and the lower boundary of adult psychiatry at 18 years, defined by educational and legal parameters rather than health or developmental needs. [216,217] The European MILESTONE study, recruiting from 39 services across 8 countries, assembled a cohort of 763 young people in transition from child and adolescent mental health services (CAMHS) to adult mental health services (AMHS). [218] The MILESTONE study confirmed that only 19·6% transitioned to adult services after reaching the upper age limit of CAMHS (either at 18 years or 16–19 years), while 26·8% remained in CAMHS for a period post 18 years. The mental health of those who left care completely did not deteriorate and they did not have a higher use of other health services. Functional outcomes were less clear however, as was future need for care. [218] The representativeness of the sample is unclear, and possible selection bias limits the generalisability of the findings. Furthermore, the appropriateness and effectiveness of the care provided in the adult system of care for those who did transition was not examined. The MILESTONE study adopts the mindset of the status quo and studies how well it operates with an implied stance of incrementalism. In contrast, various alternative models of service provision have been developing over the past two decades to address the issue of optimal transition and the much more salient issue of need beyond the minority able to access CAMHS or AMHS during the 12–25 age period. [219]

A paediatric/adult model ignores the epidemiology of mental illness, with the peak incidence and prevalence rates across the late adolescent and early adult phase of life. [7,45] Such a model also fails to take account of the myriad and important neurobiological and psychosocial developmental processes that extend across and throughout this period, well beyond the age of 18 years (see Parts 1 and 2). [21] The result is that the very group of patients with the greatest need for care and the best prospects of responding to early intervention and treatment, namely emerging adults, have the worst access to care across the whole lifespan. [216,220] In HICs until recently, the system has been weakest where it needs to be strongest. [220] In LMICs, any system for children and young people is typically just missing.

Status quo for young people

Notwithstanding the debate around the boundaries of the need for care, there is robust evidence that even in the high resource settings of the world, a significant proportion of young people with mental ill-health do not seek treatment. [221,222] When young people seek treatment, they face ballooning wait times due to high demand and limited resources. [223] Waiting for care is associated with significant adverse consequences, with a recent UK survey finding that 58% of young people experienced a deterioration of their mental health and as many as 24% tried to take their own life while they were waiting for care. [224] Treatment is likely to be less effective as in most health care if the illness becomes entrenched[225]. For those accessing services, quality of care is patchy at best, and attrition rates are high, with a large study reporting a 42% drop out of treatment by the third therapy session. [226] Young people who do successfully complete treatment rarely receive ongoing relapse support; yet up to 80% of young people with complex mental health conditions experience repeated relapses. [227,228] In-depth reviews have exposed that the mental health system is difficult to navigate and young people experience major barriers in transitioning between services, leading to poor continuity of care and disengagement from treatment. [229] Finally, even when young people receive established mental health interventions, their effectiveness is limited, with between one and two thirds of those receiving interventions not experiencing symptom reductions. [230] Key limitations on effectiveness include slow progress in discovery of new treatments, poor fidelity to existing evidence based care, and insufficient treatment continuity, intensity and personalisation. Yet these are all flaws that are capable of being effectively addressed.

In low and middle resource settings, numerous barriers exist for both the supply and demand of mental health care. [231] In terms of resources, these settings tend to be characterised by constraints such as inadequate funding and/or limited spending on mental health, a paucity of mental health care workers, and poorly integrated health systems which contribute to inaccessible mental health care especially for adolescents. Zhou et al. (2020) [49] in a recent review of child and adolescent mental health policies in low and middle resource countries identified numerous challenges related to policy development and implementation in these countries. These included poor public awareness and low political

willingness, stigma against mental health, cultural biases against children and adolescents, lack of child and adolescent mental health data, shortage of resources and international support resulting in decreased local responsibility and unsustainable programmes. As a result of these challenges, fewer people seek professional help in low and middle resource countries as compared to high resource ones and when they do, there are long delays with few and variable pathways to accessing care. Low and middle resource countries are culturally, socio-economically, and linguistically diverse regions, making it significantly challenging to identify strategies that are culturally sensitive and contextually relevant. Nevertheless, such efforts are underway, benefiting from the work of the wider global mental health movement, but different strategies which can be augmented over time will be needed.

A global challenge

To address the needs of young people for mental health care we must take a consciously global perspective, since nearly 90% of the young people in the world aged between 10 and 24 years live in what are classified as LMIC or Low and Middle Income Countries. [232] The UN and the World Bank has for many years continued to divide the world into high, middle or low income countries. With the economic growth and increasing wealth, however poorly distributed within countries due to rising inequality, this model of categorisation is being increasingly regarded as obsolete, especially for mental health. Emerging concepts, touched on earlier, include the categorisation of countries as WEIRD (Western, Educated, Industrialized, Rich and Democratic), or non-WEIRD, and the related concept of the "Global South", introduced as a value free alternative and adopted by the World Bank. Countries of the Global South have been described as in the process of industrialising, are largely considered to have lower-quality democracies, and frequently have a history of colonisation by Northern, often European states. Rising wealth across the world in recent decades, at least pre-COVID, resulted in a shift such that only 9% of countries fall into the original low income category as defined by the late Hans Rosling, who had mapped this progress. [233] A better concept for service planning is low, middle and high *resource settings[234]*. The erstwhile high, middle and low income, and even the WEIRD vs non-WEIRD, countries now differ only on the relative proportion of these resource settings which lie within their

borders. When it comes to the global population however, the Pew Research Centre estimated that, in 2020, most people were either low income (51%) or poor (10%), 17% were middle income, 15% were upper-middle income and 7% were high income. [235] The proportions will differ as mentioned from country to country and are subject to change over time.

Green shoots of reform and maturation

Several factors have combined to change the landscape and provide an avenue for genuine progress over the past 30 years. Firstly, the consistent evidence that the early intervention for psychosis movement provided an optimistic, evidence-informed model that bridged child and adult mental health services and produced better outcomes was a confidence building steppingstone. [225,236,237] A series of landmark studies revealed that reduction in treatment delay improved long-term outcome, [238] that early intervention in psychosis services achieved improved symptomatic and functional outcomes and lower suicide rates over the first 2–5 years post diagnosis, and that transition to psychosis from the Clinical High Risk or Ultra High Risk stage of illness to First Episode Psychosis could be delayed and ameliorated. [239-241] Recent evidence highlighted that this stage-linked stepping stone model is by itself insufficient and must be complemented by the safety net of ongoing high-quality care to sustain and build on these gains. [242] Secondly, the epidemiology and the changing landscape of the developmental transition to adulthood became much more obvious. [21,106] Finally, the accumulating evidence of a deterioration in the mental health and well-being of young people (see Part 1), with rising incidence and prevalence rates, has become impossible to ignore.

Slowly but surely, a broad-spectrum youth mental health approach has emerged and is gaining momentum in many high-resource settings, in an increasing number of WEIRD countries. [202,243] These have generally comprised enhanced versions of primary care which offer "stigma-free" or "soft entry" to care, often with a lay young person and/or clinician as first contact point, yet with mental health and other needs-based expertise also embedded. This has been supported by the International Association for Youth Mental Health (www.iaymh.org), a network of academics, health professionals, educators, young people,

families and other leadership and constituencies. Integrated youth primary mental health care lies at the heart of this reform front with a focus on the age group 12–25 years, challenging the deeply disruptive and harmful transition point at 18 years. [202,220,244] Primary care has been the fulcrum around which the World Health Organization (WHO) has built its strategy for global mental health care, [245] although primary care may mean different things in different cultures. In youth mental health enhanced primary care offers great advantages as an affordable low-stigma foundation on which to build many other features adapting to local resources settings, financial models and cultural dimensions. [202] A primary care model drawing on the richness of lay community human resources wrapped around clinicians with digital support where possible is more achievable in settings where investment in mental health care is at best modest. However, ultimately, we have to acknowledge that primary care alone is only the first building block, since many young people require more intensive and expert care to recover from the more persistent, complex or severe forms of illness. [246] In high resource settings within some WEIRD countries, it is becoming possible to design and aspire to much more comprehensive models of care for 12–25 year olds that extend from the community through primary care to secondary and tertiary levels of sophisticated quality care integrating both face-to-face and digital support. [220,229,247,248] Yet such specialised and sustained expert community mental health care to back up the entry-level primary care models has not yet materialised even in WEIRD countries.

Realigning the focus to encompass both the adolescent and emerging adult years necessitates a new system of care that is developmentally and culturally appropriate and that recognises youth-specific biopsychosocial issues and the patterns of mental health symptom emergence and comorbidity. [220,244] The World Economic Forum has recognised the need to prioritise and build momentum in developing a youth-specific system of care and, together with Orygen, has produced a blueprint for addressing this global challenge based on review of the evidence and extensive consultation with young people and other key stakeholders across the world. [29] The resultant framework specifies key elements of youth mental health care (Panel 2), which, overall, highlight that services must be co-designed and highly accessible in the community with barriers to care minimised (including a de-emphasis on formal diagnosis), where all young people and their families feel welcomed in an

inclusive, positive and non-stigmatising environment. [201] Consistent with clinical staging, holistic, safe, stage-specific and evidence-based care should be provided at the earliest opportunity. [195]

Panel 2: Key elements of youth mental health care

- Community awareness, education and advocacy especially for prevention and the social and economic determinants of mental ill-health
- Youth engagement and participation (including peer workers) at all service elements to ensure that services are youth-friendly and stigma-free
- "Soft entry" to care that is rapid, easy and affordable (e.g., self-referral and drop-in services that are free or low-cost and in accessible locations with non-stigmatising branding and non-clinical ambience). Mobile outreach and detection strategies combined with community education programs to case-find for certain hard to reach and engage diagnostic subgroups notably within psychosis and eating disorders
- A holistic and optimistic approach to prevention and early intervention that offers evidence-informed care, proportionate to stage of illness and guided by shared decision making
- An integrated practice unit or "one-stop shop" that is organised around the needs of young people and provides the full cycle of care via a multidisciplinary team of clinical and non-clinical staff, ideally in a single location
- Integration of mental health, physical health, substance use services, and educational and vocational support
- Strong connections with schools and tertiary educational organisations
- Integration of digital support across all stages of care (entry, blended models of care and post-discharge) as well as prior to entry to face-to-face care
- Youth-specific care that is inclusive and culturally and developmentally appropriate, reflecting the epidemiology of mental illness and the specific needs associated with the life stage of emerging adulthood
- This involves careful attention to issues of privacy and confidentiality while ensuring that the scaffolding of the support systems around young people, notably family, educational and employment structures, are engaged and supported
- Family engagement and support, including family peer workers
- Seamless transitions into and out of services (e.g., when transitioning from services for younger children or into services for older adults)
- Continuous learning and improvement through auditing, evaluation and workforce development

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Layers and stages of care

The collaborative global effort to create a framework for youth mental health went beyond principles in identifying key building blocks which have universal relevance across all resource settings. These include 1) mental health promotion and community awareness; 2)

prevention programs; 3) integrated primary youth mental health care; 4) secondary and tertiary care; 5) school and university settings; 6) integrated digital mental health platforms; and 7) multidisciplinary workforce, volunteers and peer workers. The implementation of these components will vary according to the level of resources available (Table 1). In a fully-fledged model, which will require higher levels of resources, vertical integration of services and settings – from the community through primary care and to secondary and tertiary levels – is essential to eliminate fragmentation for all young people and their families accessing mental health care and to effectively meet the needs of those young people experiencing severe, complex and persistent mental illness in a proactive, pre-emptive and proportional way (Figure 9).

Table 1: Implementation of integrated youth mental health care according to level of resource[234]

	HIGH-RESOURCE SETTINGS	MEDIUM-RESOURCE SETTINGS	LOW-RESOURCE SETTINGS
COMMUNITY	● Programs to address the social and economic/commercial determinants of health, which include mental health: environment and climate; housing security; intergenerational inequality and other aspects of socioeconomic inequality. ● Community education and development		
	● Early detection and, in certain scenarios, screening programs ● Prevention programs (e.g., anti-suicide, anti-bullying, anti-maltreatment, harm reduction for substance use) ● Mental health promotion programs (e.g., wellbeing, stress management, social connection, physical health, nutrition) ● School, university and workplace awareness, mental health promotion, prevention, and	● Prevention and school-based programs (including those delivered via social media)	

	● early detection programs		
	● Digital mental health platforms		
PRIMARY CARE	● Horizontally integrated youth (12–25 years) health and social care platforms as "one-stop shops"	● Integrated youth health and social care platforms as "one-stop shops"	
	● Peer support and lay volunteers: "Friendship Bridge" ● School and university mental health services		● Volunteer, peer or lay worker programs (Friendship Bench/Bridge concept)
	● Digital interventions and telehealth integrated with primary care		● Digital interventions, telehealth platforms, and social media
SECONDARY CARE	● Multidisciplinary youth mental health systems providing face-to-face and online care closely linked to primary care and community platforms ● Complementary, synergistic and integrated digital platforms, including those targeting comorbidities that are not the primary focus of care	● Multidisciplinary community mental health teams (face-to-face or online) ● Complementary, synergistic and integrated digital platforms	● Primary care health professionals, including general practitioners and volunteers, trained in youth-friendly practice and mental health skills, providing care within mainstream community primary care settings with face-to-face, telehealth and digital options
TERTIARY CARE	● A suite of specialised, co-designed youth inpatient and residential services linked to acuity and stage of illness ● Home-based acute care and assertive community treatment, including 'after care' following self-harm or a suicide attempt ● Diagnostic stream expertise (e.g., psychotic, mood,	● Inpatient services distinct from adult facilities and home-based acute care if this is not feasible ● Integrated, blended, digital and face-to-face support when feasible	● Home-based acute care with telehealth backup systems

	personality, substance use, and eating disorders) ● Integrated, blended, digital and face-to-face support when feasible		

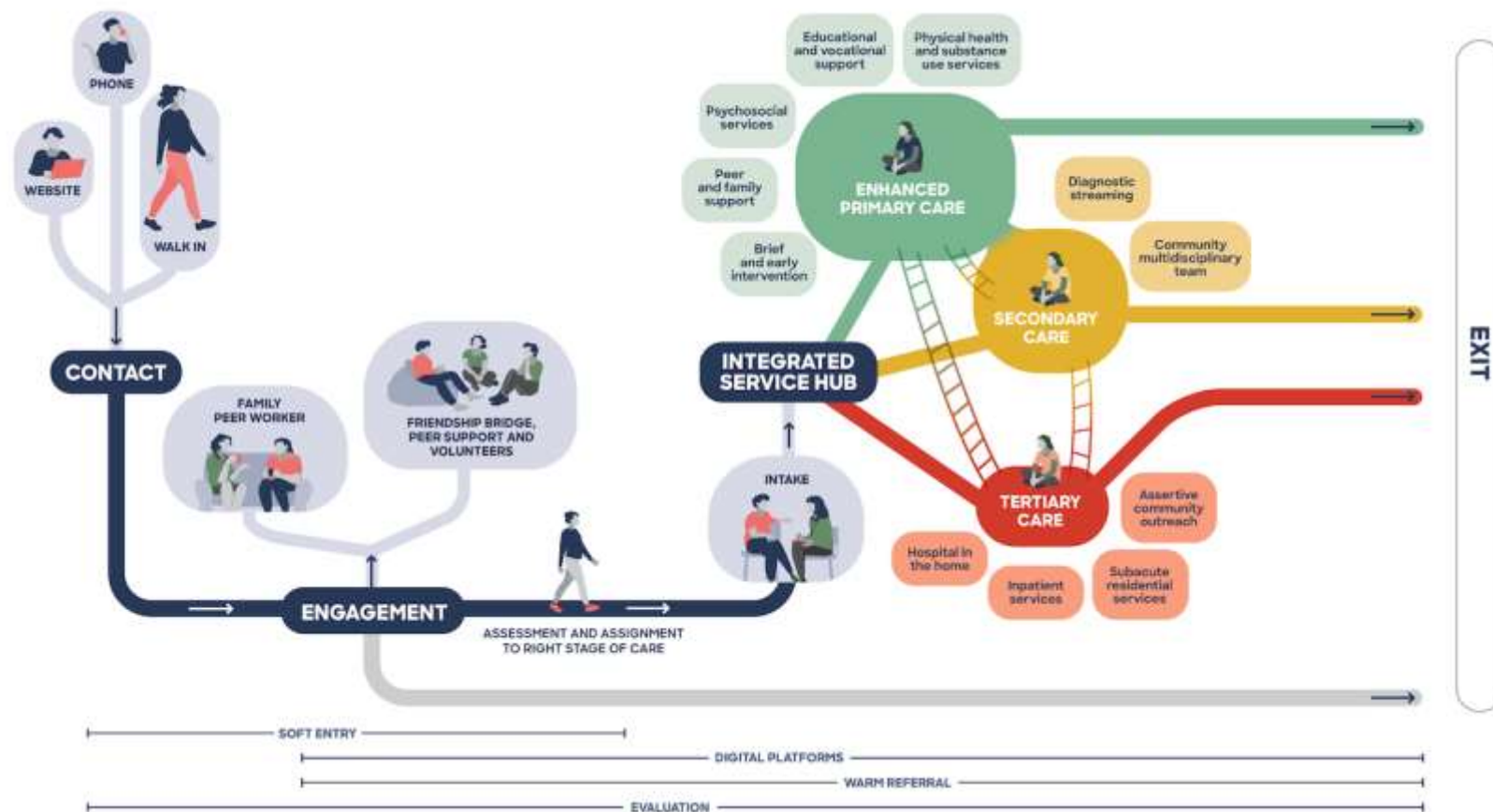Adapted from McGorry et al (2022) [202] with permission.

Figure 9: Integrated youth mental health care model. Young people and their families can access care via a range of methods, including website contact, phone contact and walk in. Service entry should be welcoming and stigma-free, with barriers to care eliminated or reduced ("soft entry"). For some young people, having a conversation with a peer worker or volunteer (friendship bridge) may sufficiently meet their current needs. For others, they are assigned to the right level of care (primary, secondary or tertiary) based on their presenting needs, following assessment by the intake team. As their needs change, young people are able to move between these levels of care with supported transitions and seamless referrals.

Mental health promotion and community awareness

Population health initiatives that educate the public to recognise and appropriately respond to the early signs of mental ill-health in young people are an essential first step in alleviating the burden of mental ill-health and improving help-seeking behaviours. [202,244] Strategies may include mental health promotion interventions, [249] self-help strategies, [250] community awareness campaigns, [251] and anti-stigma programs. [53] In many parts of the world, stigma and lack of knowledge of the concepts and causes of mental ill-health are widespread and there is a need to respect and work with religious and other traditional perspectives to make progress.

Adolescent and youth versions of mental health first aid have been developed and evaluated in the US and Australia, with review findings indicating benefits for participants who received mental health first aid training; [252] however, improvements in the mental health of young people who are the recipients of aid have not been found. [253] As referred to above, it has been hypothesised that awareness raising, particularly universal strategies within schools, may be increasing anxiety and leading to a contagion effect, which might be inflating levels of distress and mental ill-health. [87] This is a hypothesis that requires testing, though universal strategies have a place in suicide prevention, [254] and all the evidence to date indicates that this hypothesis is unable to account for the extent of the rise in prevalence[61,255-258] and the optimal approach may be to combine evidence based universal strategies with other effective strategies (especially targeted interventions). However, this work does highlight the diluting effect of universal approaches on the capacity to respond to the substantial subset of young people with more severe and persistent mental health conditions. [259]

The engagement of young people with lived experience of mental ill-health is a critical and powerful ingredient to promoting community awareness and reducing stigma. [53] The Batyr program in Australia is one example, [260] which was created by young people for young people to reduce stigma and promote help-seeking within school and university settings. This engagement requires capacity building and training to ensure that young people with lived experience of mental ill-health are well supported and feel safe in leadership and advocacy roles. [261] Orygen has recognised this need and recently launched two sets of fellowships (the Orygen Global Youth Mental Health Advocacy Fellowship and the ASEAN-Australian Youth

Mental Health Fellowship), which provide 18–30 year olds with advocacy education and training, including expert mentoring, peer mentoring and contact with leaders in global mental health. In lower resource settings, the 'It's Ok To Talk' initiative by Sangath in India advocates for sharing personal mental health narratives of young people to address stigma and promote wellbeing through a digital storytelling website (www.itsoktotalk.in). The programme has included young people in various capacities as youth advisors, as storytellers through a virtual mental health museum (www.mannmela.in), and as evaluators analysing key messages derived from narratives received by the platform. [262] Recent developments include the involvement of youth in the co-design, development, delivery and evaluation of a peer-delivered storytelling intervention targeting depression, anxiety and social disability among 16–24 year olds (www.sangath.in/baatcheet).

Prevention

It is clear that an urgent and global response is needed to reduce the burden and rising incidence of youth mental ill-health (see Part 1). [4,263] A crucial distinction needs to be made between universal interventions targeting the harmful megatrends identified earlier and more traditional social determinants of, and risk factors for, health and mental health. While some advances have been made in characterising risk factors and social and economic determinants of mental disorders (e.g., ethnicity, poverty and social adversity, housing insecurity, trauma, war, forced migration, neighbourhood deprivation, social support, education, physical health, and parental mental illness), [52,264] there is a great deal more to be understood. Candidate risk factors that may have contributed to rising rates of mental ill-health have been proposed and involve recent social, technological and economic megatrends (see Part 2). Of course, many of these potential universal strategies are beyond the scope of the health portfolio. In addition to childhood, adolescence and early adulthood are sensitive periods when risk factors (e.g., childhood maltreatment, peer victimisation and bullying, and substance misuse) can increase vulnerability to mental illness with long-term consequences. [264] Thus, prevention targeted at risk factors within these developmental stages may be more effective in the short and long-term.

A missing element to the implementation of large-scale and long-term prevention strategies is political will (see Part 5) [265] as well as adequate and effective financing and economic evaluation frameworks. [266] Preventive strategies must span all levels of prevention (universal, selective and indicated) and extend across all stages of illness, as is the case for other NCDs. [267] Although indicated prevention is currently the most promising avenue for preventive efforts, [191,268] universal and selective interventions also have value. [269,270] For adolescents and young adults, strategies that are focused on promoting resilience and exercise and preventing maltreatment and bullying, substance use, self-harm and suicide may be useful and contribute to improved mental health. [203,264,269] Universal and selective interventions are effective in young people for alcohol use, psychological distress, anxiety features, affective symptoms and other emotional and behavioural problems, but not for eating-related problems. [270] However, selective programs that are lifestyle modification and dissonance-based may reduce the onset of eating disorders. [271] Other specific preventive interventions that have been found to be effective include psychoeducation for affective symptoms and psychotherapy for anxiety features. [270] Regarding indicated prevention of psychosis, pairwise meta-analyses support the efficacy of cognitive-behavioural interventions in reducing transition to psychosis in individuals at ultra high risk for psychosis. [272,273] Although network meta-analyses suggest a lack of evidence for the superiority of any one type of intervention, [272,274] the included trials indicate that transition rates are reduced at a group-level. [275] Interventions that result in improvement do not appear to be syndrome specific, and so far fall short of achieving full symptomatic and functional recovery. This was demonstrated in a large adaptive trial (published after these meta-analyses) comprising support and problem solving, cognitive-behavioural case management and fluoxetine. [276] Although group-level improvements in functional and symptomatic measures were found, remission rates were low and relapse rates were high, indicating the need for treatment innovation in the ultra high risk for psychosis field, and the identification of treatment relevant subtypes. [276]

Integrated primary youth mental health care

As the WHO has highlighted for many years, the fulcrum for mental health care globally is located in primary care[245] and this is where youth mental health reform has made most progress to date. [202] Integrated primary mental health care has been proposed as a solution to

reduce service fragmentation and maximise outcomes due to its focus on patient-centred care delivered by a co-ordinated multidisciplinary team of clinical and non-clinical staff, preferably in a single location. [200] Both young people and service providers have endorsed an integrated service model for youth mental health. [277,278]

Within the last two decades, a range of integrated youth mental health care services have emerged internationally, although reform has largely occurred in high resource settings (Table 2). [202,243,279] The Australian 'headspace' model (Panel 3), created in 2006, has been a prototype for global reform. headspace is a national network of youth-friendly "one-stop shops" that provide young people with a range of health and social services, including mental health, drug and alcohol education, physical and sexual health, educational/vocational support, and integrated digital support. [201,248] Other jurisdictions – notably, Ireland, [280] Canada (Panel 4), [281-283] the UK, [284,285] Denmark, Singapore, [286] the US, the Netherlands, [287] Japan, [288] Korea, [289] Israel, [290] Hong Kong, [291] Iceland, France[292] and New Zealand[293] – have implemented variations of similar models that have been adapted to meet local need as well as cultural, workforce and financial factors. Common across these services are the goals to reduce barriers to care by delivering mental health services that are youth-friendly with youth and family involvement, easily accessible in the community ("no wrong door") and low-stigma, and to provide seamless and holistic care during the transition from adolescence to early adulthood. [202,279,294] Co-design, where the model of care benefits from the ideas and views of young people with lived experience of mental ill-health, and youth partnership, where young people have an ongoing role in the operation of the service, are underlying principles and are essential elements for building a trusted brand. [201,202,279]

Table 2: Characteristics and outcomes of youth mental health services

Service	Year established	Country	Service description	Number of centres	Target age (years)	Number of young people accessing service	Key outcomes
Youth One Stop Shops[293]	1994	New Zealand	Wraparound health and social care	14	10-25	11,430 occasions of service (mean, per centre/year)	• Young people (94%) and stakeholders (89%) report that the service is effective in improving health and well-being
Maisons des Adolescents[292,295]	1999	France	Integrated youth health care service	104	11-25	700-1,000 (per centres/year)	• Young people report that the service contributes to their well-being • Professionals report that the service responds to individual situations and helps to prevent deterioration
headspace[296-299]	2006	Australia	Enhanced primary health care service offering integrated care across four core streams – mental health, drug and alcohol, physical and sexual health, and vocational supports	154 (+10 upcoming)	12-25	106,574 (2020-2021)	• Effective in increasing access to services • 74% of young people have high or very high levels of psychological distress at entry • Post-treatment: decreased psychological distress (47%); improved well-being (82%); significant symptomatic and/or functional improvement (60%); significant reductions in suicidal ideation and self-harm; significant increase in the number of days working or studying; reduced impact of mental health issues on work and study (83%) • 88% satisfied with the service • Cost-effective

Jigsaw[300-302]	2008	Ireland	Youth mental health service focused on prevention and early intervention	14 (+1 upcoming)	12-25	>44,000 (since 2008)	• 52% of young people have moderate-severe or severe levels of distress at entry • Psychological distress post-treatment: 62% aged 17-25 showed reliable and clinically significant improvement; 68% aged 12-16 showed reliable improvement • >90% satisfied with the support received
CHAT[286,303]	2009	Singapore	National youth mental health check and outreach program	1	16-30	3,343 (2009-2019)	• >90% of young people report that the CHAT assessment service is accessible, acceptable and appropriate • Of those receiving CHAT supportive interventions, 47% showed a >25% change in distress reduction; 20% showed a 6-25% change in distress reduction • >90% satisfied with CHAT supportive interventions
headspace[a]	2013	Denmark	Counselling and support service	28 (+4 upcoming)	12-25	NA	• Since 2020, increased numbers of young people who require support and report suicidal thoughts • Young people's satisfaction with both life and their well-being increased during service engagement

Access Open Minds[282,304]	2014	Canada	Integrated youth service offering mental health care and as well as access to physical health and sexual health services, traditional Indigenous programs/support, and other social services	14	11-25	7,539	• 64% of young people have moderate-severe mental health problems at entry • Post-treatment: significant reductions in distress and severity of mental health problems, and improvements in mental health and school, work and social functioning • High satisfaction rates: 88% satisfied with service received and 86% satisfied with services overall • $10 savings for every $1 invested
Headspace[290,305]	2014	Israel	Integrated youth mental health service with three major components: prevention and early intervention, community awareness, and training and education for professionals	2	12-25	652 (Bat Yam centre)	• 66% present with high or very high levels of distress • Service has increased the level of accessibility and familiarity of mental health services available to young people • High levels of satisfaction

Foundry[283,306]	2015	British Columbia, Canada	Integrated health and social service centres offering access to physical health, mental health, substance use, peer support, and social support care	16 (+19 upcoming)	12-24	4,783 (2015-2018)	● 81% of young people have high or very high levels of distress at entry ● Young people strongly agree that having multiple services in the one location makes it easier to get help ● Excellent access for Indigenous and LGBTIQA+ groups ● 70% report that services meet their needs ● 75% satisfied overall
Mindlink[289]	2016	Korea	Accessible, youth-friendly, stigma-free, community-based early intervention centres providing intensive case management and group programs	16	15-30	206 (2019)	● Diagnoses: schizophrenia spectrum disorder (53.4%), depression (24.8%), ultra-high risk for psychosis (9.7%) and bipolar disorder (9.2%)
Youth Wellness Hubs Ontario[281]	2017	Ontario, Canada	Integrated service hubs offering services related to mental health, substance use, primary care, education, employment, training, housing and other	22	12-25	9,585 (2020-2023)	● 91% of young people have moderate-severe psychological distress at entry; 46% report suicide ideation in the past two weeks ● Post-treatment: significant reductions in distress and severity of mental health problems, and improvements in mental health ● >90% reporting positive service experience across multiple service domains

			community and social services. Hubs also include peer services, outreach, and system navigation services				
@ease[219,287]	2018	Netherlands	Youth-friendly, easily accessible support for mental health and well-being	12 (+4 upcoming)	12-25	>750 face-to-face sessions and >3,000 online chats	• High diversity and complexity of need at entry • Significant improvement in symptoms and functioning post-treatment • 33·3% improved clinically and 39·6% reliably (SOFAS) • 43·2% improved to a better clinical category and 28·4% improved reliably (CORE-10) • On average young people were satisfied to very satisfied with wait times and their conversations
Aire ouverte	2019	Quebec, Canada	Integrated youth services providing a variety of health and social services, including mental health, sexual health,	23	12-25	NA	NA

			vocational support and other related services				
headspace[a]	2019	Iceland	Counselling and support service	1	12-25	390	● Characteristics of service users: average age 19 (69% female); 26% live independently; 56% live in Reykjavík; 47% became aware of the service via friends/family ● Young people have benefitted from a counselling model: few have required more intensive treatment and the service has helped young people remain in work or education ● Average number of sessions attended: 4
Piki[307]	2019	New Zealand	Integrated youth mental health care service	NA	18-25	5,307 (2019-2020)	● Diversity of need at entry; however, greater likelihood of severe distress presentations ● 75% would recommend Piki to others
Support with One-stop care on Demand for Adolescents and young adults	2019	Japan	Integrated youth mental health service providing clinical case management	1	12-35	105 (March-September 2020)	● 80% required short term support ● 20% received clinical case management for 6 months, with improvements in Global Assessment of Functioning scores at the end of treatment

in Adachi (SODA) [288]							
Levelmind, with Headwind (online service)	2019	Hong Kong	Integrated youth mental health platform offering multi-disciplinary care in community youth centers, with service stratified in 3 tiers based on distress level and clinical assessment	8	12-25	>18,000	● Initial outcomes suggest reduction of distress in young people with moderate distress levels and prevention of deterioration in distress in young people with lower distress levels
allcove	2021	US	Early mental health services, primary medical care, substance use services, peer and family support, and supported education/employment services	2 (+9 upcoming)	12-25	5,000 (2021-2023)	NA

Services were identified via author knowledge and via www.iaymh.org

NA: not available

[a] unpublished data

Evaluation is an essential component to ensure that services are achieving their intended aims. [29] Independent and in-house evaluations have found that integrated youth mental health care services are associated with high satisfaction rates among young people, [287,296,297,301,304] are cost-effective, [297] and offer a range of benefits: increased help-seeking behaviours and enhanced access to care, including marginalised and at risk populations (e.g., Indigenous, LGBTIQA+),[283,296,304] although effectively meeting the needs of these populations requires strengthening; [297] reductions in distress, symptoms, [296,297,302,304] suicidal ideation and self-harm; [296] and improvements in social, educational and occupational functioning. [296,297,304] A 2017 review of integrated youth mental health services confirmed that young people are highly satisfied with these services and have benefitted from improvements in service accessibility as well as symptomatic and functional recovery. [243] Evaluations should also seek to identify any iatrogenic effects of models of care and interventions, such as stigma and barriers to engagement and continuity of care.

As with any paradigm shift, these reforms have attracted critics as well as early adopters. [308,309] Critiques can be seen as a sign that real change is underway and, by pointing out weaknesses and gaps, can contain ways of improving the new models of care. The main criticisms have been that somehow focusing on early stage illness detracts from or diverts the focus from the care of later stages of illness, that the models lack sufficient clinical expertise, or that the evidence for the benefits provided are lacking. Reformers have typically engaged and responded to such critiques. [310-312] The responses emphasise that these are primary care models which are designed for early stages of illness and the levels of severity that can be managed in primary care. They are by no means the complete answer, yet are often judged on that basis. Rather than draw funds away from more seriously ill patients, they have been created with new funding, acting as a portal for better access for such patients to the next tier of care, exposing this need more publicly and increasing the pressure on governments that the needs of this large cohort of more complex patients with persistent and potentially disabling illnesses will be addressed. The evidence for the effectiveness of the enhanced primary care models has accumulated over time from independent evaluations, [296,297] along with identified areas for improvements. Many critiques have been helpful, however, some have been less well motivated and misleading,

though they are an inevitable companion to real progress, where the status quo is being challenged.

Panel 3: headspace

headspace, Australia's National Youth Mental Health Foundation, was created in 2006 for 12–25 year olds in response to young people's poor access to and quality of mental health care. The foundations of headspace lie in the successful early psychosis paradigm that emerged in the early 1990s. headspace is funded by the Australian government and has been progressively scaled up to 154 centres. Each headspace centre is operated by a lead agency that works in collaboration with an independent consortium of local organisations to provide governance.

headspace operates as an enhanced primary care model or "one-stop shop", with a stigma-free "soft entry" to care. Through a multidisciplinary team of clinical and non-clinical staff, headspace provides a range of youth-friendly services across four core streams of care: mental health, drug and alcohol, physical and sexual health, and vocational services. While headspace is designed for young people with mild to moderate mental health problems, since it is a primary care model, all help-seeking young people, including those with more severe and persistent illness, are welcomed, and can access at least some services and support ("no wrong door" approach), even if they do not identify as experiencing mental ill-health. headspace offers a nationwide online and phone service, eheadspace, which includes web chat, email and phone conversation. headspace also delivers a school support program, which provides suicide postvention support, and a range of community awareness campaigns focused on reducing stigma as well as promoting help-seeking, early identification and referral pathways. In several Australian states, the standard headspace digital platform is enhanced with more comprehensive and fully integrated digital support, provided alongside face-to-face support across different stages of treatment via the government funded evidence-based Moderated Online Social Therapy (MOST) platform. [247,248,313]

At headspace, stepped care is provided to young people within a clinical staging

framework. Benign interventions (e.g., psychoeducation and support) are offered in the earlier stages of illness, while medications are offered when first-line psychosocial interventions are ineffective alone or when symptoms are more severe. headspace has undergone three independent evaluations, with findings indicating that the model has had a positive impact on access to care and outcomes for especially for those with mild to moderate mental health needs (see Table 2).

Panel 4: Integrated youth services in Canada

Over the last decade, integrated youth service models for mental health and substance use have been increasingly adopted across Canada, with the majority of provinces and territories having developed or committed to an integrated youth services network. The most established networks are ACCESS Open Minds (pan-Canadian; including Aire Ouvertes in Quebec), Foundry (British Columbia), and Youth Wellness Hubs Ontario (Ontario). Other networks include Huddle (Manitoba) and Kickstand (Alberta). Approximately 91 youth hubs are in operation and an additional 48 are in development. In 2022, the Integrated Youth Services Network of Networks initiative was launched to link existing and emerging provincial and territorial networks and to develop a pan-Canadian network of learning health systems to improve service delivery.

To guide the development of integrated youth services networks across Canada, ten principles have been developed: 1) engagement with young people and family; 2) collaborative partnerships; 3) accessible services; 4) youth-centred care; 5) responsive to the needs of young people; 6) culturally safe; 7) socially just; 8) holistic care; 9) intervene early and promote health; and 10) continuous learning and improvement. [314] Consensus guidelines have been developed to operationalise these principles. Services delivered through Canada's integrated youth services model include primary care, mental health care, substance use services, peer and family support, Indigenous programming, work and employment supports, housing and other social services. This approach has been co-designed and delivered in partnership with young people and families.

Secondary and tertiary services

While primary care services are predominantly designed for young people with mild to moderate needs, individuals with higher or more complex needs are increasingly accessing these services. [243,279,297] This group of young people who require more specialised, sustained and multidisciplinary care have been termed the "missing middle". [315] A substantial proportion of these young people do not respond to simpler primary care models, [316] which function for this group more as a stigma-free entry portal to the next tier of care. This is currently only remotely feasible in high resource settings. In Victoria, Australia, the recent Royal Commission into mental health care[229] has catalysed a major restructure of public sector specialist or secondary mental health care, which will now see the child and youth system boundary with adult mental health shift to 25 years. There will now be two zones or cultures of care within this, with younger children seen within a 0–11 age range and young people/emerging adults entering a youth-friendly, co-designed 12–25 age range system with multimodal and holistic components of care from residential services through to multidisciplinary community care vertically integrated with the enhanced primary care system of headspace centres, which have focused on 12–25 year olds for 17 years. The implementation challenge is substantial, including training and workforce, sufficient financial resources and appetite for workplace culture reform. Such reform needs to address access to services for groups of young people whose needs have historically been seen as reasons to discriminate against them and to deny them services, such as those living with personality disorder or substance use, and young people involved with the justice system.

At a tertiary level, options available to young people, particularly in high resource settings, should include inpatient or intensive home-based care, subacute programs and short or longer-term residential care that are strengths-based and recovery-focused. It is imperative that these facilities are adequately funded, co-designed with young people and families, and are distinct from younger childhood and adult facilities (i.e., they should be developmentally and culturally acceptable to young people). In lower resource settings, home-based acute care should be available if youth-specific inpatient services are not feasible or affordable. In India, SAMVAD (Support, Advocacy and Mental health interventions for children in Vulnerable circumstances And Distress) is a national initiative located in a tertiary mental health care facility. [317] It aims to address the challenges in delivering child

and adolescent mental health care in lower resource settings and enhance access to CAHMS. SAMVAD incorporates the integration of CAHMS into child protection, judicial and education systems, and delivers culturally-specific training and capacity building, mentoring, and public awareness initiatives. Between 2020 and 2023, it provided training to 24,599 mental health professionals across the country. [318]

School and university settings

Educational settings are a prime platform for the mental health care of young people owing to the large volume of time young people spend at school. This applies to some low resource settings although access to education varies across and within countries. [319] Educational settings have a central role in promoting mental health, [320,321] recognising the warning signs of mental ill-health, [322] and delivering prevention and intervention programs. [264,323] Meta-analyses of school-based preventive interventions have found weak or modest evidence for the prevention of anxiety and depression, [324,325] with indications that targeted prevention may be more effective than universal for depression. [324] Evidence from both high and low resource settings suggests that low-cost interventions that target the whole-school environment are effective in lowering rates of bullying victimisation, improving well-being, [326] and reducing the severity of depressive symptoms, particularly when delivered by lay counsellors. [327] However, findings from a large cluster randomised controlled trial (RCT) of a universal school-based mindfulness programme indicate that further research is needed to co-design interventions with young people and to determine what works for whom and under what circumstances. [91] The authors of this study found no evidence for the superior effectiveness of mindfulness compared to teaching as usual in reducing the risk of mental health problems and promoting well-being, although engagement was low and acceptability was mixed. [91] Where there was evidence of a difference between treatment arms, outcomes were marginally worse for the mindfulness group across the domains of hyperactivity/inattention, panic disorder, obsessive-compulsive disorder, emotional symptoms and mindfulness skills.

Within non-WEIRD countries, 'PRemIum for aDolEscents' (PRIDE) is the largest adolescent mental health research programme ever undertaken, implemented from 2016–2022 in low-income schools across Goa and New Delhi. The aims were to develop and test a suite of

psychosocial interventions arranged around a transdiagnostic stepped-care architecture for common adolescent mental health problems. A fully powered RCT demonstrated that step 1 (a lay counsellor-delivered brief problem-solving intervention) reduced youth-reported psychosocial problem severity and these effects were sustained over a year. [328,329] Classroom information sessions, compared with less targeted publicity materials, greatly enhanced demand for step 1 in a stepped-wedge cluster RCT. [330] An alternative digital format of problem solving proved to be feasible and acceptable with in-person guidance, while remote delivery was less viable. [331,332] Evidence was also found for the incremental benefit of a tailored, second-step intervention for non-responders to step 1. [333] An RCT of two different e-learning formats found that periodic coaching can improve learning outcomes and engagement among novice counsellors. [334]

Regarding higher education, a 2022 systematic review on mental health interventions in university and college settings found evidence for the effectiveness of mindfulness-based interventions, cognitive behavioural therapy (CBT), and interventions delivered via technology, whereas psychoeducation appeared to be less effective. CBT-related interventions also were found to deliver sustained effects over time. [335] However, research has also identified that integrated models of university-based mental health care, rather than stand-alone interventions, are needed that can meet a spectrum of student wellbeing and mental health support needs across prevention, early intervention and treatment. [336,337] This includes supported transitions to community services, where clinically indicated, and the integration of effective digital mental health interventions. [338] A comprehensive approach is needed beyond well-being strategies and out-dated student health models, which have failed to address the scale and severity of the mental ill-health that exists in tertiary educational settings.

Digital technologies to drive service innovation and reform in youth mental health

Young people are the highest users of the Internet and digital technology. Being brought up entirely within a 'connected and digital world', young people (termed 'digital natives') [339] are the first to adopt new digital technologies as they arise and engage extensively with existing technologies and all features of the Internet. [340] For example, a 2022 report from the Pew Research Centre found that, in the United States, 95% of adolescents have access to a

smartphone (98% of those aged 15–17), 97% use the Internet daily, and 35% use one of the top online social media platforms 'almost constantly'. [341] Notably, the percentage of adolescents who reported being online 'almost constantly' doubled over the past 7 years (46% in 2022 vs. 24% in 2017). [341] Much attention has been focused on the potential for harm and risks to mental health posed by this dramatic change. Conversely, the use of smartphones may offer opportunities to extend and enhance models of care globally and to bridge the 'digital divide' previously experienced by LMICs, [342,343] although access varies across countries; for example, only 56% of adolescents aged 10–15 years in Tanzania have access to their own or someone else's mobile phone compared to 95% in Sudan. [344] Taken together, this means that digital and virtual technologies and interventions can not only deliver accessible support in settings where mental health professionals are non-existent or in short supply but also augment the reach, impact of and even transition between existing mental health services. They have the scope to address some of the key shortcomings of youth mental health services and interventions, particularly failure to seek treatment, poor access and long waiting lists, poor continuity of care, and lack of personalisation and fidelity to evidence. Integrated digital interventions and blended models of care have the potential to address most of these issues, thus improving overall effectiveness.

The role of digital and mobile technology and smartphones is therefore critical in the redesign of services. These technologies now include a wide range of highly personalised (passive and active) mobile sensors and apps that can capture subjective data on repeated occasions, without the need for physical attendance at a clinic. Therapeutic platforms of care are now becoming available and can be integrated within face-to-face care systems. [247,248] They can also be used to reduce the risk of suicide and self-harm[345,346] as well as depression and alcohol misuse. [347] Improving the scalability of such approaches is the next challenge.

Over 100 efficacy trials have demonstrated that online interventions improve accessibility, and produce engagement and effectiveness outcomes that are equivalent to traditional face-to-face services and interventions. [348,349] Rates of engagement in these 'first-generation' stand-alone digital interventions appear to lower in young people compared to adults. [350,351] A plausible contributing factor to this finding is that young people have

consistently endorsed integrated digital interventions that blend face-to-face services and digital support, as opposed to stand-alone digital interventions. [352,353] Similarly, experts and consumers alike have called for a contemporary youth mental health system "*enabled by digital technology*" where digital interventions are "*blended into service delivery*" to "improve accessibility and continuity of care" shaped by "interdisciplinary translational research" that "informs service delivery and policy". [229,354] Yet, despite evidence from 15 years of research for the effectiveness of digital mental health interventions, there has been a historical and global research translation gap, with very few digital interventions being successfully integrated into mental services. [355] This failure in clinical implementation is twofold. First, nearly every digital mental health intervention has been designed in academic or commercial settings, in isolation from clinical services, thereby failing to consider service constraints and needs. [355-357] Second, the science of digital mental health implementation is often trial-and-error, with little systematic research on implementing digital technologies. [358]

There are, however, promising developments in integrating digital technologies into youth mental health services. A key example includes the MOST platform (Moderated Online Social Therapy) a purpose-built digital intervention designed to provide an integrated solution to youth mental health service limitations. [313] To achieve this aim, MOST was designed in partnership with young people, clinicians, mental health services, and industry partners. It merges evidence-based, transdiagnostic, interactive psychological treatment with professional psychological, vocational, and peer support integrated with a social network of peers and peer workers. MOST was designed to dovetail with services and address their limitations across the care pathway or phases of care (i.e., entry and waitlists, blended with face-to-face care and post-discharge). Results from several pilot studies and a clinical trial showed that MOST was engaging over prolonged periods of time, safe, non-stigmatising, endorsed and valued by young people, clinicians and services, effective in improving vocational recovery and reducing utilisation of hospital services in youth psychosis, as well as cost-saving and cost-effective, with four clinical trials underway. [247,359-363] After being adapted and tested across Australia, USA, Canada and Europe, MOST has now been implemented in headspace centres and specialist youth mental health services including over 200 clinics across eastern Australia. [364-366] Comprehensive multifaceted digital

tools like MOST have great potential in low and middle resource settings where the content must be adapted through codesign and translation within local cultural and language conditions. There is similar potential for social media platforms to deliver mental health interventions in low and middle resource settings, [367] which have been safely used in high resource settings with appropriate risk management strategies among young people experiencing active suicidal ideation. [368]

While the above provides a promising example of the potential of digital technology to drive the development of new models of care in youth mental health, the rapid development and adoption of breakthrough technologies including Artificial Intelligence, natural language processing, virtual and augmented reality and virtual worlds, provide an unprecedented opportunity to use new innovations to address historical problems in youth mental health. [230,369,370] To fulfill this opportunity, we need to adopt robust scientific designs, develop new models of translational research that fast-track the development-evaluation-implementation cycle and enhance the external validity of our interventions, and embrace best practice in implementation science, psychological interventions, behavioural science, and user-centred design.

Multidisciplinary workforce, peer workers and volunteers
The successful implementation of youth mental health reform requires a multidisciplinary and appropriately skilled workforce that includes clinical and non-clinical staff (e.g., psychologists, psychiatrists, social workers, youth workers, nurses, general practitioners, alcohol and other drug workers, vocational workers, and peer workers). While the demand for youth mental health care has increased, [223,371-373] workforce and skills shortages are a major challenge globally, particularly in low resource settings. [374-376] Even in high resource settings, youth mental health services have faced difficulties in attracting and retaining a multidisciplinary workforce, leading to excessive wait times. [223,297]

Strategies to meet workforce and skills challenges include the creation of new sub-specialty training in youth psychiatry[377] or, in Europe, transitional psychiatry, leveraging digital technologies, [378] and increased government investment to support training and incentivise workforce growth and retention in the youth mental health sector. Neither existing adult

nor child and adolescent training programs are fit for purpose as there is another dimension of skills and evidence that is needed to effectively respond to emerging adults. Additionally, it has been realised that there is actually an abundance of human resources, including in low and middle resource settings, that can be drawn upon to innovatively build systems of mental health care that are context appropriate. [379,380] The Friendship Bench concept[381] is the best known example of this strategy, however, the use of volunteers and peer workers in new youth primary care services has been a creative response to the difficulty in assembling the professional clinical workforces and structures even in high resource settings. [287] Peer or lay workers are a core component of the youth mental health workforce across all resource settings, [29,279,334] complementing traditional clinical roles rather than merely filling staff shortages. The incorporation of peer workers assists in providing care that is holistic, strengths-based, patient-centred and recovery-oriented both in face-to-face and in digital settings. Their roles are diverse and may include enhancing service engagement, providing emotional support, assisting in navigating the mental health system and prioritising and planning treatment. [382,383] When combined with shared decision making, peer support can strengthen young people's involvement in treatment decisions. [384] This strategy also enhances and catalyses engagement capacity for culturally diverse communities. Peer work is an emerging and demanding role. For it to be safe and sustainable, quality training, supervision, support and appropriate remuneration are essential. It is important that scope of practice is clearly defined to avoid stress and burnout.

The models of youth mental health care which are emerging represent a prescient response to what has been revealed now as a global crisis in youth mental health. However, they are merely a foundation or launch pad for a much greater mission. The youth mental health crisis and rising prevalence has placed these first generation models under increasing demand pressures. We must tackle the sources of and structural forces underpinning this crisis and build the several tiers of evidence-based care to respond such that the full ecosystem of care depicted in Table 1 and Figure 9 is accessible. This will involve global collaboration and a mission-based approach with a series of phases powered by innovation. [385]

Part 4: The Economic Imperative

Introduction

The 2019 Global Burden of Disease study confirmed that mental disorders accounted for the highest disease burden (as measured by disability adjusted life years) for the 10–24 age group across all income groupings: high, upper-middle, lower-middle and low-income countries. [386] Suicide is also a major contributor to the disease burden globally in this age group, being the leading cause of years of life lost (YLL) in the WHO South-East Asian region, and in the top three causes of YLL in all other WHO regions except Africa, where it is 10th. [387]

Poor mental health in young people is also associated with substantive personal and economic impacts. Most of these costs are incurred outside of health care systems, and involve the costs of social welfare programs, lost taxation receipts, loss of productivity or "mental wealth", costs of violence, crime and incarceration, costs of suicide and premature mortality[388]. The global cost of all mental disorders for all age groups was estimated to range between US$2·5–8·5 trillion in 2010, depending on the method of assessment used, with the cost projected to double by 2030. [389] A key cost driver is that mental disorders typically emerge by the age of 25. [7,106] Mental health problems emerging early in life adversely impact critical developmental transitions, potentially with profound consequences for life trajectories. For example, 30–70% of adolescents with depressive symptoms or major depressive disorders are likely to develop major depressive disorder in adulthood. [390] As indicated in Part 3, the risk of mental disorders is also influenced by social determinants such as socioeconomic status, immigrant status, and exposure to traumatic life events. [52]

Young people with depression are more likely to smoke[391] or vape[392] and poor mental health has been associated with a significantly increased risk of lifetime adverse physical health outcomes such as coronary heart diseases or stroke[393-395] and disparities of decades in life expectancy, even in affluent countries with strong social safety nets and universal health care systems. [396] Poor mental health in adolescence increases the risk of poor educational attainment, [24] as well as non-participation in post-secondary education, unemployment, lower levels of income when working and being a recipient of welfare payments. [397,398]

These significant personal, community and economic burdens demand better policy responses. In this section, we provide an overview of current economic evidence for action and identify a number of areas in which it can be further strengthened. As the generalisability of economic evidence can be open to question and depends on multiple factors, including similarity of resource contexts, we discuss this evidence according to resource level. Key terms used throughout this section are defined in Panel 5.

Panel 5: Key terms

The following are key terms that the youth commissioners deemed helpful to include while reading this report. The veracity of these terms was verified with the content experts of this Commission.

Cash transfer programmes (CTP) are monetary payments to the population that promote opportunities for economic productive activities. For example, a CTP may provide recovery support after a humanitarian crisis.

Cost-benefit analysis (CBA) is a form of comparative economic evaluation that compares both the costs and outcomes of a program (and its comparator) in monetary terms. This method allows the ability to compare across different sectors (e.g., education vs. health). The limitation of CBA is that valuing health in monetary terms can be problematic.

Cost-effectiveness analysis (CEA) is a form of comparative economic evaluation that compares costs of a program (and its comparator) in monetary terms and outcomes in natural units such as depression scores that are meaningful to clinicians and providers. However, CEA fails to capture all the effects of an intervention. Furthermore, the comparability of interventions (which may impact different health outcomes) is not possible.

Cost minimisation analysis (CMA) is used when interventions have the same effectiveness so that the least costly intervention is chosen. However, this is often rarely the case in the real world.

Cost utility analysis (CUA) is a form of comparative economic evaluation in which the incremental cost of a program is compared to the incremental health improvement expressed most commonly in the units of quality-adjusted life years (QALYs). CUAs along with CBAs, CEAs compare the program that is being evaluated to its next best alternative (which could be an alternative program, treatment as usual or do nothing).

Disability-adjusted life year (DALY) measures the number of disability-adjusted years lost because of ill-health and can be calculated by summing the years of life lost due to premature mortality (YLL) and years of life lived with a disability (YLD). It is a globally recognised measurement of overall disease burden.

Quality-adjusted life year (QALY) is a health unit of outcome that combined both quantity and quality of life. The quality component is most commonly derived by utility weights (sometimes also called preference weights). Utility weights are anchored at 0, which is equivalent to death, and 1 which is equivalent to perfect health. Perfect health is usually defined as the best possible health state measured on a questionnaire from which these utility weights can be derived (e.g. the EQ 5D) – although there are other ways of also deriving these weights. A year of life lived in less than perfect health will be a value of less than 1 – depending on the utility weight. QALYs are common metrics used in economic evaluations.

Evidence of cost-effective interventions and approaches from high resource contexts ranging from prevention, service models and treatment

Prevention

There is reasonably good evidence for a number of cost-effective interventions for mental disorder prevention and mental health promotion specifically targeting young people in high

resource settings. Economic evidence of psychological interventions targeting high-risk populations for the prevention of anxiety disorders has consistently shown that youth-focused cognitive behavioural therapy (CBT), parent-focused CBT or parent-focused psycho-educational interventions provide good value for money. [399,400] With respect to the prevention of depression in young people, the evidence is mixed. For example, recent Australian modelled studies have shown that school-based psychological interventions were cost-effective regardless of whether they were universal or indicated interventions. [401] In contrast, trial-based economic evaluations found that school-based CBT was more costly and less effective than usual care for indicated prevention of major depressive disorder over a one-year time horizon. [402,403] Similarly, a universal school-based mindfulness program was neither effective nor cost-effective than standard teaching based on the co-primary outcomes (risk for depression, social-emotional-behavioural functioning and well-being), although there was some evidence of cost-effectiveness when quality-adjusted life years (QALYs) were used as the measure of benefit. [91] The level of cost-effectiveness of many public health and health promotion interventions depends not only on their availability and affordability, but on their initial uptake and sustained engagement by their intended target population. For example, Le et al. (2017) [404] found that a cognitive dissonance intervention for the prevention of anorexia nervosa and bulimia nervosa would become cost-effective if more young people (aged 15–18) agreed to participate. Interventions need to be acceptable to young people and delivered in a way that minimises their risk of stigmatisation and exclusion. How interventions are implemented (for example, whether secure multi-annual funding is made-available to attract and retain required staff) and the context of the health systems in which they are delivered (for example, whether the availability and capability of third party services facilitate adequate, appropriate and timely referrals to and from an intervention service) also can affect cost-effectiveness. It also needs to be ensured that there are no unintended or unaccounted for consequences of implementation (such as increased waiting times).

The economic case for investing in mental health prevention and promotion when different interventions are completed within the same study context has been examined in the UK[405] and Australia. [406] Results for interventions targeting young people, using conservative modelling assumptions, have shown that for every Australian dollar invested for the

prevention of depression and/or anxiety at school or university, there is around a $1·1 to $3·1 AUD return from that investment in terms of health care service savings and increased productivity. [406]

Service models and treatments

One area focusing on young people that has been robustly evaluated from an economic perspective is early intervention in psychosis. There is consistent evidence of cost-effectiveness of early interventions in psychosis across different health systems. [407-412] A Hong Kong-based study associated early intervention with 35% savings in health care costs for every point improvement on general psychopathology (measured by the Positive and Negative Syndrome Scale). [413] In the UK, models as well as individual patient data analyses have reported cost savings and increased benefits (such as improvements on clinical outcome scales) associated with early intervention in psychosis services. [414-417]

Easy-access, youth-friendly and integrated community-based primary care services that provide evidence-based interventions for young people aged 12 to 25 years have been established in several countries (see Part 3). [243] These services have been shown to increase access to mental health services and improve symptomatic and functional recovery post-service. [243] Given that these services are relatively new and are also complex, multi-faceted, inter-sectorial, community-based, and quite "organic", economic evidence is still emerging. [418] An independent evaluation commissioned by the Australian Government concluded that headspace primary youth mental health services were effective and cost-effective and especially so for those for whom they were designed. [297] Although the cost-effectiveness of digital mental health services remains unclear, [419] some studies in Australia have found that an online intervention with the sole aim of increasing access to care for young people resulted in quality of life improvements and was cost-saving compared to usual care. [420] A collaborative care model has also been found to be very cost-effective in reducing depressive symptoms in adolescents when implemented in an integrated health care environment. [421] Other evidence for specific interventions targeting disorders that occur mainly in young people (such as depressive or eating disorders) have also been found to be highly cost-effective. [422-424]

Evidence of cost-effective interventions and approaches from low and middle resource settings ranging from prevention, treatment and task-shifting

Most of the literature on this matter has focused on the classification of countries as low and middle income, as discussed already. The World Bank has emphasised the links between economic development, cognitive capacity and mental capital (i.e., cognitive and emotional resources[425]) in low and middle resource settings. [426] However, these issues pertain not only to certain countries and parts of the world where such low resourcing is most prominent, but also to substantial sections of what are termed high and middle income countries. Disadvantage and poor access to care is widespread in such countries too. Already, economic modelling studies are helping to *"debunk the overgeneralized claim that treatment of mental disorders is not a cost-effective use of scarce health care resources".* [427] There is both scope to adapt some actions implemented in high resource settings for delivery in low and middle resource settings wherever they are located, and a requirement to develop novel solutions that address the specific challenges of lower resource settings. The optimal way to determine cost-effectiveness in low and middle income countries is unclear. The most common approach is to apply a criterion that the incremental cost of an intervention should be no more than one to three times per capita GDP for each DALY averted, but this approach remains controversial[428].

Prevention

There are still few economic assessments of the value of promotion and prevention within a lower resourced context. Given the association between poverty and poor mental health, the use of fiscal measures such as cash transfer programmes and other poverty reduction measures to promote and/or improve the mental health of young people have come to prominence. [429] While formal cost-benefit analyses of most of these programmes are still needed, there is some evidence they protect mental health. [430] In Malawi, a cluster RCT of an unconditional cash transfer programme targeted at very poor households significantly reduced depressive symptoms in young people, especially young women. [82] A trial of a similar programme in Kenya reported significantly lower rates of depression in young men, but not in women. [431] In Uganda, a trial of two financial incentives encouraging young orphans to save more money reported significant improvements in depression at two-year follow up, with the most generous financial scheme being more cost-effective. [432] At four-

year follow up, these improvements in depression were no longer significant, although other benefits, such as reduced hopelessness, persisted. [432] In Brazil, lower suicide rates have been observed following receipt of a cash transfer programme conditional on attendance at school, although the cost-effectiveness of the intervention was not examined. [433]

Legislative measures that reduce harmful behaviours, such as excess alcohol consumption, have been modelled as cost-effective in all WHO regions. [434] Measures to reduce suicide risk, such as legislation to restrict access to hazardous pesticides, have been associated with substantial decrease in suicide rates in some Asian countries, including in Sri Lanka at a very cost-effective $1·23 per disability-adjusted life year (DALY) averted. [435]

Treatment

Economic modelling work for all WHO regions, albeit for the general population, indicates investment in both pharmacological and psychological therapies can be cost-effective even in the most resource constrained regions of the world. [436,437] There are also examples of country-level modelling of mental health care. In Ethiopia, at a willingness to pay level of US$500 (roughly GDP per capita in Ethiopia) per DALY averted, investment in antidepressant therapy and psychotherapy would be considered cost-effective; if the threshold were US$1,500, then some psychosocial treatments and lithium for bipolar disorder would also be cost-effective. [438]

Some effectiveness evaluations in lower resource settings target specific vulnerable groups that are not common in high resource settings, such as young people living with communicable disease or exposed to conflict-related trauma. For example, psychological therapy for young people in Sierra Leone who had experienced war-related psychological distress has a cost per QALY gained equivalent to 2·6 times GDP per capita. [439] This ratio would be more favourable if non-health related benefits, such as long-term benefits of increased education participation, were included.

Task-shifting and task-sharing

The challenges in resource-constrained settings have also led to innovation in intervention delivery. To address workforce constraints, it is possible to shift and/or share responsibility for mental health care delivery from mental health specialists to primary care or lay health workers yet still provide care that is effective at reducing the burden of common mental disorders. [380] Task-shifting and task-sharing are strategies that has been explored in generic adult services in low and middle resource settings. [440,441] Even in high resource settings this strategy is an essence of the entry level youth integrated primary care models, as described above, to optimise the role of more specialised professionals who are in short supply. In India, brief psychological therapy delivered by lay health workers to young people living with severe depression was found to be cost-effective at both three and 12-month follow-up from a health system perspective, and cost-saving when considering impacts on subsistence activity and employment. [442,443] Lay-delivered therapy to improve adolescents' self-reported psychosocial problems and mental health symptoms has been found to be effective and could be scaled up in India at a cost of $4 USD per student. [328] Brief lay-delivered therapy for treatment of depression in young people living with HIV in Uganda is also highly cost-effective at $13 per DALY averted. [444]

Broader economic considerations

Despite evidence of both effective and cost-effective interventions and service delivery paradigms, mental health systems worldwide, even in high resource settings, are typically underfunded, unfair and inefficient. [445,446] These systems fall well short of delivering the health gains theoretically attainable with current technologies. [436,447,448] While a major priority for system improvement initiatives is to provide better and more timely support to young people (Part 3), achieving this goal requires addressing challenges related to securing substantial additional public investment and expanding the scope of the type of economic research undertaken in mental health. [449]

The economic evidence base for mental health prevention and treatment is already substantial, with over 4,000 published reports on this topic. [204] However, this evidence base principally examines questions of cost-effectiveness, with budget impact questions relatively underexplored. As a result, we know more about the value for money of

programmes than we do about their affordability. This distinction is important as many, perhaps most, cost-effective youth mental health programmes are not cost-saving and a number are likely to be expensive to scale up, particularly in cases where unmet need is high. Even where programmes may potentially be cost-saving, many of these benefits are not accrued to health systems, but other sectors of the economy such as social welfare systems. Measurement of these cross-sectoral impacts could be improved through methodological innovations such as broadening the cost-perspectives of economic evaluations and adopting cost-benefit and return of investment analyses that provide actionable insights for government decision-makers in portfolios beyond health. Methods such as Multiple Criteria Decision Analysis can provide a formal means of integrating these impacts with other concerns of relevance to decision-makers[450].

The need for economic evaluations to better account for demand and supply constraints is also particularly important in lower resourced contexts. [451] It is noteworthy that health systems and contexts across the world are inherently different and a challenge for economics research is the issue of generalisability. Arguably, this challenge is particularly important in mental health, where both the epidemiology and service response of often complex interventions are highly contextual. However, research into how context shapes resource use and outcomes is under-developed. [452,453] Continuity of support is also an issue to consider in economic analyses; fragmentation of youth mental health support between child and adult service structures can hinder effective implementation. [282] As with health care more broadly, aspects of the conduct and reporting of economic evaluations in lower resourced contexts create additional barriers to generalisability[452] that can in part be addressed through funding more high-quality economic research in these contexts.

Major injections of public funding to provide cost-effective, but initially relatively expensive, youth mental health service systems will require difficult choices about how such funding is sourced – e.g., reducing other areas of public expenditure or levying additional taxes. However, if effective, youth mental health care is much more likely to deliver a major return on investment than equivalent investments to treat other NCDs in older adults, simply due to the timing of mental illness vs other NCDs in the life cycle. Innovative financing arrangements including pooled cross-sectoral funding, social impact bonds and systematic

linking of health technology assessment to funding decisions have been recommended as enablers of achieving these gains. [449] Choices involve normative judgements about the societal value of young people's mental health and it has therefore been argued that advocacy for additional resources should be more explicitly grounded in moral values rather than economics. [454] Such a values-based framing aligns with the major role that politics has on youth mental health care resource allocation decisions[455] even if how this relationship works is perhaps inadequately understood. [456] As David Haslam, former Chair of NICE in the UK has pointed out in his recent book "Side Effects", [457] the value proposition of investing in mental health, which has a lifelong impact due to its emergence in young people, may represent a better value proposition than, for example, extremely expensive late-stage cancer treatments, which at best prolong life by a few months. Haslam contends that even if all cancers were cured it would add only a few years to the already high level of life expectancy. Indeed, the greatest gains in life expectancy overall may now come from better mental health care. This is a clear example of the difficult choices that we face as health care costs spiral out of control. Such choices are being made covertly already, driven by stigma and prejudice in relation to the mentally ill and they have resulted in severe neglect of the latter and particularly young people. In fact, low value health care abounds throughout health care systems, including in areas of mental health care, and must be defined and deprioritised. [458] While some may find such debates and choices confronting, the case made by Haslam, in the context of what he regards as surging and unsustainable health costs, for a more rational allocation of resources and prioritising primary, community and mental health care is timely. Atul Gawande in his classic work "Being Mortal" makes similar points regarding a compassionate yet rational approach to end of life care in a moving and powerful way. [459] Equity and public health risks associated with de-funding programs can be mitigated by ensuring that such decisions are informed by robust and up-to-date health technology assessment processes.

Policies to significantly reshape entire mental health service systems should be grounded in appropriately validated theories of how those systems behave and how they are expected to respond to alternative policy settings, such as changes to clinician incentives, budget constraints, workforce supply, skills and scope of practice, increased emphasis on prevention and early intervention and promoting greater use of digital mental health

services. Such whole-of-system theories are currently relatively rare in economic and epidemiological simulation models of mental health, [460] which have historically performed poorly in predicting the population health impact of scaling up investment in mental health. [461] Economic research in mental health over recent decades has produced much greater clarity about the cost-effectiveness of individual prevention and treatment strategies, [204] yet modelling the behaviour of a complex system is a very different and much longer-term undertaking, which calls for a field building endeavour of multidisciplinary researchers worldwide. Initial steps that can be taken towards that technically challenging goal include establishing collaborative networks of mental health modellers and service planners[462], greater understanding of the ethical risks associated with inappropriate model implementation[463] and the development of enabling technologies such as software frameworks to facilitate transferable, open and modular model implementations[464].

The scope of economic research in mental health needs to expand into relatively neglected areas, such as preferences, incentives and behaviours, pricing implementation risk, and developing novel financing instruments (including "value" based pricing – or paying for outcomes).

Critically, this also requires a radical rethink of what is meant by the mental health system. Mental health services cannot operate in isolation; this means more than better integration and coordination with general health services, they will also require the financial buy-in and political support of many different sectors of the economy. [465] Political arguments for investment in mental health will need to be made across sectors, especially as some of the key actions to protect mental health must be implemented in these other sectors. They include secure housing, equity in education, and social welfare safety nets that guarantee a minimum level of income for families and help young people remain in school, thus contributing to the development of their mental capital. Specialist education and employment services that support young people to get into and stay in higher education or employment are another piece of the important puzzle. They have been shown to be effective in supporting recovery in many different health systems and welfare contexts, [466] to be cost-effective for adult populations[467] and have growing evidence of efficacy in youth populations. [468]

International development agencies may also be a part of a mental health system. Good mental health for young people is already recognised as an important objective within the UN's Sustainable Development Goals. However, translating warm words into action can be helped by making more moral and economic arguments to the major international development agencies on the importance and value of investing in youth mental health and reducing the harms that undermine it. [172]

We have highlighted a broad evidence base of effective and cost-effective interventions that can be rolled out in high resource settings. There is also growing evidence on interventions in low and middle resource settings. Unfortunately, it remains the case that such interventions and services are still not routinely available to most young people that need them – even in high resource settings. Achieving an appropriately financed and organised mental health system that improves the mental health of young people is a challenge that is partly political and values-based, but also requires us to address some important knowledge gaps, and partly about ensuring that solutions are adapted to local needs and contexts. Implementation will vary in pace and scope depending upon the level of resource of the setting (e.g., in lower resource contexts, there will be more limited access to all types of specialist care and there is a greater need to rely more on primary and community health care workers). More can also be done to explore how to expand the appropriate use of digital technologies. Equally, there is potentially much to be learnt in more complex systems from examples of effective delivery of mental health services in some low resource settings. [469] Meantime in all contexts, services will need to be developed in ways that appeal to young people and will lead to uptake and sustained use by those who would most benefit.

Rising to the challenge, however it is framed, requires a firm resolve to ensure that what we currently know is effective and cost-effective is routinely implemented and delivered. Additionally, this process involves setting an ambitious research agenda where new solutions, including broader mental health care system organisation and financing innovations are rigorously evaluated and adopted if they are found to be effective, cost-effective and acceptable to young people. Finally, if we are to contain the damaging economic consequences of mental ill health in young people on our whole society, we must

address the harmful megatrends identified above which are dramatically increasing the scale of the problem. A broader call to action is urgently required to address the political, social, cultural and economic determinants of young people's mental health. While progress on mental health for young people is impossible in countries or regions where survival is at threat, human action is leading to famine, or where basic human rights are disregarded, even in superficially intact societies there are powerful forces at play. This knowledge requires not merely an economic perspective but a political one as well.

Part 5: The Political Imperative

Introduction

Over the past decade there has been considerable progress in the international recognition of the social and economic significance of youth mental health by governments, civil society, and the private sector. [29,470] The alarming statistics and personal stories of rising psychological distress among young people before and during the COVID-19 pandemic has elevated the need for action across the global community (see Part 1). [471] Yet in contrast to the way governments around the world were galvanised by the COVID pandemic to respond to a health crisis, the political momentum needed to drive policy makers to act in a manner commensurate to the scale and urgency of the problem has so far failed to materialise. As such, the major structural reforms needed to support young people's mental health across health care, education, employment, and ongoing welfare support, remain largely unrealised. There are twin targets. The first, which now assumes even greater priority, is prevention, which means government and community action across the broad range of social, economic and commercial determinants of health and mental health. The second is for youth mental health care to be made a top priority in all systems of health care around the world.

If the widely acknowledged youth mental health crisis preceding and amplified during the global pandemic did not create the imperative for sustained and systemic action, then one might ask, what will? Translating fine words, media events, international fora, celebrity endorsements or government promises into sustained societal and political actions is never

easy. As outlined in this section and Panel 6, a combination of emotionally engaging storytelling based on a variety of lived experience, strong economic arguments, clearly defined packaging of real-world solutions, a key emphasis on prevention and early intervention, high-profile societal 'champions', media support and targeted campaigns, along with highly connected and relational political persuasion and advocacy, and much more aggressive grass-roots activism than we have seen hitherto, perhaps following in the footsteps of young climate activists, are all required to achieve transformational reform. An accompanying policy brief is available in appendix 1.

Panel 6: Requirements and options to achieve transformational reform

Strong economic arguments

- Optimal way to achieve fast and sustainable growth in national productivity and long-term "mental wealth"

Tractable (retail) solutions

- Dynamic model of regional care
- Model of Care (such as those described in Part 3)
- Delineation of care elements
- Digital technology support and tracking

Key emphasis on prevention and early intervention

- Investment in early intervention and secondary prevention services
- Promotion of wider universal prevention strategies

Storytelling

- Lived experience advocates

Societal and political 'operatives' that drive media attention and political connections

- Broad range of public figures with high credibility
- Effective use of social media platforms
- Active relationships with key decision-makers, not just in health but more importantly in finance and budget controls

Grassroots activism and global organising

> - Support for the coalition of young people, families, and carers
> - A relentless standing campaign
> - Global networks of early adopters and pioneers
>
> **Real-world exemplars**
>
> - Local examples of service innovation that demonstrate better care models

Strong economic arguments

While, as suggested, the value proposition in human terms for youth mental health care should, as with cancer and heart disease, be more than sufficient, the economic argument for a return on investment in youth mental health, delivered through enhanced participation in education, training and employment, is a strong additional selling point. [29,472] Yet the buyers remain oddly reluctant. The economic case, as described in Part 4, should help to ensure investment in mental health is not perceived as poor or low valuespending among policymakers, and highlight how good youth mental health and well-being can be considered a national resource to support productivity. [374] In some countries, political leaders, policy makers and researchers have described this concept as national "mental wealth" [473] and New Zealand and Australia have even formulated "well-being budgets". Investing in youth mental health also has the advantage that return on investment can be achieved within relatively short-time frames (compared with longer-term, but potentially valuable, investments in early child development), with fiscal benefits across a wide range of portfolios (including health, justice, and social welfare), with many subsequent years of influence and reward, in contrast with investments in health care during later stages of life, the benefits of which are limited by the number of future productive years of life.

Real-world, locally relevant and endorsed solutions

Advocates can spend significant energy on articulating the issue, but without presenting practical and realistic solutions, youth mental health becomes just one of a myriad of problems being brought forward for governments and decision makers to respond to. For real-world solutions, it is often best to have visible and scalable templates in communities. Implementing local demonstration sites underpinned by a model of care (such as those

described in Part 3) but embedded within their relevant social, cultural, geographic and workforce context, provide valuable stepping stones to scalable solutions and wider implementation.

Where a local template carries the endorsement and buy-in of different workforces, professional groups, young people and families with lived experience and researchers, the case for decision makers becomes even stronger. While workforce compositions will vary country by country and even community by community, interdisciplinary co-operation is important everywhere in the world. Political imperatives are diminished where there is fragmentation and siloing across key stakeholders and by policy makers and commissioners of services.

Translating local templates into national and regional infrastructure can be achieved through dynamic modelling that can then be used to show the scale, timing and sequencing of program initiatives that are required to achieve the specific outcome(s) [474] – such as reduced psychological distress, reduced suicidal behaviour or increased participation in education or employment. These can also be combined with the development of longer-term governance, implementation, and evaluation infrastructure to ensure their sustainability.

Change in theory is for philosophers and armchair academics. Change in practice is driven by imitation of the possible. For most political leaders and decision makers, seeing is believing. Consequently, establishing real-world examples of service innovation, be they clinically or technology-based, is essential. The extent to which solutions are also scalable and relevant to the local context needs to be clearly demonstrated.

Prevention and early intervention
The emphasis in youth mental health on prevention and early intervention, as outlined in Part 3, has remained central to the political discourse in many countries. [4,475] The opportunity to change the life-course of young people by intervening as early in the onset of mental illness and as effectively as possible has wide political and public appeal. Mental health promotion for young people has been increasingly embedded within education

systems, [321] with an emphasis on sleep hygiene, increased physical activity, reduced alcohol and drug use, increased social connection and enhanced cognitive-behavioural skills. The focus on addressing the social determinants of poor mental health and suicide risk is also gaining traction, particularly among governments simultaneously seeking to address broader societal imperatives that impact on young people's mental health, such as unemployment, housing insecurity, and financial distress. Approaches informed by Ecological Systems Theory[476,477] could also help to mobilise the public and politicians on youth mental health by focusing both on interventions that support young people directly and the social determinants of mental health, and strengthening the wider systems in which young people are embedded. [478]

The power of story-telling

Stories are essential to open people's minds to the facts and influence decisions at all levels of society. The emotional engagement and authenticity that flows from lived experience of many varieties, well told, is an essential ingredient in creating momentum for reform. However, we have seen this impact dissipate when it is limited to awareness raising alone, disconnected to other elements of strategy and calls to action. Indeed, in some respects awareness without purpose is counterproductive when it produces compassion fatigue and also creates the false impression that something is somehow being done to address the neglect and the crisis. Anti-stigma campaigns also run these risks and are ineffective in isolation too. One of the best antidotes to disease related stigma, such as was once seen in epilepsy, tuberculosis, and leprosy, is the advent of visibly effective treatment. This extends to welcoming, compassionate and effective models of care as witnessed with the scaling up of early intervention services and youth primary care platforms.

High-profile societal champions and political influencers

Linked to storytelling is sustained and high-quality media attention, which is critical to any political campaign. Here, societal (e.g., sport, entertainment, creatives, fashion, and lifestyle) and high-profile (past and current political leaders) champions, alongside the unified voice of genuine health and research experts, play a key role to ensure the message is received by a wider audience and appeals to the public in order to demonstrate support

for sympathetic policy makers. This aspect of strategy should also have a strong emphasis on positive stories of effective care and innovation, combined with credible first-person accounts from service users and their families and carers, as described above. In the age of social media, and highly segmented audiences, the effective real-time use of new technologies and platforms is increasingly critical.

Further, large scale change at the national level typically relies on major decisions by the political leadership that controls finance and budgetary decisions. Health is often perceived by these groups as necessary but a 'poor spend', yet it has been growing inexorably worldwide to the point that it is becoming unsustainable. [457] Spending is based less on logic and more on public sentiment and emotion. Vast sums are spent on high-tech hospitals and hugely expensive cancer drugs as well as a tranche of low-value health care. Investments in primary and community care, and particularly in mental health research and care, have great potential value. Yet these things are neglected for a variety of reasons, including the needs of politicians, and vested professional and commercial interests. Engagement and persuasion at the highest levels of Government, and through their advisors and influencers, appears to be important yet it can take us only so far. It is only when the community as a whole is educated, persuaded and expertly mobilised through the strategies outlined here that transformation can occur. This is achievable but requires a different approach as we have seen with climate change, and the tobacco and fast food industries, where powerful vested interests are involved. A value based society and health system is the context for such a transformation and activism is the missing strategy to get us there.

Grassroots activism and global organising

A common critique of modern Governments is that while they fail to lead, they are also very responsive to grassroots movements that threaten their political future. UK PM Tony Blair's former official spokesperson, Alastair Campbell, in his recent book "But what can I do?" illustrates this well and offers guidance in how to become involved[479]. "New Power" by Jeremy Heimans and Henry Timms[480] takes this to another level and provides a radical guide to creating reform and real change. To succeed, solid advice and careful planning needs to be underpinned by much more aggressive, confident, and well organised grassroots activism based on the real-life experiences of those young people who have lived with mental ill-

health and their families and carers. Although not all young people will have lived experience of a mental health condition[481], there is a large proportion of the population who are affected directly or indirectly by youth mental health difficulties, either through their work, families, friends and community networks. The engagement of older age groups, who are also typically much more connected to active decision-makers in government, finance and business, should not be underestimated.

Sensitive promotion of the lived experiences of young people and new solutions could also help to persuade the public to advocate for better access to evidence-based supports. Although this needs to carefully consider whose lived experience is being elevated. In many contexts, the voices of young people and/or those with mental health conditions have historically been marginalised. Many young people cannot participate in elections or do not have the financial or network-driven power to compete for attention or influence. [482] Where mental ill-health intersects with known drivers, such as poverty and poor living standards, gender-based violence, discrimination based on sexuality, gender identity and ethnicity, and where there is trauma from colonisation, displacement, and violations of human rights, [483-488] opportunities for power are even further diminished. Therefore, campaigns to raise the political imperative must be as inclusive as possible of people whose voices have been excluded, and must also be sensitive not to place the onus on these young people to fight the cause alone. [480]

Finally, all paradigm shifts are powered by a collective set of principles and a shared mindset. The progress achieved in building the youth mental health field to date has flowed from the establishment of scientifically and humanistically oriented global networks of pioneers, leaders and supporters who have come together through a series of international forums over the past 25 years; initially through the IEPA Early Intervention in Mental Health Association since 1996and, since 2010, the International Association for Youth Mental Health. While these organisations are committed to science and evidence, they are nevertheless operating in a socio-political manner within professional fields, partnering with lived experience and the public, to secure progress and build a new field and culture.

Conclusion and Call to Action

A new paradigm, indeed a new field, of youth mental health is being created and assembled, and this endeavour must be accelerated, strengthened and prioritised.We have aimed to capture the state of play with this global endeavour and examine the changing landscape of youth mental health, acknowledge the threat and the opportunity, and begin to identify the underlying megatrends influencing this change. The damage that some combination of these megatrends is inflicting is deep and widespread within societies and across the globe. Arguably, young people represent the "miners' canaries" of our modern world, and are showing the most serious warning signs and symptoms of a society and a world that is in serious trouble. This underlines the central importance of taking a sophisticated socio-political perspective and developing a clear objective supported by the most effective strategy and tactics. Such a plan must also be soundly and scientifically based. Conceptual building blocks and some of the perspectives needed to build a new field of youth mental health are innovations that have emerged. The principles, core features and strategies necessary for designing, testing and scaling up new models of youth mental health care have become widely accepted and substantial progress to at least a base camp has been made in many jurisdictions. While the barriers and remaining gaps are both considerable, definable solutions are on offer. The economic dimension of youth mental health and the politics of reform are where much more energy needs to be devoted, with activism based on the best science, as with climate change, the safest insurance policy to avoid mistakes and wrong turns. However, drawing on New Power approaches, [480] the people must be engaged and mobilised in their own self-interest if youth mental health is to be transformed. We have attempted to adopt as inclusive as possible approach to this global problem while recognising that much of the data and practical reform has been limited to high and middle resource settings. The authorship and the model of producing this commission was formulated and agreed to try to maximise this aspiration, however, greatly enhanced efforts are now needed to address and strengthen youth mental health care in lower resource settings. Even in the best resourced settings, youth mental health reform and care is still "too little too late". In low resource settings, where most of the young people in the world are growing up, youth mental health reform is at the starting blocks and will need to adopt a modified strategy. It should be crystal clear now that in

relation to the youth mental health crisis, the stakes are very high for our world, given how dependent societies are on the capacities and contributions of their young people. As long as so many emerging adults continue to be allowed to die prematurely, be cast onto the welfare scrapheap, are denied sufficient respect and nurture, and languish in precarity, society itself will become more precarious. The youth mental health crisis is more than a wake-up call; it may be our last chance to do so.

Contributors: PM conceived this Commission. The Commission report was led by the Commission editor (PM), co-editors (EK, SI, CM) and a youth co-editor (ND), who wrote, edited and integrated the manuscript in collaboration with all section commissioners and coauthors. The Commission consisted of five parts to which authors were assigned as section commissioners (lead authors), youth commissioners or co-authors (see appendix 2). Part 1 was led by BD and PJ with input from JF, IQN (youth commissioners), MC, AD, TF, AJ, JT and AY. Part 2 was led by S-JB and SW with input from KP (youth commissioner), MB, AC, IH, CK and JS. Part 3 was led by PM, EK, SI, MA-J with input from ND, EG, EP, SH (youth commissioners), SA, AC, MD, PG, JH, FK-L, AM, DN, DR, JR, SS, IS, KT, LV, TvA, SV and JW. Part 4 was led by CM and DM with input from FAEA, JT (youth commissioners), MH and LK-DL. Part 5 was led by VB and IH with input from AM, AH (youth commissioners), EC, NMD and PM. All authors contributed to the writing of their respective sections, and reviewed, commented upon and approved the final version of the report.

Declaration of interest: PM is a founding director, patron and former founding board member of headspace. He is the executive director of Orygen, Australia's National Centre of Excellence in Youth Mental Health. Orygen is the lead agency for five headspace centres across northwest Melbourne. S-JB has provided paid expert witness work for UK charities and legal organisations. She is the author of two books related to the brain, education and learning, for which she receives royalties. She gives talks in schools, in the state and private sector, as well as at education conferences and for education organisations, and other public, private and third sector organisations (some talks are remunerated). S-JB a member of the Rethinking Assessment group, the Steering Committee of the Cambridge Centre of Science Policy, the Technical Advisory Group for the UK Government Department of

Education 'Education and Outcomes Panel-C Study', the Singapore Government National Research Foundation Scientific Advisory Board, and the Singapore Government Human Potential Scientific Advisory Board. She was a member of the Times Education Commission (2021-2022). IBH has received honoraria for consultancy and educational activities from Janssen Cilag. He was a member of the Clinical Advisory Group for the evaluation of the Better Access to Psychiatrists, Psychologists and General Practitioners through the Medicare Benefits Schedule (MBS) initiative, and is a member of Mental Health Reform Advisory Committee (Department of Health). He is the Chief Scientific Advisor to, and a 3.2% equity shareholder in, InnoWell Pty Ltd which aims to transform mental health services through the use of innovative technologies. FAEA has received honoraria for consultancy from Grand Challenges Canada and is a past member of the World Economic Forum's Global Future Council on Mental Health. AC is a director of headspace, Australia's National Youth Mental Health Foundation, and the National Education Alliance for Borderline Personality Disorder. AD is the Academic Secretary for the Royal College of Psychiatrists' Faculty of Child and Adolescent Psychiatry; a research advisory group member of the UK National Society for the Prevention of Cruelty to Children; a member of the UK Trauma Council; and an evidence panel member of the Early Intervention Foundation. TF's research group receives funding for consultancy to Place2Be, a third sector organisation that provides mental health training, support and interventions to schools across the UK. JH is executive director of Youth Wellness Hubs Ontario and receives funding from Graham Boeckh Foundation and other donors through the Centre for Addiction and Mental Health Foundation. AJ is a trustee of the Samaritans and MQ. She has received fees for lecturing from the Scottish Association of Mental Health. She is an advisory board member of Our Future Health, UK. FK-L's work is the subject of publishing contracts with multiple companies, including CCBT Ltd in the EU, Magelan, multiple BCBSs and Cobalt Therapeutics LLC in the US, as well as the NHS in the UK. Although she has received no remuneration to date, she may receive royalties in the future. She has not received any equity or payments related to this publication. She is a non-executive board director of Orygen. CK is the founder of Wida, a digital mental health platform. He has received consulting fees from the United Nations Children's Fund. He has received grants from MQ: Transforming Mental Health, UK; Royal Academy of Engineering, UK; NIH, US; Medical Research Council, UK; and Fundação de Amparo à Pesquisa do Estado do Rio Grande do Sul, Brazil. DR is a Chief Scientific Advisor to headspace,

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