The Lancet Commission on global mental health and sustainable development

Article *in* The Lancet · October 2018

DOI: 10.1016/S0140-6736(18)31612-X

28 authors, including:

Crick Lund
University of Cape Town
317 PUBLICATIONS **6,849** CITATIONS

SEE PROFILE

Pamela Y. Collins
University of Washington Seattle
57 PUBLICATIONS **3,379** CITATIONS

SEE PROFILE

Janice Cooper
The Carter Center
39 PUBLICATIONS **570** CITATIONS

SEE PROFILE

Julian Eaton
CBM International
70 PUBLICATIONS **1,005** CITATIONS

SEE PROFILE

The *Lancet* Commission on global mental health and sustainable development

Vikram Patel, Shekhar Saxena*, Crick Lund†, Graham Thornicroft†, Florence Baingana‡, Paul Bolton, Dan Chisholm, Pamela Y Collins, Janice L Cooper, Julian Eaton, Helen Herrman, Mohammad M Herzallah, Yueqin Huang, Mark J D Jordans, Arthur Kleinman, Maria Elena Medina-Mora, Ellen Morgan, Unaiza Niaz, Olayinka Omigbodun, Martin Prince, Atif Rahman, Benedetto Saraceno, Bidyut K Sarkar, Mary De Silva, Ilina Singh, Dan J Stein, Charlene Sunkel, Jürgen Unützer*

Executive summary

The Sustainable Development Goals (SDGs) represent an exponential advance from the Millennium Development Goals, with a substantially broader agenda affecting all nations and requiring coordinated global actions. The specific references to mental health and substance use as targets within the health SDG reflect this transformative vision. In 2007, a series of papers in *The Lancet* synthesised decades of interdisciplinary research and practice in diverse contexts and called the global community to action to scale up services for people affected by mental disorders (including substance use disorders, self-harm, and dementia), in particular in low-income and middle-income countries in which the attainment of human rights to care and dignity were most seriously compromised. 10 years on, this Commission reassesses the global mental health agenda in the context of the SDGs.

Despite substantial research advances showing what can be done to prevent and treat mental disorders and to promote mental health, translation into real-world effects has been painfully slow. The global burden of disease attributable to mental disorders has risen in all countries in the context of major demographic, environmental, and sociopolitical transitions. Human rights violations and abuses persist in many countries, with large numbers of people locked away in mental institutions or prisons, or living on the streets, often without legal protection. The quality of mental health services is routinely worse than the quality of those for physical health. Government investment and development assistance for mental health remain pitifully small. Collective failure to respond to this global health crisis results in monumental loss of human capabilities and avoidable suffering.

A historic opportunity exists to reframe the global mental health agenda in the context of the broad conceptualisation of mental health and disorder envisioned in the SDGs. This opportunity is supported by the passing of WHO's Comprehensive Mental Health Action Plan, the ratification of international conventions protecting the rights of people with psychosocial disabilities, the convergence of evidence from diverse scientific disciplines on the nature and causes of mental health problems, the ubiquitous availability of digital technology, and the growing consensus among diverse stakeholders about the need for action and what this action should look like. This Commission grasps the opportunity presented by the SDGs to broaden the global mental health agenda from a focus on reducing the treatment gap for people affected by mental disorders to the improvement of mental health for whole populations and reducing the contribution of mental disorders to the global burden of disease. The Commission grounds this reframed agenda on four foundational pillars.

(1) First, mental health is a global public good and is relevant to sustainable development in all countries, regardless of their socioeconomic status, because all countries can be thought of as developing countries in the context of mental health. (2) Second, mental health problems exist along a continuum from mild, time-limited distress to chronic, progressive, and severely disabling conditions. The binary approach to diagnosing mental disorders, although useful for clinical practice, does not accurately reflect the diversity and complexity of mental health needs of individuals or populations. (3) Third, the mental health of each individual is the unique product of social and environmental influences, in particular during the early life course, interacting with genetic, neurodevelopmental, and psychological processes and affecting biological pathways in the brain. (4) Fourth, mental health is a fundamental human right for all people that requires a rights-based approach to protect the welfare of people with mental disorders and those at risk of poor mental health, and to enable an environment that promotes mental health for all.

Realising this reframed agenda will require six key actions. The Commission fully recognises the diversity of settings across countries and within countries and suggests that the starting point for staged implementation of its recommendations will differ according to particular settings and the availability of human and financial resources. First, mental health services should be scaled up as an essential component of universal health coverage and should be fully integrated into the global response to other health priorities, including non-communicable diseases, maternal and child health, and HIV/AIDS. Equally, the physical health of people with severe mental disorders should be emphasised in such integrated care. Second, barriers and threats to mental health need to be addressed; these include the lack of awareness of the value of mental health in social and economic development, the lack of attention to mental health promotion and protection across sectors, the severe demand-side constraints for mental health care caused by stigma and discrimination, and the increasing threats to mental health due to global challenges such as climate change and growing inequality. Third, mental health needs to be protected by public policies and developmental efforts; these intersectoral actions should

Published **Online** October 9, 2018 http://dx.doi.org/10.1016/S0140-6736(18)31612-X

See **Online/Comment** http://dx.doi.org/10.1016/S0140-6736(18)32271-2, http://dx.doi.org/10.1016/S0140-6736(18)32269-4, http://dx.doi.org/10.1016/S0140-6736(18)32272-4, and http://dx.doi.org/10.1016/S0140-6736(18)32270-0

*Joint lead editors

†Joint co-editors

‡Remaining authors listed in alphabetical order

Harvard Medical School, Boston, MA, USA (Prof V Patel PhD); **Harvard TH Chan School of Public Health, Boston, MA, USA** (Prof V Patel, S Saxena MD); **Sangath, Goa, India** (Prof V Patel); **Public Health Foundation of India, New Delhi, India** (Prof V Patel); **Centre for Global Mental Health, Health Service and Population Research Department, Institute of Psychiatry, Psychology and Neuroscience, King's College London, London, UK** (Prof C Lund PhD); **Alan J Flisher Centre for Public Mental Health, Department of Psychiatry and Mental Health, University of Cape Town, Cape Town, South Africa** (Prof C Lund); **Institute of Psychiatry, Psychology, and Neuroscience, King's College London, London UK** (Prof Sir G Thornicroft PhD); **WHO Sierra Leone, Freetown, Sierra Leone** (F Baingana MSc); **Makerere University School of Public Health, Kampala, Uganda** (F Baingana); **Department of International Health and Department of Mental Health, Center for Humanitarian Health, Johns Hopkins University Bloomberg School of Public Health, Baltimore, MD, USA** (P Bolton MBBS); **WHO Regional Office for Europe, Copenhagen,**

Panel 1: **UN Sustainable Development Goals specifically pertaining to mental health**

SDG 3: Ensure healthy lives and wellbeing for all at all ages

- Target 3·4: countries should "reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and wellbeing" by 2030
  - Indicator 3·4·2: suicide mortality rate
- Target 3·5: countries should "strengthen the prevention and treatment of substance abuse, including narcotic drug abuse and harmful use of alcohol"
  - Indicator 3·5·1: coverage of treatment interventions for substance use disorders
  - Indicator 3·5·2: harmful use of alcohol (per capita consumption)
- Target 3·8: countries should "achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all"
  - Indicator 3·8·1: coverage of essential health services (defined as the average coverage of essential services based on tracer interventions that include reproductive, maternal, newborn, and child health, infectious diseases, non-communicable diseases, and service capacity and access, among the general and the most disadvantaged population)
  - Indicator 3·8·2: number of people covered by health insurance or a public health system per 1000 population

SDG=Sustainable Development Goal

Denmark (D Chisholm PhD); **University of Washington School of Medicine and School of Public Health, Seattle, WA, USA** (Prof P Y Collins MD); **The Carter Center, Monrovia, Liberia** (J L Cooper PhD); **and Emory University, Atlanta, GA, USA** (J L Cooper); **CBM International, Bensheim, Germany** (J Eaton MRCPsych); **Centre for Global Mental Health, London School of Hygiene and Tropical Medicine, London, UK** (J Eaton); **Orygen, National Centre of Excellence in Youth Mental Health and Centre for Youth Mental Health, The University of Melbourne, Melbourne, VIC, Australia** (Prof H Herrman MD); **World Psychiatric Association** (Prof H Herrman) ; **WHO Collaborating Centre in Mental Health, Melbourne, VIC Australia** (Prof H Herrman); **Palestinian Neuroscience Initiative, Al-Quds University, Jerusalem, Palestine** (M M Herzallah PhD); **Center for Molecular and Behavioral Neuroscience, Rutgers University, Newark, NJ, USA** (M M Herzallah); **National Clinical Research Centre for Mental Disorders (Peking University Sixth Hospital), Beijing, China** (Prof Y Huang PhD); **Institute of Psychiatry, Psychology, and Neuroscience, King's College**

be undertaken by each country's leaders to engage a wide range of stakeholders within and beyond health, including sectors in education, workplaces, social welfare, gender empowerment, child and youth services, criminal justice and development, and humanitarian assistance. These interventions should target social and environmental determinants that have a crucial influence on mental health at developmentally sensitive periods, particularly in childhood and adolescence, for the promotion of mental health and the prevention of mental disorders. Fourth, new opportunities should be embraced, including those offered by the innovative use of trained non-specialist individuals and digital technologies, to deliver a range of mental health interventions, and the mobilisation of the voices of people with lived experience of mental disorders. Fifth, substantial additional investments should be made urgently because of the strong economic and health case for increased investments in mental health. Although additional resources are essential, an immediate opportunity exists for efficient and effective use of existing resources—for example, through the redistribution of mental health budgets from large hospitals to district hospital and community-based local services, the introduction of early interventions for emerging mental disorders, and the re-allocation of budgets for other health priorities to promote integration of mental health care in established platforms of delivery. Finally, investments in research and innovation should grow and harness novel approaches from diverse disciplines such as genomics, neuroscience, health services research, clinical sciences, and social sciences, both for implementation research on scaling up mental health interventions and for discovery research to advance understanding of causes and mechanisms of mental disorders and develop effective interventions to prevent and treat them.

This Commission proposes a broad and integrated set of indicators to monitor progress for mental health in the SDG era, spanning the social determinants of mental health, the mental health status of populations, and the inputs into and outcomes of mental health services and systems. We call for the establishment of a partnership to transform mental health globally, whose goals would be the mobilisation and disbursement of funds, enabling the utilisation and monitoring of these funds, and evaluation of the effect of the actions proposed by the Commission. Such a partnership should include the UN and development agencies, academic institutions and non-governmental organisations, the private sector, organisations representing the voices of people with lived experiences and their family members, and policy makers from national and international agencies.

This Commission reframes mental health by bringing together knowledge from diverse scientific perspectives and real-world experiences to offer a fresh, ambitious, and unified vision for action. Our conceptualisation is aligned with, and will give further impetus to, the central SDG principle to leave no one behind and to the notions of human capabilities and capital. We believe in both the inherent right of every person to mental health and in the idea that mental health can facilitate sustainable socioeconomic development, improved general health, and a more equitable world. Urgent action to fully implement our recommendations will not only hasten the attainment of the mental health targets of the SDGs, but indeed many of the other SDG targets as well.

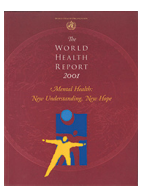
The journey so far

In 2015, all nations united around a shared mission of achieving the Sustainable Development Goals (SDGs). The SDGs were an exponential advance from the Millennium Development Goals, both in their aspiration to encompass a substantially broader agenda and through their recognition that these were global concerns, affecting all nations and requiring global actions to address them. A notable example of this transformative vision was the recognition that health burdens went beyond the focus of the Millennium Development Goals on a selection of infectious diseases and maternal and child health (the leading causes of the burden of disease in low-income countries). As such, non-communicable diseases, mental health, and substance abuse received recognition, and targets and indicators related to these were specified (panel 1). With this, decades of science and advocacy for mental health to achieve its rightful place in the global development agenda had finally succeeded.

Figure 1: **The evolution of global mental health**
mhGAP=Mental Health Gap Action Programme.

1990

The Caracas Declaration of Mental Health and Human Rights emphasised the need for developing psychiatric care in close links with primary care through community-based services and advocated the need to anchor, in a legal framework, the restructuring of the services and to assure proper safeguards for the human and civil rights of patients.



2001

WHO's World Health Report focused on mental health for the first time and presented a public health perspective on mental health along with providing practical guidance to policy makers.

2007

The Lancet's first Global Mental Health series emphasised the large treatment gaps for mental disorders in low-income and middle-income countries, and called for services for mental disorders to be scaled up, guided by the evidence of cost-effective interventions and respect for human rights.

2007

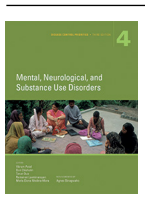
The Convention on the Rights of Persons with Disabilities was adopted, and quickly signed and ratified by most countries in the world, coming into force in 2008. The Convention promotes, protects, and ensures the full and equal enjoyment of all human rights and fundamental freedoms by all people with disabilities, and promotes respect for their inherent dignity.

2011

The Grand Challenges in Global Mental Health, the most comprehensive priority setting exercise to guide research in global mental health, identified implementation questions as the leading priority, ushering in a wave of new funding for global mental health research.

2015

The ratification of the Sustainable Development Goals recognised the promotion of mental health, prevention of mental and substance use disorders, and universal health coverage as targets of the health goal.

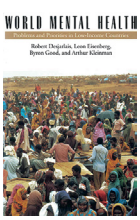


2016

The Disease Control Priorities-3 published recommendations for cost-effective packages of care for the prevention, treatment, and care of mental disorders that are feasible for delivery through a range of platforms (from the community to specialist) and that can be prioritised as the mental health component of universal health coverage.

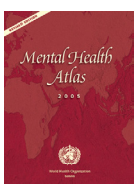
2018

The *Lancet* Commission on global mental health and sustainable development proposes a reframing of mental health to concurrently address the prevention and quality gaps alongside the treatment gap (for both clinical and social care interventions) to reduce the global burden of mental disorders.



1995

The World Mental Health Report highlighted the large, and growing, burden of mental disorders in low-income countries, their strong association with social determinants (such as poverty, displacement, and violence), and the pervasive lack of care and abuse of human rights.



2001

WHO's Mental Health Atlas provided, for the first time, comparable data from the majority of countries on some basic indicators on mental health services and systems. Further editions have been published in 2005, 2011, 2014, and 2018.

2007

The Movement for Global Mental Health, a virtual alliance of people affected by mental disorders and practitioners of global mental health was formed to collectively champion the attainment of the call to action.

2008

WHO's mhGAP initiative committed WHO to providing evidence-based guidance and assistance to countries for scaling up care for mental, neurological, and substance use disorders. Over the next 10 years, the initiative assisted more than 100 countries.

2013

WHO's Mental Health Action Plan was adopted with the highest level of political commitment from all 194 ministers of health in the World Health Assembly, and clear objectives, actions, indicators, and targets for 8 years.

2016

The Out of the Shadows meeting and declaration of the World Bank and WHO recognised mental health not just as a global health priority, but as a global development priority.

London, London, UK (Prof M J D Jordans PhD); **Research and Development, War Child, Amsterdam, Netherlands** (Prof M J D Jordans); **Faculty of Social and Behavioural Sciences, University of Amsterdam, Amsterdam, Netherlands** (Prof M J D Jordans); **Department of Anthropology, Harvard University, Cambridge, MA, USA** (Prof A Kleinman MD); **Department of Global Health and Social Medicine, Harvard Medical School, Boston, MA, USA** (Prof A Kleinman); **National Institute on Psychiatry Ramon de la Fuente Muñiz, Mexico City, Mexico**(M E Medina-Mora PhD); **Templeton World Charity Foundation, Nassau, The Bahamas** (E Morgan MPhil); **Psychiatric Clinic and Stress Research Centre, Karachi, Pakistan** (Prof U Niaz FRCPsych); **University of Health Sciences, Lahore, Pakistan** (Prof U Niaz); **Dow University of Health Sciences, Karachi, Pakistan** (Prof U Niaz); **College of Medicine and Centre for Child and Adolescent Mental Health, University of Ibadan, Ibadan, Nigeria** (Prof O Omigbodun FMCPsych); **King's Global Health Institute, King's College London, London, UK** (Prof M Prince MD); **University of Liverpool, Liverpool, UK** (Prof A Rahman PhD); **Human Development Research Foundation, Islamabad, Pakistan** (Prof A Rahman); **School of Medical Sciences, University Nova of Lisbon, Lisbon, Portugal** (Prof B Saraceno MD); **Lisbon Institute of Global Mental Health, Lisbon, Portugal** (Prof B Saraceno); **PRIDE Project, Sangath, India** (B K Sarkar PhD); **Public Health Foundation of India, New Delhi, India** (B K Sarkar); **Wellcome Trust, London, UK** (M De Silva PhD); **Department of Psychiatry and Wellcome Centre for Ethics and Humanities, University of Oxford, Oxford, UK** (Prof I Singh PhD); **Department of Psychiatry and Mental Health, University of Cape Town, Cape Town, South Africa** (Prof D J Stein FRCPC); **Groote Schuur Hospital, Cape Town, South Africa** (Prof D J Stein);

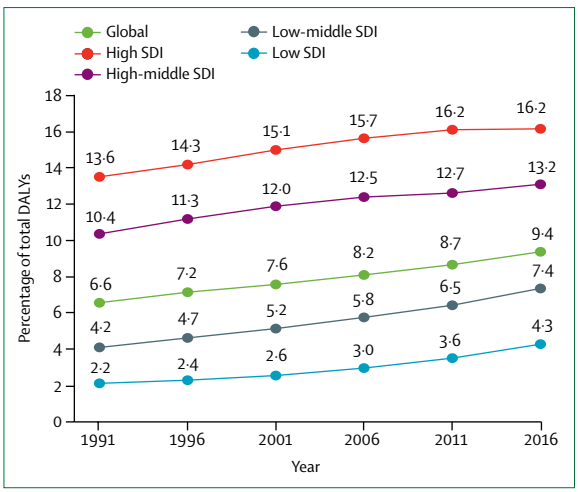


Figure 2: **The rising burden of mental and substance use disorders, Alzheimer's disease and other dementias, and suicide (self-harm) by SDI groups**
Data are Global Burden of Disease health data. SDI is a summary measure of a geography's sociodemographic development and is based on average income per person, educational attainment, and total fertility rate. SDI=sociodemographic index. DALY=disability-adjusted life-year.

The field of global mental health has played a key part in the inclusion of mental health in the SDGs. Global health has been variously defined as a field that "places a priority on improving health and achieving equity in health for all people worldwide".[1] In line with its parent discipline, the focus of global mental health has been on reducing mental health disparities between and within nations.[2] Global mental health is the product of decades of interdisciplinary research and practice in diverse transnational contexts. A series of publications from the early 1990s (figure 1) led to a call to action in *The Lancet* in 2007 to scale up services for people affected by mental disorders built on the twin foundations of cost-effective interventions and respect for human rights in all countries, but in particular in low-income and middle-income countries (LMICs) where the realisation of these rights was most seriously compromised.[3]

The goal of this Commission is to reframe global mental health within the paradigm of sustainable development. We propose a substantial expansion of the global mental health agenda, building on its achievements but also recognising the limitations of its extant principles and strategies. This Commission attempts to reframe the global mental health agenda in several ways. First, our scope is global and we address concerns that are relevant in all countries. When it comes to mental health, all countries can be thought of as developing countries, and vast inequities exist in the distribution of and access to mental health resources, not only between but also within countries. Instead of the conventional classification of countries according to their income status, we use a resource-based classification of contexts in our analysis. We advocate for countries to use available planning tools to set targets for inputs (eg, budgets, staff, and beds), processes (eg, numbers of skilled providers), and outcomes (eg, improved mental health).[4] Second, from a nosological perspective, we acknowledge that the binary approach to the diagnosis of mental disorders—although useful for health professionals—does not adequately reflect the dimensional nature of mental health or the experience of people affected. Instead, we propose a hybrid staged model and show how such an approach is not only of utility to providers across the spectrum (from community health workers to mental health professionals), but also more accurately reflects the distribution of symptoms of mental ill health, is more attuned to the lived experience of people with mental disorders, and provides better optimisation of the allocation of resources for interventions than the binary approach. Third, in terms of the causes of mental ill health, we emphasise a convergent model of mental health, recognising the complex interplay of psychosocial, environmental, biological, and genetic factors across the life course, but in particular during the sensitive developmental periods of childhood and adolescence. Fourth, we call for the actualisation of mental health as a fundamental human right for all people, with a specific focus on those who are at highest risk of having their rights denied, including people living in institutions (including prisons), those who are homeless, and those (such as refugees) who are affected by severe adversities such as conflict.

In the context of reframing mental health, the Commission seeks to emphasise the global mental health goal of reducing the treatment gap, or more accurately the care gap,[5] for people affected by mental disorders. We also seek to reduce the burden of mental disorders by addressing the quality gap (ie, the quality of care received by people with mental disorders) and the prevention gap (ie, the coverage of interventions that target the risk factors for mental disorders). The burden of mental disorders can only be reduced through the combined actions of the prevention of mental disorders and the effective clinical and social care of people with mental disorders. We include dementia and suicide within the scope of our Commission because mental health of the affected person and their caregivers is a major focus of care for dementia, and suicide is often the consequence of mental disorders. Before we describe the principles for reframing global mental health and its implications for policy and practice, we briefly review the history of this field, and its impact and limitations.

History of global mental health

The initial perspective on global mental health was characterised by two epistemologies: the emic approach of social anthropologists and cultural psychiatrists who analysed mental disorders as shaped by social and cultural forces, and the etic approach of clinicians and epidemiologists who analysed mental disorders as if they were not biologically different from other medical

disorders and could therefore be conceived as universal conditions. From the 1970s, a new generation of interdisciplinary collaboration (including the work of scholars whose expertise encompassed both approaches) led to the emergence of a "new cross-cultural psychiatry".[6,7] This approach recognised the key contributions and complementarities of both schools and promoted the study of mental disorders in diverse populations with balanced acknowledgment of their universal features and the crucial contribution of contextual and cultural influences. This body of work led to four transformational shifts that heralded the emergence of global mental health.

The first shift concerned the nature of mental disorders and, consequently, the content of interventions. The biomedical approach was progressively considered as just one among other dimensions of mental health. In a historic article,[8] George Engel coined the term biopsychosocial. Subsequent contributions showed the multifaceted nature of the cause and treatment of mental disorders, leading to the conclusion that mental disorders should be considered as conditions of people always in transaction with social and environmental contexts. The concept of social suffering encompassing human problems that result from political, economic, and institutional power emphasised the need for structural and social interventions in comprehensive responses to address mental health problems.[9] Simultaneously, substance use disorders were conceptualised as complex, chronic health conditions with a relapsing nature, challenging their interpretation as examples of moral failure or criminal behaviour. Approaches to tackle these disorders changed from criminal justice-based to public health-based.[10]

The second shift concerned where mental health care is provided and was represented by the progressive shift from institutional care to community care, a process known as deinstitutionalisation. As a result of a reframing of the ethical, social, and administrative considerations related to mental health care, the availability of new drugs, and the growth of the human rights movement, the number of psychiatric beds decreased in many high-income countries from the 1950s. Some clinical and rehabilitation activities were moved outside hospitals, psychiatric wards were created in general hospitals, and mental health was integrated into primary health care, entirely replacing the psychiatric hospitals in some countries (eg, Italy[11]) or moved into the community (eg, the Aro Village System in Nigeria[12]).

The third shift concerns the idea of who is the provider. Mental health promotion, and prevention, treatment, and recovery from mental disorders, were no longer the prerogative of a single group of experts (historically psychiatrists). Instead, a diverse variety of people have become active in this area, from a range of mental health professionals, to various non-specialist providers, such as community health workers, teachers, law enforcement officers, and (as exemplified by the fourth shift) people with lived experience and caregivers. In short, mental health was considered everybody's business.[13]

The fourth shift is exemplified by the expression "nothing about us without us". This expression is much more than a slogan borrowed from disability activism by people with lived experience of mental disorders claiming their empowerment. It is a fundamental, rights-based component of the ethos of mental health-care provision and research,[14] from championing the engagement of people in service delivery to recognising the recovery approach (which places the wishes and expressed needs of people affected by mental disorders at the heart of mental health care).[15]

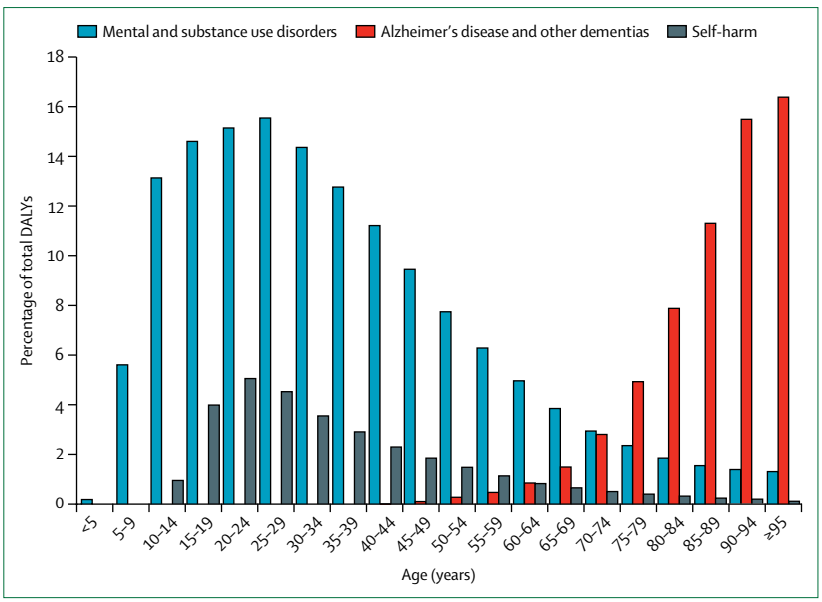


Figure 3: **The global burden of mental and substance use disorders, Alzheimer's disease and other dementias, and suicide (self-harm) in DALYs across the life course**
Data are Global Burden of Disease health data (2016). One DALY represents 1 lost year of healthy life. The sum of DALYs across the population, or the burden of disease, is a measurement of the gap between current health status and an ideal health situation in which the entire population lives to an advanced age, free of disability and disease. DALY=disability-adjusted life-year.

Scientific foundations of global mental health

These shifts have been buttressed by evidence in four domains that led to the emergence of the discipline of global mental health.

The social determinants of mental disorders

Research consistently showed a strong association between social disadvantage and poor mental health. Poverty, childhood adversity, and violence emerged as key risk factors for the onset and persistence of mental disorders that, in turn, were associated with loss of income due to poor educational attainment and reduced employment opportunities and productivity.[16] These complex, multidirectional pathways led to a vicious cycle of disadvantage and mental disorders and suggest a crucial role for mental disorders in the intergenerational transmission of poverty.

South African Medical Research Council Unit on Risk and Resilience in Mental Disorders, Cape Town, South Africa (Prof D J Stein)**; South African Federation for Mental Health, Johannesburg, South Africa** (C Sunkel)**; Movement for Global Mental Health, Johannesburg, South Africa** (C Sunkel)**; and Department of Psychiatry and Behavioral Sciences and the Advancing Integrated Mental Health Solutions Center, University of Washington, Seattle, WA, USA** (Prof J Unützer MD)

Correspondence to:
Prof Vikram Patel, Department of Global Health and Social Medicine, Harvard Medical School, Boston, MA 02115, USA
vikram_patel@hms.harvard.edu

For the **SDGs** see http://www.un.org/sustainabledevelopment/sustainable-development-goals

For the **Global Burden of Disease health data** see https://vizhub.healthdata.org/gbd-compare/

Figure 4: **Examples of torture and incarceration of people with mental disorders**
(A) View of a rehabilitation centre in Indonesia. In 2012, no housing was available and many of the residents were confined in a large cage enclosed pavilion without sanitation facilities, men and woman living separated by a wire wall. Photograph credited to Andrea Star Reese. (B) Villagers chained a 32-year-old person with mental illness, apparently behaving in a threatening manner, to a tree for 8 days at Balurghat in West Bengal, India. Photograph credited to the Press Trust of India. (C) A national psychiatric hospital ward in a resource-limited setting, May, 2018. Photograph credited to Giuseppe Raviola. (D) Incarceration of a woman with intellectual disability in a social care home in Göd, Hungary, April, 2017 (by permission of the Validity Foundation).

See Online for appendix

Global burden of disease attributable to mental disorders

A transformative methodological breakthrough occurred in the early 1990s with measurement of the global burden of disease in disability-adjusted life-years (DALYs), allowing the burden of mental disorders to be compared with other health conditions by estimating their contribution to both years of life lived with disability and to premature mortality. Global burden of disease attributable to mental disorders (primarily through years lived with disability and led by depressive and alcohol use disorders) was large at the time of the first report in 1996 and has increased steadily in the subsequent two decades, due, in part, to demographic and epidemiological transitions (figure 2 and figure 3).[17] This high burden is likely to be an underestimate because of high premature mortality associated with mental disorders and the fact that dementia and suicide were not included in the burden attributed to mental disorders.[18] For example, although less than 1 million deaths are attributed to mental disorders, natural history models showed that about 13 million excess deaths occurred in 2010 in people with mental disorders.[19]

Inadequate investments in mental health care

The allocations for mental health care in national health budgets and investments in mental health research in health research budgets were disproportionate to the burden of mental health conditions in all countries. The relatively small investment allocated (less than 1% of the national health budget in low-income countries)[20] was largely spent on mental hospitals—large, stand-alone institutions separated from the community, many of which were built decades ago. Thus, the funding allocated for community-oriented, person-centred care, with a focus on integration in routine health and social care platforms, was negligible (appendix p 26, figure S1: Percentage of total health spending on mental health compared to the burden of disease [DALYs and YLDs] for all mental health problems, by country income level).

The near absence of access to quality care globally

A consequence of this low investment was the very large treatment and care gaps for people with mental disorders. The World Mental Health Surveys, with 84 850 community adult respondents in 17 countries, reported that the proportion of people with an anxiety, mood, or substance use disorder using any mental health service in the previous 12 months ranged from 1·6% in Nigeria to 17·9% in the USA.[21] Furthermore, the quality of care received by many people, in particular those affected by severe mental disorders and disabilities, was poor in all countries and was often associated with abuses of their fundamental human rights (eg, forced restraints, physical and sexual violence, and torture; figure 4).[22]

The emergence of global mental health

The rich, interdisciplinary heritage described in the previous sections laid the foundation for the 2007 *Lancet* Series[3] on global mental health. The authors of the Series concluded that the high burden of mental disorders and unmet needs for care constituted a global health crisis. After much deliberation on what might be the most urgent, clear, and specific call to action for the global health community, the authors focused on the needs of people affected by a mental disorder, calling for actions to reduce the treatment gap by scaling up the coverage of services for mental disorders in all countries, but especially in LMICs.[3]

In the years after the publication of the *Lancet* Series there was a tangible increase in attention given to the treatment gap in LMICs, as evidenced by the increase in development assistance for mental health that more than doubled in absolute dollars in the years immediately after 2007.[23] WHO launched its flagship Mental Health Gap Action Programme to scale up care for mental, neurological, and substance use disorders in LMICs[24] and developed a series of seminal publications that provide guidance to health practitioners in non-specialist settings on treatments for these disorders, track the status of mental health systems at the country level,[25] and establish standards of care.[26] The WHO Comprehensive Mental Health Action Plan (2013–20),[27] agreed on by all nations of the world, set out a plan for a broad range of mental health-related targets. The Disease Control Priorities Network published its recommendations[28]

 Published online October 9, 2018 http://dx.doi.org/10.1016/ S0140-6736(18)31612-X

showing governments and development agencies which interventions should be scaled up through diverse platforms from the community to specialist care, ultimately forming the mental and neurological health component of the package of interventions for universal health coverage. Notably, both reports took a broad view of mental health, emphasising the continuum from the promotion of mental health and prevention of mental disorders to treatment, long-term care, recovery, and inclusion of people with mental disorders.

Concurrently, reform initiatives in specific countries influenced and promoted a public health approach to mental health care. In Brazil, the government sought to correct decades of emphasis on psychiatric institutions with a more balanced provision of medical and psychosocial interventions in community-based settings.[29] In 2017, India passed a landmark mental health care bill entitling people with mental disorders to access comprehensive medical and social care services in community settings.[30] In 2012, Ghana passed a revised mental health act after years of advocacy by a coalition of the mental health community, non-governmental organisations, the Ghanaian Ministry of Health, and WHO. China's commitment to mental health care is exemplified by a mental health law that entered into effect in 2013 and massive expansion of coverage of care through its 686 programme.[31] England launched a national programme for improving access to evidence-based psychological treatments,[32] and countries affected by conflict or natural disasters, such as Sri Lanka and Rwanda, used the crisis response to the mental health care needs of traumatised and displaced populations as the foundations for a sustainable mental health-care system.[33] Global age-standardised suicide rates have fallen by 24% between 1990 and 2016 (China alone witnessed a fall of more than 50%), but the precise reasons for this decrease remain uncertain.[17]

In 2011, the Grand Challenges in Global Mental Health initiative, led by the US National Institute of Mental Health (NIMH), prioritised implementation research questions to reduce the treatment gap for mental disorders (panel 2).[34] This publication was followed by a slew of research initiatives, including investment of nearly US$60 million between 2011 and 2016 by NIMH to support research and training in global mental health and 16 international hubs for research on task sharing and scaling up mental health interventions. Additionally, Grand Challenges Canada invested CAN$42 million to support 85 projects addressing some of these implementation science priorities in 31 LMICs. In 2017, the Global Alliance for Chronic Diseases consortium of funding agencies selected global mental health for its annual call, and the UK Research Councils invited bids for global mental health research programmes, promoting a similar implementation science agenda.

Civil society began to partner with mental health professionals to promote a shared vision, the most notable example being the Movement for Global Mental Health that launched in 2008 as a virtual global alliance. By March, 2018, the movement comprised 220 member institutions representing diverse stakeholders from academics to people affected by mental disorders.[34] Since 2013, the movement has been led by people affected by mental disorders (the current leader is an author of this Commission). During the movement's fifth summit in Johannesburg, South Africa in February, 2018, the Global Mental Health Peer Network was launched. In several countries, prominent individuals have disclosed their personal accounts of living with mental disorders, indicating the growing recognition of this form of human suffering. The field of global mental health has become a respected discipline with academic programmes and centres in universities around the world, specialist journals and books on the subject, and an annual calendar of scientific events; not surprisingly, the discipline has been described as having come of age.[2]

***Panel 2:* The five leading grand challenges for global mental health[34]**

1. Integrate core packages of mental health services into routine primary health care
2. Reduce the cost and improve the supply of effective psychotropic drugs for mental, neurological, and substance use disorders
3. Train health professionals in low-income and middle-income countries to provide evidence-based care for children with mental, neurological, and substance use disorders
4. Provide adequate community-based care and rehabilitation for people with chronic mental illness
5. Strengthen the mental health component in the training of all health-care professionals to create an equitable distribution of mental health providers

Threats to global mental health

Despite these tangible effects, the journey towards justice for people with mental disorders has only just begun and potential threats remain. First, very little evidence exists to show substantial reductions in the treatment gap. Recent national surveys from India and China, home to one third of the global population, report that more than 80% of people with any mental or substance use disorder did not seek treatment.[35,36] Even when treatment is sought, its quality is poor—the World Mental Health Surveys reported that one in five people with depressive disorder received minimally adequate treatment in high-income countries, dropping to just one in 27 in LMICs.[37] Recovery-oriented community mental health services are inaccessible to the overwhelming majority of the global population, and inpatient care, including emergency care and long-term social care, is dominated by large institutions or prisons.

Tens of thousands of people with mental disorders are chained in their own homes, or in prayer camps and traditional healing facilities. Poorly planned implementation of deinstitutionalisation leads to premature mortality and the arrest and imprisonment of discharged patients. In 2016, a tragic case occurred in South Africa when the Gauteng Department of Health stopped funding a large 2000-bed facility and allowed the discharge of vulnerable people with psychosocial disability into unlicensed community residential facilities, leading to the death of over 140 people.[38]

Second, financial resources allocated for mental health by governments and from development assistance for mental health for many of the poorest countries, remain alarmingly low. Despite showing absolute increases in funding since 2007, development assistance for mental health has never exceeded 1% of the global development assistance for health[23] and was just US$0·85 per DALY compared with $144 for HIV/AIDS and $48 for tuberculosis and malaria in 2013.[39] The allocations for child and adolescent mental health, arguably the most important developmental phase in the context of prevention, is just 0·1% of total development assistance for health.[40] The economic consequences of this low investment are staggering, with an estimated loss of US$16 trillion to the global economy due to mental disorders (in the period 2010–30), driven in part by the early age of onset and loss of productivity across the life course.[41]

Third, pharmacological and other clinical interventions for mental disorders, although transformative in reducing individual suffering and disability and comparable or superior to interventions for other chronic conditions,[42] could have limited effects on the population-level burden of mental disorders. An analysis of data from 1990 to 2015 from four high-income countries (Australia, Canada, England, and the USA) showed that the prevalence of mood and anxiety disorders and symptoms has not decreased, despite substantial increases in the provision of treatment (particularly antidepressants) and no increase in risk factors. The authors called for attention to the quality gap and prevention gap, including investments in early interventions.[43] Compounding this limitation, advocacy for mental health has been hampered by the reliance on input indicators (eg, financial and human resources) and, to a more limited extent due to paucity of data, process indicators rather than outcome indicators (eg, improved mental health).

Fourth, multiple transitions facing the global population are drivers for poor mental health, notably the increase in some social determinants (such as pandemics, conflict, and displacement), increased global income inequality, growing economic and political uncertainties, rapid urbanisation, and environmental threats (such as increased natural disasters associated with climate change).[44,45] Major demographic and epidemiological transitions are in progress globally, characterised by a growth in young populations in LMICs and a steadily ageing global population. These transitions have led to an increased number of people entering risk periods for the onset of mental disorders, including psychoses, substance use, and mood disorders in young adults and dementia in older people. Although some social transitions are likely to be salutary for mental health—for example, reductions in the proportion of the population living in absolute poverty—the increase in other adverse social determinants (such as income inequality coupled with demographic transitions) is likely to lead to an overall increase in the number of people at risk of mental disorders. This increase is already evident from the dramatically increasing contribution of mental disorders to the global burden of disease.

Fifth, the biomedical framing of the treatment gap has attracted criticism from some scholars and activists championing a cultural perspective and representing people with the lived experience of mental disorders. These voices fear that a biomedical emphasis will take priority over indigenous traditions of healing and recovery, medicalise social suffering, and promote a western psychiatric framework dominated by pharmaceutical interventions.[46] Tension has developed between people who believe that the UN Convention of the Rights of Persons with Disabilities (CRPD) enshrines the right to autonomy in decision making about treatment to all people with mental disorders (or psychosocial disabilities, the term used in the CRPD) in all circumstances, and people who believe that mental health laws provide appropriate guidelines that allow for substituted decision making in the best interests of the individual when the mental disorder profoundly interferes with the person's capacity to make informed decisions.[47]

Finally, advocacy for global mental health has been threatened by fragmentation caused by diverse constituencies and scientific perspectives. Each view, including the happiness agenda promoted by some economists, specialist care for mental disorders promoted by clinical practitioners, fighting discrimination promoted by civil society activists, and mapping the human brain promoted by neuroscientists, offers a distinct perspective and direction to pursue. An example is the concern of mental health professionals that they could lose professional identity and power, or that clinical standards might be compromised through the adoption of task-sharing models of care. These concerns lead to divergent or even contradictory messages passed to governments by the diverse stakeholders concerned with mental health, resulting in a lack of coherent plans to address mental health. Compounding this fragmentation within the field, there has been, and perhaps still is, the risk of global mental health becoming yet another silo, unlinked to other momentous initiatives in global health, such as Every Woman Every Child, Global Accelerated Action for the Health of Adolescents, or universal health coverage. This lack of collaboration is exemplified by inadequate

engagement with mental health in the training and practice of general health-care professionals or the agenda of global health policy and funding on one hand, and lack of engagement with the global health and development agenda in the training and practice of mental health professionals on the other.

Mental health in the era of sustainable development

Over a decade after the 2007 *Lancet* Series that propelled mental health into the global health spotlight, it is time to consider in which direction the field should go in the next decade and beyond. Although the existing agenda to improve the detection of mental disorders and access to care is very far from being attained and remains a priority, its attainment is unlikely to substantially alter SDG targets or lead to a reduction in the global burden of mental disorders unless the agenda is expanded to address the prevention gap and the quality gap in mental health care.[43] This Commission proposes a reframing and a broadening of the scope of global mental health and a scaling up of innovative strategies to reduce the global burden of mental disorders (panel 3). Our final section draws together evidence to show how countries, communities, and citizens can address the pervasive structural and attitudinal barriers to meeting global mental health priorities. We build on the Grand Challenges in global mental health[34] to propose the directions for future research and present a blueprint of the range of indicators capturing determinants of mental health, and delivery of mental health interventions, which could be used to monitor the progress of countries in achieving the SDG target and as indicators for mental health.

The global community has a historic opportunity to reframe the global mental health agenda by use of the broader conceptualisation of mental health and disorder, and to position this agenda as an integral element of the SDGs. These opportunities are supported by the passing of the WHO's Comprehensive Mental Health Action Plan, acknowledgment of mental health as a global development issue in the 2016 summit hosted by the World Bank and WHO, the inclusion of mental health in the agenda of WHO's High Level Commission on Non-Communicable Diseases,[48] the potential for a grand convergence across disciplines (both in terms of the study of the causes of mental disorder and mental health interventions), and the growing consensus and convergence of partners and stakeholders. This Commission builds on these unique opportunities to pave the way for a reframing of mental health by bringing together knowledge and evidence from diverse disciplinary perspectives, and offers a fresh, ambitious, and unified vision for action. Our goal is to ensure that the vision of mental health as a global public good, central to the concept of human capital,[49] is realised, not only to accelerate the attainment of the mental health specific goals of the SDGs, but of many other SDGs as well.

***Panel 3:* A fresh perspective on global mental health and sustainable development**

The agenda of global mental health should be expanded from reducing the treatment gap to reducing the global burden of mental and substance use disorders by concurrently addressing the prevention and quality gaps, and extending the scope of treatment to include social care.

We propose three key principles for the reframing of mental health:

- A staged approach to understanding and responding to mental health problems, as opposed to the binary approach of current classifications
- Reconciling the nurture versus nature debates by converging the findings of the social and biological determinants of mental health problems on a life course trajectory of neurodevelopmental processes
- Recognising mental health as a fundamental human right for all people, in particular for people whose mental health is at risk or is already impaired

Four innovations in global mental health interventions should be scaled up:

- Task-sharing of psychosocial interventions to non-specialised workers as the foundation of the mental health-care system
- Coordination of this foundation with primary and specialist care to achieve a balanced model of care
- Adoption of digital platforms to facilitate the delivery of interventions across the continuum of care
- Implementation of community-based interventions to enhance the demand for care

Reframing mental health

In this section, we present the three guiding principles that underpin this Commission. The first principle is the expansion of mental health from the existing focus on clinically defined mental disorders to a broader dimensional approach to mental health (panel 3). The second principle is one of convergence, which refers to the alignment of evidence from diverse fields, including the genetic, developmental, social, and biological determinants of mental health. The final principle upholds mental health as a universal and basic human right. From a social justice perspective, this principle emphasises the rights of vulnerable populations (such as those fleeing conflict), who are at an increased risk of developing mental disorders, as well as the rights of people already living with mental disorders.

Dimensional approach to mental health

Mental health and mental disorders have been understood in various ways by different historical and cultural traditions, and by different academic disciplines. Trends in global health and development, including those prompted by SDGs, necessitate a reflection on the conceptual basis of mental health, wellbeing, mental disorder, and psychosocial disabilities. In this section, we describe the nature and dimensions of mental health and mental disorder, to provide a framework for debate, research, and action. We expand the vision of global mental health in three ways: first, balancing the focus on treatment, rehabilitation, care, and recovery with an equal emphasis on the promotion of mental health and the prevention of mental disorder, particularly interventions early in the life

Panel 4: Definitions of key terms related to mental health*

Happiness
Subjective satisfaction with life that incorporates both the emotional experience of feeling good or experiencing pleasure (hedonic tradition) and the perception of living a meaningful and good life (eudaimonic tradition); increasingly viewed as an important way of judging the success of society in meeting human needs.[50]

Wellbeing
Subjective evaluation of life satisfaction;[51] broader definitions also consider less subjective social and personal circumstances that might be considered to contribute to a good life.

Quality of life
A person's perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards, and concerns.[52]

Mental health
The capacity of thought, emotion, and behaviour that enables every individual to realise their own potential in relation to their developmental stage, to cope with the normal stresses of life, to study or work productively and fruitfully, and to contribute to their community.[53]

Mental disorder
Disturbances of thought, emotion, behaviour, and relationships with others that lead to substantial suffering and functional impairment in one or more major life activities,[53] as identified in the major classification systems such as the WHO International Classification of Diseases and the Diagnostic and Statistical Manual of Mental Disorders.

Social suffering
The ways in which the subjective components of distress are rooted in social situations and conditioned by cultural circumstance.[54]

Psychosocial disability
Disability associated with impairments related to mental disorders that limit the ability to participate fully in social and community life. These disabilities come about as a result of the interaction between these impairments and the way that societal barriers prevent full participation.[55]

Recovery
From the perspective of the person with mental illness, recovery means gaining and retaining hope, understanding of one's abilities and disabilities, engagement in an active life, personal autonomy, social identity, meaning and purpose in life, and a positive sense of self.[26] Importantly, recovery is defined by the person themself and not other people's definition of what recovery means.

Resilience
The capacity of individuals to adapt to adversity or stress, including the capacity to cope with future negative events.[56] Resilience can also be seen at a community level, and in fact is recognised as an important factor contributing to the relatively low proportion of people in emergencies who develop long-term mental disorders.

*This list is not intended to be comprehensive and focuses on key terms that are relevant to the personal or human experience of mental health and mental disorder. The list does not include broader terms such as mental health problems, mental health issues, or mental ill health.

course; second, adopting a staging approach to the identification and diagnosis of mental disorder, recognising the potential benefits of intervention at each stage; and third, embracing diverse global experiences of mental health and disorder, to tailor the range of interventions more appropriately and promote mutual learning. We begin by presenting key terms to define the scope of mental health (panel 4).

Mental health and wellbeing

Mental health can be defined as an asset or a resource that enables positive states of wellbeing and provides the capability for people to achieve their full potential. Consistent with the WHO definition of health, mental health does not simply imply an absence of illness. What then is the association between mental health and mental disorder? Clearly, the two exist on a continuum—gains in mental health predict decline in mental disorders at a population level over time.[57,58] However, this association is not linear: a person could have symptoms of a mental disorder and associated distress and disability, but can also have a degree of mental health consistent with their expectations of being satisfied with their life and achieving their potential.[59]

Wellbeing is a positive construct that incorporates two related ideas: subjective satisfaction with life and positive affect or mood (the hedonic tradition), and meaningful functioning and human development (Aristotle's eudaimonic tradition). The movement promoting wellbeing and happiness as a core indicator of human and national development[60] asserts the relevance of both ideas, although with varying emphases. Some metrics, for example those measuring national wellbeing,[61] attempt to capture population-level determinants of wellbeing (such as mental and physical health and longevity), but also capture a sense of economic and social security, productivity, and social relationships. A related concept is subjective quality of life that compares people's perceptions of their life in relation to their goals and expectations. Several ongoing challenges remain with measuring wellbeing cross-culturally, not least because of diverse social and cultural norms regarding perceived happiness and satisfaction with life.

Pertinent to mental health in this context is Amartya Sen's view that development can only be achieved when

people have real freedoms in their social contexts.[62] According to this view, having practical access to the things that a person values will lead to increased wellbeing (a good life). But exposure to severe social or economic adversity undermines the fundamental mental health capabilities that make real freedom possible. Furthermore, wellbeing is restricted for people with mental disorders by a system that tends to discriminate against them. Social contexts underlie much of the distress people have, including structural inequities that can have a negative effect on mental health and wellbeing.[63] This social suffering is an important counterpoint to the tendency to focus on internal causation and provides a valuable perspective on the limited role of curative health services in overall population wellbeing.[9]

An axiom of public health is that most population benefit is gained from promoting factors that facilitate good health and avoiding causes of ill health, rather than solely treating conditions once they are present.[64] Global mental health has much to gain by supporting sectors engaged in human development to incorporate evidence-based interventions that can prevent mental disorders and enhance the mental health and wellbeing of populations. Therefore, an expanded agenda for mental health is required that ranges from promotion and prevention (which overlap considerably, especially in terms of primary prevention) to treatment and rehabilitation, mapping the dimensions from good to poor mental health, and from risk factors to the presence of mental disorders and disabilities. This expanded agenda allows improved clarity for the development of effective policy interventions for mental health and for the guidance of investment and research. The agenda involves improving mental health, reducing the incidence and delaying the onset of mental disorders, shortening episodes of illness, and maximising participation and quality of life throughout the illness course.

A staging approach for mental disorders

The importance of a dimensional approach to mental health leads logically to a consideration of how we describe and classify mental disorders. Classification systems, including the International Classification of Disease (ICD) and Diagnostic and Statistical Manual of Mental Disorders (DSM), reify syndromes (similar sets of symptoms, signs, and observations) by categorising them as discrete disorders in a similar way to physical illnesses. Categorical terminology is relatively simple to understand and to apply by policy makers and clinicians. Various methods have been used to add nuance to binary (presence or absence) categories in these systems; for example, the multi-axial approach of DSM-IV that was replaced by a hybrid dimensional-categorical approach in parts of DSM-5. WHO's proposed diagnostic guidelines for mental and behavioural disorders in the 11th revision of ICD and related health problems recommends severity ratings and other qualifiers, while retaining its clinical utility as a categorical diagnostic classification system.[65]

Despite these relative improvements in nosology, the limitations of diagnosis should be recognised. Diagnosis can lead to unhelpful labelling, diminishing the agency of the affected person, promoting a reductionist perspective, and oversimplifying and undervaluing complexities of personal circumstances.[66] The diverse experiences of mental health and mental disorder between people and for the same person over time, and across cultures, suggest that diagnosis can be simplistic and not always helpful. In fact, great overlap exists in these putatively discrete disorders, and the range of severity of distress and disability can be better captured with a combination of continuous and categorical approaches, depending on settings and individual needs. Genomic studies have shown that many risk variants are shared across clinically discrete phenotypes, such as autism spectrum disorder, schizophrenia, bipolar disorder, depression, and alcoholism.[67] The implications for re-envisaging diagnoses are unclear; some genomic research has led to delineation of possible causal pathways (eg, potential role of the complement system in schizophrenia), but individual, small genetic effects might not readily allow insights into complex pathways purely through genomic analysis.[68] Similarly, targets identified by genome-wide association studies have the potential to lead to new pharmacotherapies, but such work also faces substantial challenges (appendix p 1, panel S1: Genomics in global mental health). Nevertheless, these findings are consistent with dimensional approaches of symptom spectra rather than discrete categories of mental disorder.[69]

These insights into the biological basis for some conditions serve to strengthen theories that are based on multiple interacting biological and environmental factors, affecting development throughout the life course. The Research Domain Criteria framework[70] aims to uncover underlying mechanisms (deep phenotypes) that influence cognitive, affective, and behavioural functioning by use of evidence from diverse disciplines. Deep phenotyping involves the collection of observable physical and behavioural traits of an individual down to the molecular level.[58] When anchored by a carefully constructed clinical profile, the resulting multilevel biomarker set could provide more precise understanding of the causes of disease, and could eventually produce a more accurate way to describe and classify mental health conditions than current diagnostic classification systems. In the future, deep phenotyping could enable precision mental health care—for example, treatments could be targeted on the basis of the underlying disease mechanisms, such as depression linked to immune dysfunction.[71]

Importantly, this Commission does not advocate for the abolition of classification systems, which have clinical utility. How then can the need to recognise diversity and continua be combined with the requirement of clinicians and researchers for improved categorical classification?

One approach is to assess functional impairment; mental and substance use disorders are generally conceived as emotional, cognitive, or behavioural disturbances that have reached a threshold that causes substantial functional impairment, so that individuals struggle to fulfil their desired social roles in their community.[72] This emphasis on functional impairment is an essential criterion to identify the point at which a person might be considered to have a disorder or diagnosis. Thus, the measurement of functional impairment in diverse cultural and socioeconomic contexts remains a priority for global mental health research.[72]

However, functional impairment cannot be the only criterion to guide detection and intervention because of the importance of intervening early before substantial disability sets in. Typically, a lengthy prodromal period occurs before the diagnosis of a mental disorder during which a person's functioning declines gradually and opportunities for early intervention narrow. In the early stages of a mental disorder, symptoms are often transient, mixed, and reactive to circumstances. Only as the condition progresses or persists do the signs and symptoms allow for a diagnosis, and interventions during these prodromal stages can lead to better outcomes (figure 5).[74] When more severe mental disorders develop, they tend to be clearly divided into the syndromes that have been the focus of most clinical and epidemiological research, with clear benefit of specific clinical interventions being shown. In cases of non-specific psychological distress, a diagnosis might not be possible or helpful, but a recognition of the need for care can lead to appropriate support and engagement, promoting self-care, or simply increased monitoring.

For the **Practical Approach to Care Kit** see http://pack/bmj.com

The staging model offers a compromise between the dimensional and diagnostic approaches because it recognises opportunities for intervention at all stages of the pathway, from wellbeing to different stages of disorder.[75] Staging implies modifiability at the individual level with appropriate treatment and care for mental disorders, and by addressing relevant risk factors or strengthening environments that promote mental health at a population or group level. Population-level interventions for prevention of ill health require less targeting than individual-level interventions and benefit people with and without clinically significant symptoms. People who progress to having more defined and severe symptoms can access appropriate care through more tailored interventions. People with some symptoms but not enough to form a diagnosis can fall between these stages; such conditions can be referred to as subsyndromal or subthreshold. Although sufficient methods to accurately predict who will develop full syndromes and who will respond to interventions are lacking, promising data are available—for example, on risk calculators for psychosis.[76] The staging model is particularly relevant in the crucial developmental phase of adolescence and youth.[77] The combination of the epidemiology of the onset of most mental and substance use disorders, the crucial developmental transition from childhood to adulthood, and the potential short-term and long-term benefits of interventions at this stage mean that priority should be given to adolescent and youth mental health.

This staging model is particularly useful in primary care, where people tend to present with less severe and more mixed symptoms compared with those in mental health services. Primary care algorithms need to focus on symptom-based management by primary health-care workers and identify risk factors that might identify patients who are at high risk for developing severe conditions and require referral. Common symptoms of mental distress such as anxiety or low mood are associated with more total disability at a population level than diagnostically defined mental disorders.[78] Front-line providers need to know how to address these concerns, rather than feeling helpless because of the lack of a clear diagnosis, which their training tends to promote as a first essential step to treatment. An example is the Practical Approach to Care Kit, which integrates the identification and management of signs and symptoms of mental disorders into general clinical guidelines for nurses and doctors.[79] Transdiagnostic psychological interventions might be particularly relevant in this context[80] and other sectors such as education, social support, housing, or poverty alleviation could be engaged.

Ultimately, people are entitled to define their own outcomes of treatment success in the perception of their own lives. This premise is the goal of a dimensional approach to mental health and the hybrid staging model for the identification and treatment of mental health problems. Such an approach allows clinicians to work in a collaborative, multidimensional way, working with a full range of phenotypes and underlying biological and social mechanisms, and making use of accumulated knowledge about effective interventions for diagnosable disorders.

Universal human and unique contextual experience

The field of global mental health has grappled with concerns about the use of predominantly biomedical models developed in high-income regions to define health, illness, and treatment across cultures with diverse perspectives on mental health and mental disorder. The need to promote and provide evidence-based treatments to people who might benefit from them should be balanced with acceptance and respect for the wide range of experiences and behaviours inherent in global human diversity. Illness narratives are often closely linked to adjustment to social adversity or trauma and carry a specific meaning within the local cultural context.[81] Equally, many universal ways in which humans experience illness across cultures have been described;[82] emotional pain is as fundamental to human experience as physical pain. For example, a systematic review has shown common features in the experience of depression across

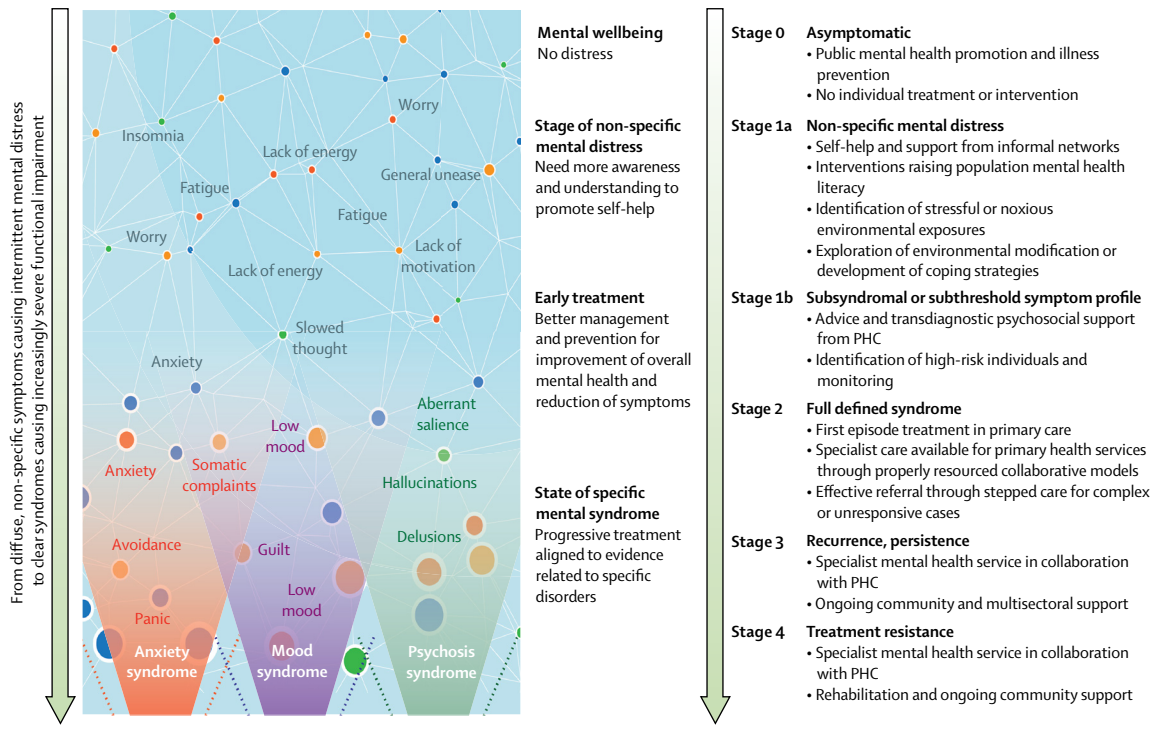


Figure 5: **A staging approach to the classification and treatment of mental disorders**
PHC=primary health care. Adapted from McGorry et al[73] and McGorry and van Os.[74]

diverse contexts.[83] The universal nature of psychological distress has also been shown in relation to the effectiveness of so-called common elements approaches to the delivery of psychological therapies across diverse contexts.[84] Global mental health practitioners have shown that integrating understanding of local explanatory models of illness experiences is possible while respecting the complementary role of western biomedical and local traditional approaches to treatment.[85]

Even with better scientific understanding of the biological, developmental, and genetic causes of mental disorder, viewing the person affected within his or her social context is essential, as is focusing on their understanding of their problems, and their preferences and priorities. The recovery movement has pioneered a powerful route to addressing different perspectives in defining illness and deciding on treatment options. This approach emphasises the centrality of the person affected in defining their problems and what a successful outcome might be.[86] This shared decision making shifts agency to the person, promotes a more equitable power balance and therapeutic relationship, and is empowering. Medical or psychiatric treatment becomes one of a range of potential solutions that could also encompass the use of community and personal resources.

Such an approach is also in line with a social model of disability, which argues that the extent of a person's disability is largely determined by the social environment rather than simply by the impairments themselves. Acknowledging the effect of stigma and discrimination on people's lives is an example of the potential benefits of this approach.[87] The tendency to restrict choices for people deemed to be incapable of making decisions robs them of agency, which is an important component of wellbeing. At a service level, improving people's experience goes hand in hand with improved quality of, and satisfaction with, the services and results in better outcomes.[88] Such a perspective is also well aligned to the human rights approach now guiding policy in both government and civil society sectors.

Convergence in understanding the determinants of mental health

Although major advances in knowledge and understanding of diverse determinants of mental health have occurred, a convergence between areas of enquiry has also happened, in particular within a life course paradigm. Here, convergence means a non-reductionist approach that uses knowledge from diverse disciplinary traditions to show the determinants of a complex human concern. A convergence approach should enable the development of a stable and testable multifactorial theory, and of context-specific and sensitive frameworks to guide interventions. At the heart of this convergent understanding of mental

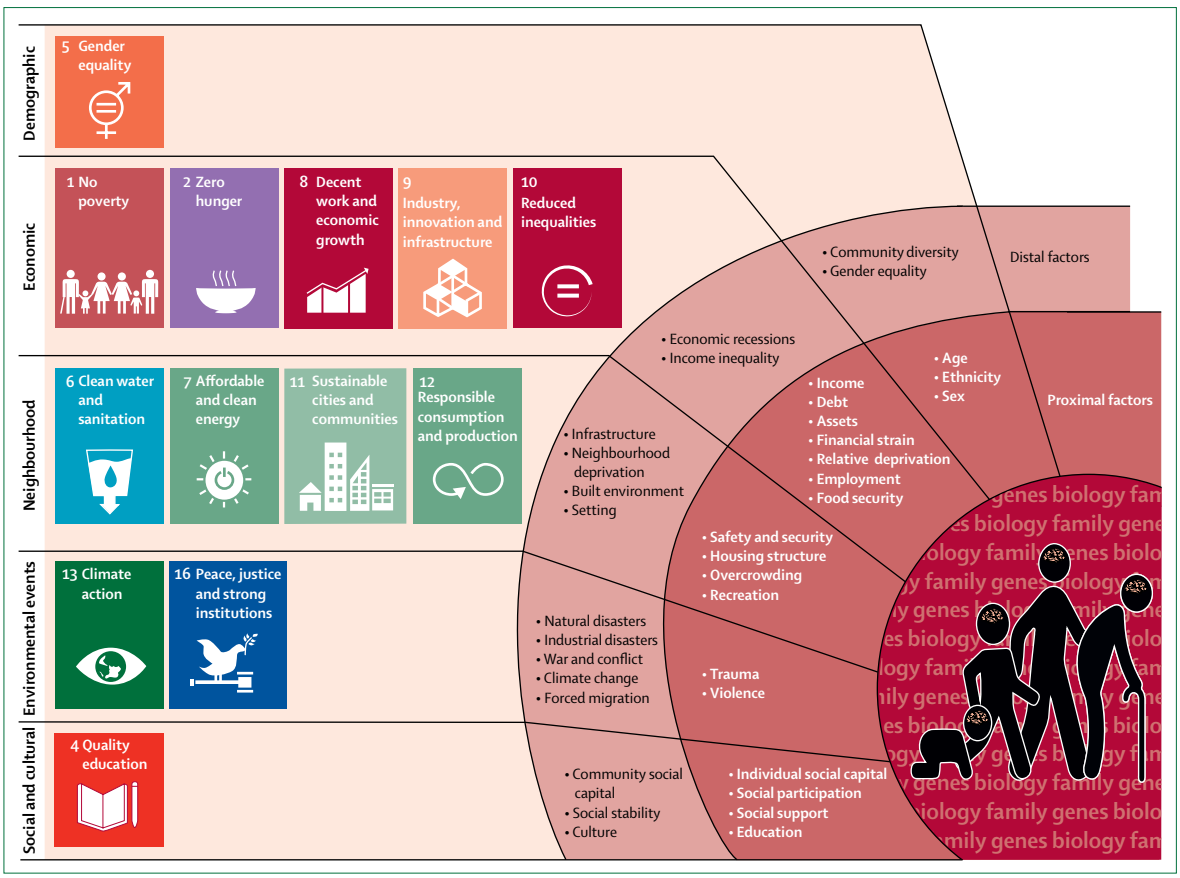


Figure 6: **Social determinants of global mental health and the Sustainable Development Goals[90]**

health is the unique, individual-level interaction between diverse determinants across the life course, from conception to death. We will briefly review the key findings on the diverse determinants of mental health, describe how these converge, and discuss their implications for understanding the causes of mental health problems and the mechanisms and timing of interventions.

Social determinants of mental health

Social determinants include a range of social and economic factors that influence the mental health of populations, such as structural social and economic arrangements (eg, poverty and income inequality) that confer advantage or disadvantage from conception to old age, differential exposure to adverse life events (eg, humanitarian emergencies and interpersonal violence), and the specific conditions of vulnerability and resilience that these arrangements and exposures produce.[89] Many of the SDGs explicitly address these social determinants, and progress towards their attainment has the potential to promote mental health and to reduce the global burden of mental disorders and inequities in the distribution of mental disorders in populations. The social determinants of mental health encompass five key domains (demographic, economic, neighbourhood, environmental, and social or cultural[90]) that act across distal and proximal levels (figure 6). Distal levels refer to the upstream, structural arrangements of society, and proximal levels refer to the way these arrangements are experienced by individuals and families.

The demographic domain includes sex, age, and ethnicity. Women are at increased risk of common mental health problems such as depression and anxiety and men are at increased risk of substance use disorders.[91] SDG 5 (Gender equality) is particularly relevant for this domain. Several studies have shown that gender disempowerment interacts with other adversities such as poverty, gender-based violence, sexual harassment, and food insecurity to increase the prevalence of common mental disorders in women.[92] Risk factors and patterns of the morbidity of mental disorders also vary substantially across the life course, and most mental disorders have their origin in childhood and adolescence. By contrast, the onset of dementias occur in older age. Ethnic minority populations, particularly in the context of racial discrimination or migration, are vulnerable to a range of disorders, including psychosis, depression, and anxiety disorders.[93]

The economic domain includes income, food security, employment, income inequality, and financial strain;

 Published online October 9, 2018 http://dx.doi.org/10.1016/ S0140-6736(18)31612-X

relevant SDGs include 1 (No poverty), 2 (Zero hunger), 8 (Decent work and economic growth), 9 (Industry, innovation and infrastructure), and 10 (Reduced inequalities). Worse economic status is independently associated with a range of adverse mental health outcomes, including common mental disorders, psychosis, and suicide.[16] Economic adversity exerts its influence across the life course: poverty negatively affects neurodevelopment and the mental health of children,[94] children in lower socioeconomic positions are at increased risk of mental ill health in adulthood,[95] and associations exist between low socioeconomic status at birth and risk of psychosis in adulthood.[96] Social causation and social drift or selection are pathways widely acknowledged to maintain the cyclical association between poverty and mental disorder.[97] Income inequality erodes social capital (including social trust) and amplifies social comparisons and status anxiety; meta-analysis[45] has shown a consistent association between depression and income inequality. This association is of particular concern in light of growing inequity in the distribution of resources both within and between nations. A particularly dangerous structural determinant of mental health is the influence of commercial interests on many social determinants (eg, in worsening inequality or conflict). Economic interests of the alcohol industry often prevent public health-oriented alcohol policies, especially within LMICs.[98] A catastrophic example of the commercial agendas of industry is shown by the ongoing opioid crisis in the USA (panel 5).

The neighbourhood domain includes the built environment, water and sanitation, housing, and community infrastructure; relevant SDGs include 6 (Clean water and sanitation), 7 (Affordable and clean energy), 11 (Sustainable cities and communities), and 12 (Responsible consumption and production). Neighbourhood characteristics influence the mental health of populations independently of individual-level markers of socioeconomic adversity. In the context of rapid urbanisation across the globe, urban poverty, exposure to violence and drugs, and the degrading experience of living in crowded urban slums pose major challenges for mental health. By contrast, well planned urbanisation can have benefits such as improved access to labour markets, opportunities for better education, and escape from the constraints of traditional customs and expectations.

The environmental events domain includes exposure to violence, natural disasters (including the effects of climate change), war, and migration; relevant SDGs include 13 (Climate action) and 16 (Peace, justice and strong institutions). Studies have identified numerous adverse mental health consequences of exposure to negative environmental events such as disasters,[104] whether because of civil conflict or climate change (appendix p 2, panel S2: Contemporary global challenges affecting mental health).[44] Political context—for example, an authoritarian or intolerant political system—is particularly important in this regard. Additionally, emerging evidence shows the intergenerational transmission of traumatic experiences—for example, transmission among women exposed to war trauma and chronic stress in the Democratic Republic of the Congo.[105] By strengthening social institutions that reduce violence and promote peace, the SDGs have the potential to prevent mental disorders and promote mental health and wellbeing.

The social and cultural domain includes social capital, social stability, culture, social support, and education. These factors influence mental health through proximal social arrangements such as communities and families, and SDG 4 (Quality education) is particularly relevant. Improving access to quality education is vital because education develops cognitive reserve and is protective against common mental disorders and dementia.[106] By contrast, educational failure and mental disorders in adolescence interact in a vicious cycle.[107] Education also has the potential to influence other SDGs that have a bearing on mental health—for example, through improved employment and reductions in income inequality and gender inequality. Individual cognitive and ecological social capital have also been associated with reduced prevalence of common mental disorders.[108] Culture can protect mental health through shared meaning and identity, and the loss of cultural identity (for example, in the context of forced migration or Indigenous

***Panel 5:* The opioid use crisis in the USA**

More than 64 000 people died from drug overdoses in the USA in 2016 alone,[99] an increase of 540% over the previous 3 years. This trend has been preceded by a substantial increase in prescriptions of opioids by health professionals; according to some reports prescription opioid sales quadrupled from 1990 to 2010 and the US Centers for Disease Control and Prevention estimates that more than 300 000 Americans have died from overdoses of prescription opioids since 2000.[100] Several factors seem to have driven the rise of this epidemic; chief among these is a growing trend of aggressive marketing of opioid compounds such as oxycodone to doctors, nurses, and pharmacists by large pharmaceutical companies, notably Purdue Pharma.[101] From 1996 to 2001, Purdue Pharma did over 40 national pain management symposia to market oxycodone to health professionals.[101] In a landmark case in 2007, the company was fined over US$600 million for misleading the public, although its profits far exceeded this amount.

The problem is exacerbated by policies that criminalise opioid use; criminalisation drives opioid users to use a black market in which heroin cut with cheap fentanyl or carfentanil can be damaging and even deadly for opioid users. Regulations to restrict opioid prescriptions and marketing of these highly addictive drugs have been introduced in several high-income countries. In response to the opioid crisis, the US Department of Health and Human Services has developed a five-point strategy, including improving access to treatment and recovery services and promoting use of drugs that can reverse overdoses.[102] In August, 2017, the Trump administration declared the epidemic a national emergency, although at the time of writing the administration had not yet presented a planned response. Additionally, concerns have been raised about new global marketing initiatives by the producers of oxycodone targeting low-income and middle-income countries such as China, Brazil and other Latin American countries, and countries in the Middle East and Africa.[103]

communities) is associated with negative mental health outcomes.[109] The effects of social factors on mental health are usually experienced through the important proximal social networks of families. Consequently, families can promote the mental health and resilience of individuals or increase risk for mental disorder. Parenting and child maltreatment (including witnessing intimate partner violence) can have substantial immediate and long-term effects on mental health, and the high prevalence of child maltreatment has major negative consequences on public mental health.[110]

The domains of social determinants frequently cluster and interact, and this has been given prominence in the emerging field of syndemics.[111] A combination of two or more social determinants of mental health is therefore likely to connote highly vulnerable populations (marked by social suffering[112]), leading to high illness transmission, progression, and negative health outcomes. For example, young women who are victims of displacement after war or natural disasters and live in circumstances of poverty with threats of sexual violence and sexually transmitted infections are likely to be highly vulnerable to depression, anxiety, and suicide. Similarly, unemployed urban young people who encounter violence and substance abuse are also vulnerable. Such populations should be targeted for mental health interventions that are integrated into development or aid programmes.

Biological determinants of mental health

Early research into the genetics of mental disorder showed the presence and strength of genetic factors but did not uncover the underlying biology of mental disorders. Cheaper and faster sequencing technologies have enabled genomic data collection consortia to investigate the genetics of mental disorder on a global scale.[113] Considerable overlap in genetic heritage has been identified (humans are closely related, having emerged from Africa only relatively recently) but also remarkable variation between individuals. This variation includes common and rare gene variants that act in synergy with one another (epistasis) and contribute to different phenotypes (pleiotropy). Mental disorders have varying heritability and are polygenic, with contributions from rare variants of large effect (particularly in conditions such as autism spectrum disorder and intellectual disability) and multiple variants of small effect (particularly in conditions such as depression, anxiety disorders, and schizophrenia). Additionally, varying overlap occurs in genetic architecture across different mental and physical conditions; for example, multiple variants of small effect increase the risk of schizophrenia and bipolar disorder, but schizophrenia and rheumatoid arthritis have negatively correlated polygenic risk.[67,114,115]

Environmental stressors could affect mental health by influencing gene expression (eg, by turning genes on or off). Early exposure to stressors and sustained exposure can lead to poor mental health outcomes.[116] Gene expression changes over the life course through a range of mechanisms. Epigenetic research has identified several important mechanisms, including methylation and histone formation, which seem to be relevant in the pathogenesis of mental disorders. For example, methylation could underlie the specific dendritic patterns seen in the superior temporal gyrus of people living with schizophrenia.[117] Some epigenetic changes associated with environmental stressors are heritable across multiple generations, meaning that offspring are at increased risk of developing the phenotype associated with the mutation. Epigenetic processes are potentially reversible and could be targeted with precision interventions, as shown in animal models.[118,119] The identification of dysregulated gene clusters and improved brain imaging technologies could provide important information for the understanding of mental disorders, including observing epigenetic changes in the human brain and the design of new intervention strategies.

The effects of various forms of stress on mental health outcomes have been well studied. For example, stressors such as poverty, neglect, or sexual and physical abuse could raise the concentration of inflammatory cytokines and negatively affect psychological functioning.[120] The immune system is a biological area of emerging interest in mental health, and several studies have reported that a subgroup of people with mental disorders (eg, depression and psychosis) have altered inflammatory biomarkers.[121] Such findings have generated interest in repurposing anti-inflammatory drugs for mental disorders and in trying to understand how the immune system might be harnessed to promote mental health. Ongoing research is seeking to delineate how neuroinflammatory mechanisms intersect with neurogenesis and apoptosis, neurotransmitter and neuroendocrine (eg, the hypothalamic-pituitary axis) systems, and the gut microbiome to affect mental health.

Development of the brain regions involved in mental health is influenced before conception because of the hereditary effects of some epigenomic processes. Many developmental disorders—for example, those associated with intellectual disability—are the result of disruption in fetal brain development due to a range of factors, from heavy maternal alcohol use to intrauterine infections (including Zika virus). Early development (0–2 years of age) is a crucial time for exposure to risk factors and development of resilience (panel 6). However, the human brain is a dynamic organ, subject to ongoing changes that result from genetic, environmental, social, and physiological inputs across the life course (figure 7). A key developmental characteristic of adolescence is the differential maturation of the limbic and prefrontal areas of the brain that explain why impulsivity and risk taking, integral to many mental health and substance use outcomes, are prominent in this age group (panel 6). Although neuroplasticity diminishes over time, new neuronal growth and connections are evident in older

Panel 6: Convergence in understanding mental health across the life course

The convergent model of mental health offers a unified perspective to tie together findings emerging from developmental science, neuroscience, intervention science, and epidemiology, as illustrated by the following three life course cases:

- In the early years of childhood, adverse family circumstances result in children experiencing early life stress that can lead to mental health problems in later life.[122] MRI studies show that the volume of grey matter in the developing brain is dependent on family income and socioeconomic status during early childhood and these effects are prominent in brain areas responsible for various cognitive functions such as the hippocampus (memory), amygdala (social-emotional processing), prefrontal cortex (executive function), and the cortex of the left hemisphere (language).[123] Parenting interventions that target early life stressors or cognitive stimulation can improve cognitive outcomes in children and reduce the incidence of mental health problems in later life. Studies comparing animals raised in deprived environments to those reared in enriched ones have uncovered the potential mechanisms that these interventions target.[124] Thus, the convergent model has helped to explain the major observations of the association of low socioeconomic status with poor mental health in childhood and the beneficial effect of stimulation interventions in early infancy
- Cognitive psychology and neuroscience studies have transformed understanding of the potential reasons for the onset of mental disorders in adolescence. One of the unique transitions that occurs during adolescence is that the opinion of peers begins to take precedence over that of family members and parents. This sensitivity to peer influence leads to adolescents being sensitive to social stimuli and having an increased propensity to undertake risky behaviours.[125] Delayed maturation of the prefrontal cortex, involved in impulse control and the reward system, could be responsible for behaviours related to impulsivity and risk taking.[126] Testosterone might moderate risky behaviours, which could explain the sexual dimorphism observed in these behaviours.[127] Interventions aimed at strengthening social and emotional competencies, often focusing on enhancing emotional regulation and packaged as life-skills education,[128] mindfulness, or yoga can have preventive effects. Mindfulness meditation has been associated with structural changes in parts of the social brain network such as anterior cingulate cortex, medial prefrontal cortex, and amygdala.[129] Convergent models help elaborate the mechanisms of the onset of mental disorders in adolescence and how preventive interventions interrupt these pathways
- Mental health in older adults should also be understood from a life course perspective. People who have received more formal education in early life have a lower risk of developing dementia than those with less education;[130] formal education could be a proxy for intelligence and brain development. Results from several studies[131] suggest inverse associations between skull circumference and leg length, and dementia risk in late life. Several mechanisms have been proposed:[130] in terms of quantitative measures, larger and better developed brains with more neurons and richer connections could incur more neurodegeneration before failure becomes apparent (brain reserve) than less developed brains; in terms of qualitative measures, better educated people might have more facility to do complex and efficient cognitive processing to compensate for damage (cognitive reserve) than people who have received a poorer education; finally, people with better education might access health-care services and adopt lifestyles that optimise brain health across the life course. A dose-response association has been shown between cumulative depression burden over the lifespan and the risk for cognitive impairment and dementia.[132] Hypothesised causal mechanisms include the toxic effect of chronically elevated adrenal glucocorticoid production on hippocampal cells; biological links between depression and thrombotic, atherosclerotic, and inflammatory cardiovascular disease pathways; and the effect of depression on cardiovascular disease risk behaviours, help-seeking, and treatment adherence.[133] The relevance of cognitive ageing and depression, which often accompany physical frailty, have been highlighted; depression might also have a causal role in the onset of physical frailty.[134] Common biological mechanisms could underpin these associations, including the trajectory of cellular ageing across the life course (as indicated by epigenetic and genomic markers)[135] and immune activation.[136] Further elucidation of these mechanisms and their determinants will be a key step towards optimising brain and mental health at all ages.

age, and could be associated with the introduction of novel stimuli and exercise (panel 6).[137] Neuronal death accelerates with age and is associated with cognitive decline and the emergence of dementia in old age.

Brain-level information provides additional insights into the biological pathways that contribute to mental health and mental disorder over the life course. Studies deploying functional and structural neuroimaging and electroencephalography across diverse disorders show structural and functional differences in specific brain regions—for example, in grey matter volume or in reactivity in a region of interest.[138] These brain-level data can be assessed alongside neuropsychological data to iteratively identify associations between cognitive dysfunctions common to a disorder (eg, working memory and episodic learning in schizophrenia) and brain regions of theorised interest, in this case the prefrontal and temporolimbic systems.

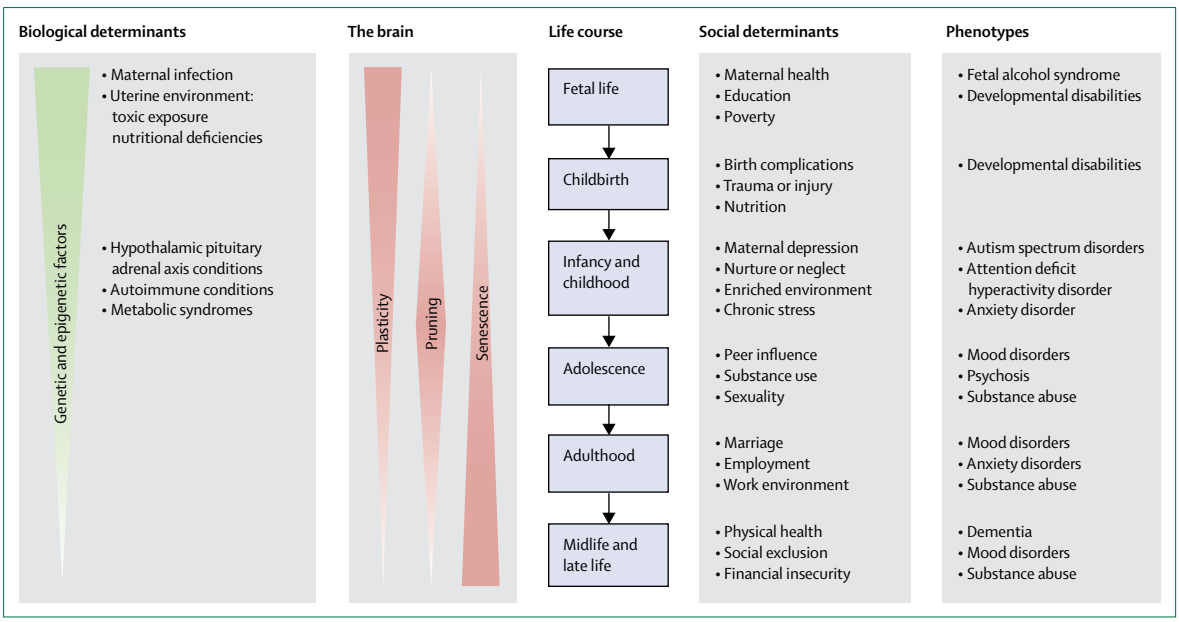


Figure 7: **Biological and social determinants of neurodevelopment across the life course**
Examples of biological and social determinants that can influence mental health outcomes across the life course. These determinants can operate at different points in life and can interact to produce specific phenotypes.

The convergent approach to mental health

The convergent approach attempts to explain the interactions between the diverse observations on the causes of mental health and mental disorders. This approach considers the strong association of mental disorders with social disadvantage and childhood adversity, and the fact that most mental disorders emerge in adolescence and young adulthood (panel 6). The approach proposes that social and economic factors confer risk or resilience for mental health outcomes through their influence on brain development and function, mediated by genomic and neural mechanisms, over the entire life course. However, the effect of social and economic factors such as poverty, trauma, abuse, neurotoxins, life stress, education, or parenting will vary at different stages of the life course and is greatest during the developmentally sensitive phases of early life and adolescence. Furthermore, these factors do not only exert influence in a top-down direction; individuals can shape their environments and experiences in ways that matter for mental health outcomes, and differences in social experience could be partly driven by genetic factors that contribute to individual differences in cognitive, social, and behavioural capabilities.[139]

Thus, a convergent approach seeks to build a full account of evidence emerging from the diverse disciplines that have provided information about the causes of mental health problems. This task will require the same attention to be paid to socioeconomic phenotypes (or exophenotypes)[140] as is paid to clinical phenotypes. Specification of concepts such as childhood deprivation or stress into operational variables is likely to require empirical research that interrogates and explains the mechanisms by which social and economic factors influence mental health. The real promise of the convergent approach is that it uses, and dynamically integrates, multiple levels of explanation simultaneously to build complex models that guide prevention and intervention over the life course; this approach is also responsive to critiques about biological reductionism.[141] Many examples show how the convergent approach could be applied across the life course, in early childhood, adolescence, and older age (panel 6).

The human rights framework

The importance of a human rights approach to health gained momentum after the Nuremberg trials, which highlighted the atrocities that are possible in the absence of a human rights framework. The Nuremberg trials are also relevant because they led to the prosecution of doctors responsible for the Aktion T4 plan, through which the Nazis eliminated psychiatric patients, including children (indeed, the gas chambers were first developed for murdering mentally ill patients before being used against Jews). Human rights need to be considered with respect to mental health in two main ways: first, mental health as a human right itself, as an inalienable component of health; and second, people living in vulnerable situations (including those with mental disorders) are at increased risk of having their rights ignored or abused.

Mental health as a universal human right

The right to health is a fundamental human right and essential in our understanding of living a life with dignity.

This right is inclusive and applicable to all aspects of daily living. Although historically the right to mental health has not been clearly conceptualised, several policy instruments are changing this, including the UN Human Rights Council Resolution 6/29 in 2007, which states that every person should have the right to the enjoyment of the highest attainable standard of physical and mental health; the WHO Mental Health Action Plan 2013–20, which has human rights as one of the cross-cutting principles;[27] the 2017 report[142] of the UN Special Rapporteur on the right of everyone to the enjoyment of the highest attainable standard of physical and mental health; and the UN CRPD. Additionally, strong links exist between mental health and the realisation of social, economic, and cultural rights. The belief that mental health is a fundamental human right implies that the circumstances that undermine mental health should be challenged,[112] including inequalities in income, living conditions, safety, and food security, which are in danger of being accepted as inevitable or normal. In short, people have the right to enjoy the shared conditions that allow for the attainment of mental health, including access to quality mental health care.

From an equity perspective, the acceptance of mental health as a fundamental human right also draws attention to the needs of specific vulnerable populations who are at an increased risk of having mental health problems, including people affected by violence, conflict, and forced migration; children and young people in vulnerable circumstances; people living in poverty; lesbian, gay, bisexual, and transgender people; indigenous peoples; prisoners; and people with disabilities. Vulnerable groups tend to experience exclusion, prejudice, isolation, and denial or lack of access to fundamental rights and services. A plethora of international human rights instruments underpin the rights of vulnerable populations (appendix pp 28–29, table S1: Human rights instruments relevant for global mental health).

Under extreme circumstances such as war, natural disasters, and severe resource constraints, vulnerabilities tend to converge and be compounded in already marginalised populations. The lack of power that children and young people have over their life decisions makes them particularly vulnerable, and initiatives to empower children, recognising their right to self-determination, can challenge this status quo. The UN Convention on the Rights of the Child, ratified by all countries of the world (except the USA), includes several articles directly addressing the rights of children to mental health. Children with disabilities often face marginalisation and discrimination, and the effect on the child is further compounded by poverty, social isolation, humanitarian emergencies, lack of services and support, and a hostile and inaccessible environment.[143] In a similar manner, the situation of women with disabilities is commonly compounded by the denial of multiple rights.[144] These vulnerabilities are also amplified among older people with other risk factors.

Populations affected by humanitarian crises constitute a large vulnerable group whose human rights and mental health are frequently compromised. A report[145] from Syria provides a stark example, documenting the effect of the prolonged exposure of children to bombings, conflict, and malnutrition on mental health. Over 200 million people are estimated to be displaced globally, and similar examples of the resulting violations of the right to mental health can be seen in many other countries such as in Yemen, the Democratic Republic of the Congo, and Myanmar.

People with mental disorders and psychosocial disabilities

The CRPD[146] was adopted in 2007 and was quickly signed and ratified by most countries in the world, and came into force in 2008. The convention promotes, protects, and ensures the full and equal enjoyment of all human rights and fundamental freedoms by all people with disabilities, and promotes respect for their inherent dignity. People with psychosocial disabilities (the term used in the convention to refer to people affected by mental disorders) participated in the negotiations and have been active in promoting its realisation. The ratification of CRPD by countries emphasises their human rights obligations, including support for social inclusion and the removal of "attitudinal and environmental barriers that [hinder] their full and effective participation in society on an equal basis with others". The convention has provoked much debate about reform of laws related to mental health to make them compliant with the CRPD. In the absence of a specific statute on mental health or disability in a country, the CRPD can be invoked and rights holders have access to this mechanism for any country in which it is ratified.

Despite the development of these international legal instruments, people with psychosocial and intellectual disabilities are among the most vulnerable globally, experience many forms of marginalisation, and are often left behind when it comes to attaining their human rights and equal access to services and life opportunities.[147] Across the globe, people living with mental disorders have often been hidden, tortured, abandoned, or left to die. In many countries, lack of access to health services, housing and employment, and sometimes extreme violation of basic rights, is common.[148] In 2012, Human Rights Watch reported the forceful detention of people with mental disorders in prayer camps, and conditions of chaining and denial of mental health services or medication as the most pressing concerns.[149] These violations occur across the life course, with vulnerable groups particularly at risk, including children and adolescents with neurodevelopmental disorders (such as intellectual disabilities), and adults with dementia.[150]

Such violations of human rights occur most frequently at the nexus of poverty, social marginalisation, and lack of access to mental health care. Consequently, the Pan African Network of Persons with Psychosocial Disabilities' Cape Town Declaration highlights the role of

poverty and dignity in their empowerment strategies.[55] With a few exceptions, programmes aimed at disability inclusion, poverty alleviation, and other development priorities have frequently excluded psychosocial and intellectual disability.[151] In contravention of Article 25 of the UN CRPD, which states that health services should be "as close as possible to people's own communities, including in rural areas", many LMICs continue to concentrate their mental health services on inpatient psychiatric hospitals, which are relatively inaccessible.[25] The WHO QualityRights Tool Kit, based on CRPD, uses parity with general health services as a benchmark for the quality of care that people should expect to receive.[26]

In addition to specific human rights violations that people with severe psychosocial disabilities have had, people living with mental disorders are frequently denied fundamental human rights, including the right to freedom, opportunities for education and employment, citizenship, and health care of the same quality as that offered to people with physical health problems. This lack of health care is one of the major reasons for premature mortality among people with mental disorders.[152] In addition to the scarcity of service resources, stigma and discrimination are fundamental barriers to social inclusion. Such public acceptance of often blatant abuse and neglect, within and outside the health-care system, would not be acceptable if related to any group other than people living with mental disorders.

Attention has recently focused on the CRPD's Article 12 (Equal recognition before the law) and Article 14 (Liberty and security of the person), with the CRPD's general comments prohibiting the status quo, in which other people, usually professionals and legal representatives, make decisions on behalf of people temporarily unable to represent themselves in their best interest (ie, substitute decision making or guardianship). The CRPD states that all people have inherent legal capacity and should always be at the centre of decisions about their own welfare. In situations in which people need support (supported decision making), states should primarily be guided by the person's will and preference.[47] Commentators have referred to guardianship as civil death subject to widespread abuse[153] and have called for states to develop supported decision-making mechanisms, compatible with their settings, to allow people to exercise their right to decide and make choices about their lives.[154] Critics of this view suggest that the absolute commitment to the person's will and preference could inadvertently undermine the right to health, freedom, and justice, thereby leading to a backlash including a rise in stigma and discrimination.[154] Additionally, some critics have argued that the CRPD's general comments assume a highly individualistic culture, which is frequently not appropriate in more collectivistic cultures in LMICs in which the role of the family is given more prominence in decision making than in high-income settings. These debates on how people with psychosocial disabilities exercise autonomy and agency over matters about them indicate that work is needed to ensure that justice and full, effective, and equal participation is achieved. Improved dialogue is needed between advocates of the CRPD and people working on the ground to articulate systems of review on the basis of evidence-based principles of competency. These systems could include monitoring guardianship abuses, dedicated and informed legal representation or counsel, alternative guardian programmes, and robust enforcement of human rights legislations.[154]

People with psychosocial disabilities who are involved in the criminal justice system evoke similar concerns. A key challenge is balancing individual rights and community safety because of the imprecise means for determining and managing risks. Whatever is the most appropriate approach for the relatively rare instances in which the human rights of the individual and the rights of the community collide, there is consensus that the convention is a powerful tool, requiring governments to recognise equal rights. The full range of stakeholders should focus on the practical steps required to implement these CRPD principles in the full range of settings in which people with mental disorder receive care.[155] Alignment of law and practice in other areas, for example the CRPD's Article 19 (Living independently and being included in the community) or Article 30 (Participation in cultural life), would challenge assumptions that having a mental disorder reduces a person's value before the law and could improve the quality of life of people with psychosocial and intellectual disabilities. The role of civil society and voices of people with lived experience of mental disorders are crucial in attaining these fundamental rights (appendix p 3, panel S3: Mental Health Society of Ghana).

Interventions for mental health

In this section we address the interventions that we consider necessary to prevent mental and substance use disorders, and to provide treatment and care to enhance recovery. We present these interventions according to stages of the life course, particularly stressing aspects that we find innovative, with the potential for scaling up, and which could be delivered either through routine health care or other platforms.[156] We use case studies to show the implementation of these interventions in the real world (appendix pp 3–25, panels S3 to S24). Our aim is not to summarise all evidence-based interventions (for summaries see other sources[156,157] and our recommendations for future research in "The way forward", below), but rather to indicate what a reframed mental health system could look like in the future.

We first consider four innovative strategies to address supply and demand barriers to achieving mental health objectives: improving access to psychosocial interventions, the use of digital technologies, the balanced care approach to delivering mental health services, and interventions to increase the demand for care. We then turn to the

application of these innovations across key developmental stages of the life course. Finally, our focus moves to interventions for particularly vulnerable groups, in light of the SDG vision of leave no-one behind. Despite the many challenges outlined earlier in the Commission, our vision of how mental health interventions can be delivered is positive. Indeed, mental health services in many countries have pioneered elements of modern health care faster and more widely than have services for treating people with physical health conditions (panel 7).

Panel 7: Aspects of mental health care that are pioneering across the whole of health care

- The reconfiguration of care away from hospitals and into community settings[158]
- A commitment to involving patients and family members in planning and providing services[159]
- Providing aspects of social interventions alongside psychological and pharmacological treatments tailored to the needs of a specific individual (the hallmark of person-centred care) through multidisciplinary teams[25]
- A focus on comorbidity and multimorbidity across mental and physical long-term conditions[160]

Innovative strategies

Improving the availability of psychosocial interventions

The primary goal of psychosocial interventions, including talking therapies and social interventions, is to facilitate the acquisition of skills to address the risk factors, mediators, or consequences of mental health conditions and to enable social circumstances for the patient's recovery. The interventions are supported by strong evidence of their effectiveness across a wide spectrum of conditions, and for a range of goals, from prevention to the treatment of acute phases of illness and to rehabilitation and recovery.[161]

The effect sizes for psychological treatments typically range from moderate to large, and side-effects are relatively rare. The strength of evidence for psychological therapies is at least as strong as for other treatment methods. Furthermore, when head-to-head comparisons of efficacy have been done between pharmacological and psychological therapies (notably for mood, anxiety, and trauma-related disorders) no consistent evidence has been reported for the superiority of either in terms of attaining remission; additionally, psychological therapies seem to have a greater enduring effect than pharmacological therapies.[162] Most interventions are grounded in a robust orientation of cognitive, behavioural, and interpersonal theories, and a growing neuroscience evidence base exists indicating their mechanisms of action. Evidence is also growing for the effectiveness of social interventions, including specific, manualised programmes, such as individual placement and support (supported employment) to help people with severe mental illness to find and keep jobs.[163]

When offered a choice, most people living with mental disorders prefer psychosocial therapies over pharmacological options. A considered balance therefore needs to be struck between pharmacological and psychological treatments, with patients being offered a choice when feasible. Furthermore, pharmacological and psychological interventions can often be used concurrently in a way that can reinforce their individual effects. Despite this evidence, access to these therapies is very low in most populations, primarily because there are very few skilled practitioners of psychosocial therapies in most countries and awareness of their availability is lacking. Additionally, people have concerns about the acceptability and feasibility of these therapies in the real-world contexts in which they need to be delivered at scale because most have been developed in restricted clinical samples in specialist settings of high-income countries.[161]

Over the past decade, a large body of evidence has accumulated highlighting several consistent strategies to overcome these barriers. The concept of task sharing (previously described as task shifting) refers to the transfer of some mental health-care responsibilities from more-specialised to less-specialised staff. Several systematic reviews have shown the effectiveness of the delivery of psychosocial therapies in LMIC settings for common mental disorders (including trauma-related disorders) in adults,[84] mental disorders in children,[164] schizophrenia,[165] and a range of mental disorders in high-income countries (appendix pp 4, 6; panels S4: The Friendship Bench, Zimbabwe; and S6: The Thinking Healthy Program, Pakistan).[166] Evidence is also available to support interventions aimed at the prevention of mental disorders, such as targeting early child development, and to promote social and emotional competencies in young people.[167] In at least one high-income country (appendix p 7, panel S7: The IAPT Programme, UK) the exponential expansion of the range of providers with specific training in these therapies has somewhat reduced the treatment gap for common mental disorders.

The sum of this substantial evidence base points to a fundamental rethinking of psychosocial therapies in four respects. First, the content of therapies needs substantial modification to incorporate local metaphors and beliefs, and to combine psychological skills building components with social work components. The tasks should also be adapted to ensure acceptability for people with limited literacy (eg, completing homework in sessions). Second, the delivery agent is usually a community health worker or lay counsellor from the same community as the beneficiary population who has had basic training to achieve competency to deliver the treatment, followed by a structured supervision protocol to assure quality. Third, the setting for delivery is typically in the community or in primary health care. Fourth, the treatment is delivered over a relatively brief period (eg, between six and ten sessions for common

mental disorders in adults) to enhance acceptability and feasibility. The non-specialist health-care provider should ideally work within a collaborative care framework with access to a specialist provider who can be remotely located, participates in training, oversees quality, and provides guidance or referral options for complex clinical presentations.

Several innovative strategies can facilitate dissemination of psychosocial therapies. First, a major bottleneck to task sharing is the reliance on traditional face-to-face methods for training and on experts for supervision. These barriers are being addressed through online training and the use of peers to supervise therapy quality with structured scales and feedback.[84] Second, effective treatment packages typically comprise several similar elements spanning behavioural, interpersonal, cognitive, and emotional domains.[84] For example, an analysis[168] of 832 treatments tested in 437 randomised clinical trials for child and adolescent mental disorders identified a parsimonious set of 18 practice elements from these treatments that mapped on to the needs of 63% of children with mental health conditions in a community clinic setting. These observations have led to the development of transdiagnostic psychological therapies that aim to target multiple disorders either through a common approach for all, or through matching of specific treatment elements for specific syndromes (eg, behavioural activation for depression).[169] The body of evidence in support of these approaches is growing, in particular for young people[170] and for lay counsellor-delivered interventions in LMIC settings.[169] The third approach for the scale-up of psychosocial therapies is their direct dissemination to the patients who will benefit, in particular for secondary prevention of mental disorders (ie, intervention in the early or subsyndromal stages of a disorder). This innovation is potentially the most disruptive because it removes the health-care professional entirely. Apart from the burgeoning industry of mobile applications and websites offering self-delivered psychological therapies, evidence also supports the use of guidance from printed manuals, which is useful for populations constrained by limited internet coverage or by language barriers.

For the **Depression and Bipolar Support Alliance** see http://www.dbsalliance.org

For **iSupport** see https://www.isupportfordementia.org/

The scaling up of psychosocial therapies to enhance population coverage efficiently will rely on a stepped-care approach in which the first step comprises self-delivered interventions for mild to moderate conditions. The second step for people with more severe conditions could take the form of psychosocial therapy delivered in routine care settings or homes by community health workers or lay counsellors. The next step, which could be accessed immediately for people with very severe presentations such as acute psychoses or serious suicide attempts, could take the form of a specialist or physician consultation, and intervention options might expand to include medications, more complex psychotherapies, or other physical therapies. This stepped approach is based on the staged model of mental disorders described earlier.

For **moodgym** see https://moodgym.com.au/

For **Living Life** see http://www.llttf.com/index.php

For **7 cups** see https://www.7cups.com/

Digital technologies for mental health

The rapid growth in mobile telecommunications and internet access affords new opportunities to reach an increased number of people living with mental disorders and to bridge the mental health treatment gap. A review[171] of 49 studies of digital technology interventions from over 20 LMICs, and literature on their use in high-income settings, reveals five distinct roles of these technologies.

First, digital technology can help to educate the public and disseminate information about common mental disorders through antistigma campaigns,[172] substance use prevention messaging, or efforts to promote awareness by use of short message service (SMS) text messages or social media. Online communities represent an opportunity to promote mental wellbeing and enable people with mental health conditions to feel less alone and to find support from others with shared experiences. Family members can also access important resources such as social support, recommended coping strategies, and self-help programmes delivered online or through mobile phone platforms—for example, for developmental disorders,[173] mood and anxiety problems (the Depression and Bipolar Support Alliance), and for dementia (WHO's iSupport).

Second, digital tools can facilitate screening and diagnosis of mental disorders.[171] Screening tools delivered on mobile devices, by SMS text messaging, or smartphone applications, have been used to enable community health workers to identify common mental disorders. With the increasing popularity of online platforms and rapidly developing big data analysis techniques, new opportunities could become available to examine patterns of online interaction to enable early identification of people at risk of depression, psychosis, suicide, or substance use.

Third, technology can support the treatment and care of people with mental disorders. Technology applications include mobile and online programmes for illness self-management and relapse prevention, SMS text messaging for promoting medication and treatment adherence, and smartphone applications for tracking and monitoring symptoms (eg, moodgym, Living Life, and 7 cups).[171] Opportunities could also be available to track high-risk situations with wearable sensors or smartphone-based location, time, or activity data and to send real-time alerts to patients or designated caregivers. Additionally, social media offers peer-to-peer networking combined with individually tailored therapeutic interventions.[174] Telepsychiatry applications such as online videoconferencing can allow patients to connect with mental health providers for clinical consultations for diagnosis, follow-up care, or long-term support.[171] Websites and mobile applications can also be used to deliver evidence-based treatments (eg, those to reduce alcohol consumption, or cognitive behavioural therapies), making it possible to reach people with little access to

specialty care or who might be reluctant to seek services because of stigma, long travel distances, or out-of-pocket expenses. The most innovative digital therapies use the digital platform in ways that are unique to this medium—for example, use of gaming interfaces to assess deep phenotypes of mental health and tailor interventions to promote adaptive or ameliorate maladaptive cognitive processes. Although these methods are still at an experimental stage of design and evaluation, they provide another example of how clinical disciplines, cognitive neuroscience, and digital technologies can converge to build a radically new vision for therapies for mental disorders.

Fourth, digital technology can support effective training and supervision of non-specialist health workers through digital learning and supervision platforms, by providing crucial decision support tools, or access to specialist consultation and support. Therefore, digital applications can extend the capacity and reach of the limited number of mental health specialists by facilitating off-site supervision and mentoring of local health and lay providers. Such support can build provider capacity and reduce burnout and turnover among frontline health workers.

Finally, technology can also support health-care, system-level efforts to improve mental health. For example, digital mental health information systems can help track patients and mental health outcomes of defined populations, and can ensure that patients do not fall through the cracks.[175] Tools such as mobile or web-based registries can facilitate care coordination and prompt targeted notifications to the care team or family caregivers. Such technologies could also afford opportunities to identify crisis situations and facilitate rapid response. Digital technology can support health-care systems through analysis of big data to facilitate system monitoring, planning, and quality improvement as well as targeting specific interventions to patients (an approach aligned with the principles of precision medicine). Another example is the use of geoinformatics to map communities or neighbourhoods at increased risk for mental health and substance use problems such as areas with high amounts of crime or violence. These approaches could improve targeting of social determinants of mental health at the population level, and inform and evaluate prevention efforts.

Potential risks and harms associated with the use of digital technologies should also be recognised. Technology-based approaches might improve the reach of mental health services but could lose key human ingredients and, possibly, lower effectiveness of mental health care. The use of social media is associated with potential risks for mental health (such as cyberbullying), and the addition of internet gaming disorders in the latest iteration of the ICD as a condition for further study is an indication of the mental health consequences of excessive use of these media. Information available through mobile or online platforms should be safe, reliable, and trustworthy, although ensuring this is a challenge. Digital technology creates important ethical risks related to privacy, confidentiality, potential for intrusion and coercion, and circumstances in which governments or authorities could further discriminate against people with mental disorders through tracking and monitoring (eg, for access to health and life insurance). Technology interventions could also have the unintended consequence of widening inequalities in mental health care between people who have access to mobile devices or the internet and those who do not. Policies are needed to guide the safe and effective application of digital technologies in health care; such applications are unregulated in most countries and research on their effects on mental health is in its infancy.

A balanced care model for mental disorders

The balanced care model is an evidence-based, systematic but flexible approach to planning treatment and care for people with mental disorders.[158] This model describes mental health service components relevant for low-income, medium-income, and high-income country settings.[176] The model has been adapted for this Commission to reflect resource contexts, rather than countries, recognising the large inequalities that occur within all countries as well as between countries. In figure 8, this model has been further developed to emphasise the need for a balance between different service delivery platforms, customised to each resource setting. This balanced care model also emphasises the importance of evidence-based community and intersectoral interventions (provided outside the health-care sector), such as employment opportunities, child protection services, measures to improve community-level understanding of mental disorders and the available services,[177] long-term social care, and suicide prevention measures.

In low-resource settings, the most pressing challenge is to increase the coverage of evidence-based care through non-specialist providers who are most widely available on the ground. Therefore, the focus is on increasing the capacity and capability of primary care and community-based health-care staff, and providers in other relevant platforms, such as schools and the criminal justice system. Such staff need to acquire and practise the skills needed to identify, treat, and provide care for people with mental disorders. For children and young people, improved integration of mental health care is needed across a range of platforms that address their concerns, notably in education, child protection, primary and child health care, and social care settings. It is recognised that young people are particularly likely to avoid formal care settings and innovative means of reaching them in other settings (such as educational settings) is essential.

In medium-resource settings, mental health service provision needs to be strengthened in all the community and primary health-care platforms, along with the addition of an extended range of community and hospital-based secondary and tertiary services.

Figure 8: **Mental health service components relevant to low-resource, medium-resource, and high-resource settings**[156,176]

In high-resource settings, the balanced care model proposes that each of these four platforms (community and intersectoral interventions, and primary, secondary, and tertiary health care) is strengthened in terms of coverage, degree of specialisation (for example, early intervention teams for people in the first episode of psychosis[178]), and in a fuller range of evidence-based interventions provided, delivered in an integrated manner.

This model envisages that there is a progressive trend across the range of resource settings for diverse delivery platform components—for example, from initiating, developing, and then consolidating the move of inpatient wards from psychiatric hospitals to general hospitals. Where institutions remain a major form of service provision, a structured process of moving people into community settings is a priority.

Interventions to increase help-seeking and demand for care

The low demand for mental health interventions (including follow-up and adherence to care) is the consequence of a range of barriers. In addition to the lack of supply of reliable, quality services, other notable barriers include the stigma attached to mental disorder[179] and the differing explanatory models for mental health experiences in diverse populations. For several mental disorders, evidence shows that only about half of the people living with these disorders wish to seek help. For example, global studies[37,180,181] done by the World Mental Health Survey consortium have shown that only 41% of people with anxiety, 57% of people with depression, and 39% of people with substance use disorders report that they have a mental health difficulty. Evidence is emerging on how to address these barriers, including through interpersonal contact with people with mental disorders, engagement of people with mental disorders in all aspects of mental health care, and use of multimodal community interventions that incorporate contextual understandings and narratives of mental health and disorder to increase the detection of mental disorders, demand, and help-seeking for mental health care (appendix p 9, panel S9: The PRIME-CIDT program, Nepal).[182-184]

Interventions based on the core principle of interpersonal contact are the strongest evidence-based method for reducing stigma and discrimination, and therefore for promoting the human rights of people with mental health problems. These interventions rely on creating opportunities for either direct or virtual contact with people with experience of mental disorders,[172] and can be targeted to specific groups in the community (eg, health-care staff). For young people, interpersonal contact is most effective when done in educational settings.[172] Such antistigma campaigns have been scaled up in some high-income countries (appendix p 8, panel S8: The Time to Change programme, UK). Emerging evidence also shows that culturally adapted interpersonal contact interventions can be effective in reducing stigma in LMICs.[185] Such measures to reduce stigma should be a core component of a much broader strategy that emphasises freedom from discrimination, the active promotion of human rights, and social inclusion and participation.

In the past three decades, the demand for meaningful participation by patients and family members in all aspects of shaping mental health policies, and in planning, delivering, quality assurance, and evaluation of services has increased steadily. This increased participation is a practical manifestation of the slogan "nothing about us without us". Three main types of patient involvement have been described: consultation, collaboration, and patient-controlled initiatives. Specific consumer-led interventions include crisis plans, advance statements, and advance directives. These methods formalise the priorities and preferences of patients during the formulation of care plans and have been shown to be effective under some circumstances in reducing compulsory admission to psychiatric hospital.[186] Decision aid tools are structured approaches to support decision making by patients (in consultation with staff)—for example, when choosing between treatment options, or when deciding to disclose a history of mental illness.[187] An overarching theme connecting these elements is the concept of recovery.

In many communities, the widely varying explanatory models of mental health and disorder (eg, that they are equivalent to social suffering or are the result of moral weakness, or spiritual or religious misfortune) lead to low levels of self-recognition or detection by health workers. Innovative strategies for educating health workers and communities that integrate biomedical and contextually appropriate understandings and messages improve detection of common mental disorders and enhance demand for health care (appendix p 5, panel S5: The VISHRAM program, India).

Application of interventions across the life course

The reframed mental health system that we envision for the future encompasses interventions related to prevention and treatment of mental disorders, and is applied at key developmental stages across the life course. This vision also emphasises that a focus on the distributional equity of resources is needed to avoid resources being delivered largely to well resourced populations (eg, urban populations), and that interventions should be used purposefully to redress social disparities and disadvantage. Although we have presented interventions for each of the key stages of the life course, we emphasise that a joined-up package of effective interventions for prevention and treatment through the life course can have substantial population-level benefits on the burden of depression (panel 8) and represents excellent value given the burden and impact of mental health problems.

Panel 8: Realising the gains of scale-up—the case of depression

As a complement to real-world evaluations across different geographical and service settings, modelling techniques can inform estimation of the expected effects of mental health programme scale-up.[188] To show the potential health effects of scaled-up action across the life course, the Commission has assessed the comparative effects of a set of scaled-up treatment and prevention strategies using depression as the index disorder because of its prevalence throughout the life course, the disease burden it accounts for at the population level, and the availability of effective interventions. We assessed seven intervention strategies: caregiver or parental skills training, life-skills training in schools, wellness programmes in the workplace, social participation of older adults in the community, psychological treatment for perinatal depression, psychological treatment for depression in adults, and pharmacological treatment for depression in adults (appendix p 30, table S2: Effectiveness of depression prevention and management strategies over the life course). This intervention set is evidently illustrative of best practice rather than exhaustive. For each intervention, a consistently high intervention coverage of 80% was used to enable like-with-like comparison of population-level effects.

Population-level health effects were generated for each year from 2015 to 2030, with final year estimates subsequently expressed as a proportion of the total and age-specific disease burden attributable to depression, as reported for each country in WHO's Global Health Estimates for 2015. The strategic planning OneHealth tool, the mental health module of which has been applied to several previous analyses and country settings,189 was used for the population modelling.190 We did the analysis for a range of geographical and income settings with diverging demographic and socioeconomic profiles, including low-income countries in Africa (eg, Ethiopia and Tanzania), lower-middle-income countries in Asia (eg, India and Indonesia), upper-middle-income countries in the Americas (eg, Brazil and Mexico), and high-income countries in Europe (eg, France and Germany). Population figures for each country are taken from the UN Population Division, and age-specific and sex-specific depression prevalence estimates are derived from the Global Burden of Disease 2015 study.191

Results of the population-level depression modelling are shown in the appendix (p 31, table S3: Estimated population-level impact of scaled-up depression interventions). When delivered at scale (80% coverage), healthy life-years gained per 1 million population in the year 2030 range from less than 5 (caregiver skills training for children aged 5–9 years) to more than 1000 (long-term pharmacological treatment of recurrent depression in adults aged 20–59 years), reflecting the relative prevalence of depression at different ages, the relative size of the target group, and the relative size of intervention effects. Life- skills programmes for enrolled school students aged 10–19 years can generate over 250 healthy life-years per 1 million population, and wellness programmes in the workplace and social participation programmes for those aged 60 years or older lead to less than 50 healthy life-years per 1 million population. Treatment of perinatal depression on an episodic basis generates close to 20 healthy life-years per 1 million population; by comparison, treatment approaches that also proactively identify people at risk and thereby prevent the onset of depressive episodes have population-level effects that are at least three times greater (76 healthy life-years per 1 million population). Similarly, but for a much larger target group of all adults aged 20–59 years, proactive psychological and pharmacological treatment programmes have the potential to generate three to five times the health gain of programmes that manage depression cases solely on an episodic basis because they avert a proportion of recurrent episodes that would otherwise have occurred.

Perinatal period and childhood

Several compelling arguments can be made for prioritising child and youth mental health. First, acting early in the life course is key to preventing mental health problems later in life because most mental disorders in adult life have their onset in childhood. Second, the combined mental and substance use disorders among children and youth are the sixth leading cause of DALYs (accounting for 6% of total disease burden in this age group) and are the leading cause of disability in terms of years lost due to disability, equivalent to a quarter of disability in young people aged 10–24 years worldwide (27%).[192] Third, neurological changes during the sensitive periods of childhood and adolescence provide opportunities to positively affect the developing brain. Fourth, childhood neglect, maltreatment, and deprivation are strong risk factors for future mental and physical health problems (figure 9).[193] Finally, globally, child and youth mental health services—and funding for these services—are lacking.[40] Young people access mental health services less frequently than any age group because of underdetection, poor awareness and help-seeking, and insufficient priority in policy frameworks.[194]

Acting early is likely to be the most promising investment in population mental health for the following reasons. First, early recognition of mental health problems or risk factors, such as parental mental illness, is compatible with a clinical staging approach, which emphasises early stages of mental illness, contributing to a strong preventive focus. Second, early recognition can contribute to tackling stigma associated with mental health and promote timely help-seeking, with improved probability of favourable outcomes. Third, special attention to early interventions in high-risk groups, such as children affected by violence, abuse, maltreatment, or poverty, can contribute to reduction in disparities in mental health. Fourth, investing in child and youth mental health is not only an economic requirement, but also a moral imperative.

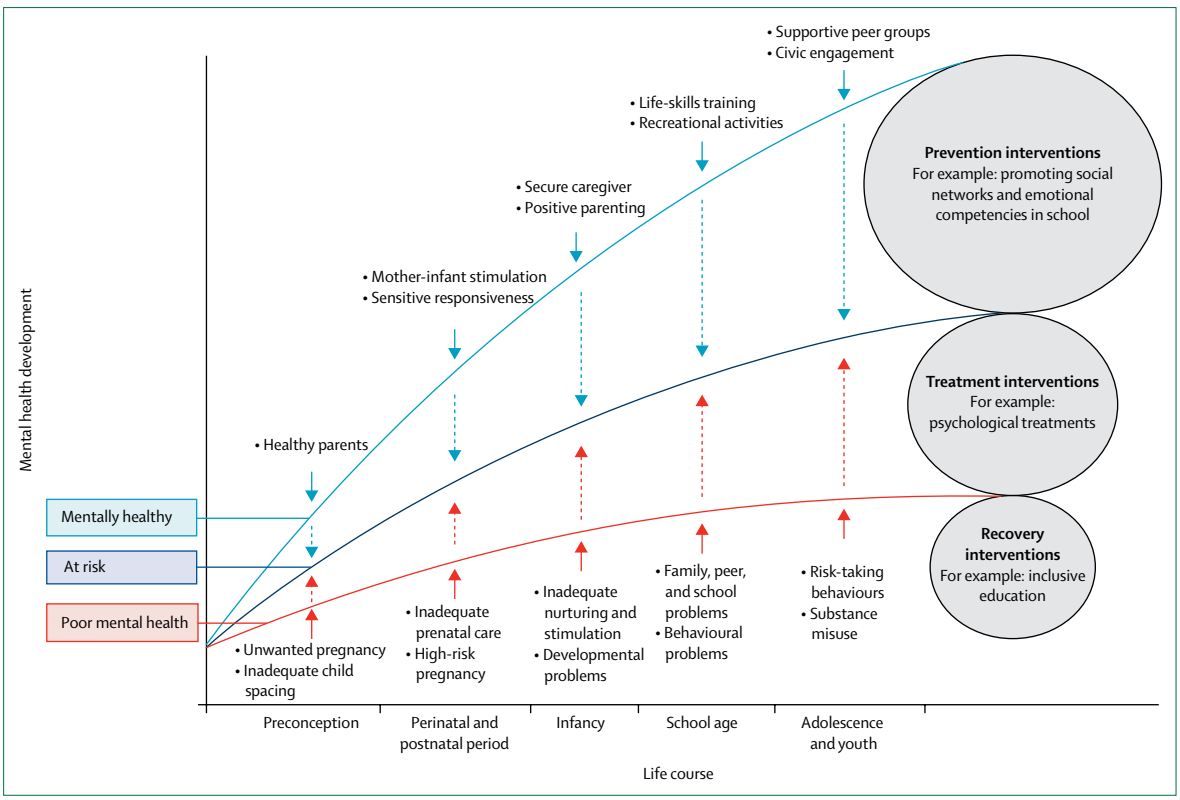


Figure 9: **Protective factors and risk factors in the early life course**

Increased funding for child and youth mental health care can positively affect future unemployment and reduce use of welfare benefits and contact with criminal justice.[40]

Investment in young children's development has positive long-term outcomes, improving health, human capital, and wellbeing across the life course.[195] Given the brain's plasticity, the perinatal period and early childhood are crucial periods for healthy development and later mental health.

In terms of prevention, genetic counselling, screening newborn babies for modifiable risk factors, and reducing maternal alcohol use can prevent intellectual disability. Preventive interventions focusing on maternal mental health, mother–infant interaction, and play and stimulation, have positive long-term benefits for both infants and mothers.[196] Interventions that promote early initiation of breastfeeding, close physical contact with the mother (eg, kangaroo mother care), and enhance maternal responsiveness, contribute to secure attachment and have been associated with an increase in bonding indicators such as infant–mother attachment at 3 months and infant growth.[196] Such programmes focusing on the early interaction between newborn babies and their caregivers, and particularly improving sensitive responsiveness, can also reduce the risk of child maltreatment.[197] Additionally, parent education and multicomponent interventions (which typically combine family support, preschool education, parenting skills, and child care) also show promising effectiveness in preventing child maltreatment and reducing mental health problems in children exposed to adversities and for children affected by armed conflict.[198]

A meta analysis[199] of 193 studies reported that maternal depression was significantly associated with increased internalising (eg, anxiety disorders) and externalising (eg, attention deficit hyperactivity disorder [ADHD], conduct disorder) mental disorders among their children.[199] A correlation has also been shown between post-traumatic stress disorder symptom severity in parents and psychological distress in their children. Strong evidence exists for the effectiveness of interventions for maternal mental disorders in reducing internalising and externalising problems, and preventing the onset of childhood mental disorders.[200] Screening for women at risk of antenatal and postnatal depression and providing effective interventions to promote recovery are therefore important interventions for preventing mental disorder in their offspring.[167] Home visiting programmes for new mothers and their babies integrate the detection and treatment of maternal depression, including the delivery of psychosocial interventions, within routine prenatal care and postnatal care services.[167]

Parenting and child welfare interventions are key investments for breaking toxic cycles of transgenerational transmission of violence, poverty, and mental illness. For example, a psychosocial stimulation and parenting support intervention among growth-stunted toddlers led

to substantial gains in adult functioning and labour market outcomes later in life.[201] Within schools, life-skills training focusing on the development of social, emotional, problem-solving, and coping skills is considered best practice for building emotional and social competencies in children of all ages.[202]

In terms of treatment, care, and rehabilitation within low-resource settings, a basic package of interventions for children and young people could include parenting skills training programmes, which are effective for children with developmental, behavioural, and emotional problems (appendix p 10, panel S10: PPP and Incredible Years parenting interventions).[203] Children with developmental disorders and their families are best supported by community-based, family-focused rehabilitation programmes. The community-based rehabilitation model is a rights-based approach, building on the inherent strengths of the community and involving people with disabilities, family members, and volunteers. The approach should be supported by local health professionals to facilitate inclusion in mainstream services when possible, tailored to local specific needs and resources. The evidence on community-based rehabilitation programmes is mostly supportive of their acceptability and beneficial effects.[129] The effectiveness of low-intensity parenting interventions for children with developmental disorders (such as the WHO Caregiver Skills Training Package) for delivery by task sharing in low-resourced settings is being assessed. Children with developmental disorders such as autism spectrum disorder can benefit from more specific parent-focused interventions (effective even when delivered by non-specialists in LMICs).[204] Within high-resource settings, as resources allow, psychosocial interventions with robust evidence for their effectiveness for specific conditions include cognitive behavioural therapy and family psychotherapy for anxiety disorder, conduct disorders, and ADHD.[156] Although stimulant medications are effective treatments for children with ADHD, challenges in obtaining diagnostic assessments, and the risk of stimulant misuse in the absence of adequate regulation, limits the feasibility of their widespread use outside high-resource settings.[203] Furthermore, child training interventions can reduce behavioural problems in school-aged children.[200]

Adolescence

Late childhood and adolescence present further opportunities for ameliorating the effects of early disadvantage, building resilience, and reducing the harmful consequences of conditions that have an onset in this period.[205] In terms of prevention, inequities (including those linked to poverty and gender) shape all aspects of adolescent health and wellbeing, calling for strong multisectoral actions to address these social determinants and offer second chances to the most disadvantaged people.[205] Family, parents, peers, school, and community can provide the crucial protective inner circle. Universal socioemotional learning (SEL) interventions in communities and schools promote children's social and emotional functioning, improve academic performance, and reduce risk behaviours, including smoking and teenage pregnancy.[206] SEL interventions can be delivered by peers, teachers, and counsellors through integrating SEL into youth programmes or school curricula (appendix p 11, panel S11: The HealthWise program, South Africa). School-based programmes require teacher training, support, supervision, and attention to the school environment, suggesting that integration into a whole-school approach is preferred. Indeed, the most effective interventions use a whole-school approach in which SEL is supported by a school ethos and a physical and social environment that is health enabling, involving staff, students, parents, and the local community. Such interventions act directly by promoting self-efficacy and trust, and through reducing risk factors such as bullying.[207] Economic analyses indicate that SEL interventions in schools are cost-effective, resulting in savings from improved health outcomes and reduced expenditures in the criminal justice system.[208]

Effective prevention programmes for reducing drug and alcohol use among adolescents are generally comprehensive approaches that include antidrug information, training in refusal skills, self-management, and social skills. Suicidality among adolescents is a major public health concern because it is the second highest cause of death among young people globally.[209] Multimodal programmes including community and school-based skills training for students, screening for at-risk young people, education of primary care physicians, media education, and lethal-means restriction offer the most promising prevention strategies (appendix p 12, panel S12: The Going Off, Growing Strong programme, Canada). Targeted or indicated preventive interventions focus on young people who have had experiences that increase their vulnerability to mental disorders or who show subthreshold symptoms. Interventions that promote coping and resilience, including cognitive skills training, help to prevent the onset of anxiety, depression, and suicide.

In terms of treatment, care, and rehabilitation, mental disorders are the leading contributors to the burden of disease in adolescents, and approaches suitable for young people are needed to address the barriers to access that are unique in this developmental group.[210] A comprehensive approach (appendix p 13, panel S13: The Prime Minister's Youth Mental Health Project, New Zealand) should involve the active engagement of young people in the design and delivery of services, and offer a choice of low-intensity and high-intensity interventions, including guided self-care delivered digitally and face-to-face interventions delivered in primary care or stand-alone youth friendly centres (which offer a one-stop service for a range of social and health concerns including mental disorders). Psychological therapies based on cognitive

and behavioural elements are effective for anxiety and depression, and evidence supports the limited use of antidepressants for depression.[203] Screening combined with brief interventions based on motivational interviewing, cognitive-behavioural elements, or family support have the most consistent evidence for treatment of substance use problems.[211] Treatment strategies could include replacing substance use with constructive and rewarding activities, improving problem-solving skills, facilitating improved interpersonal relationships (including strengthening family relationships), encouraging young people to accept and stay in care, treating other co-occurring mental disorders, and addressing violence and child abuse. To improve access, quality, and continuity of youth mental health care, further development and investment in systems of care are needed. An example is the multidisciplinary and scaled-up headspace programme in Australia (appendix pp 14–15, panel S14: the headspace program, Australia), which provides youth-friendly stepped care within a clinical staging framework.[194] The literature is rapidly expanding on interventions at the prodromal stage of psychosis that use a staged care model[75] and research is underway to tailor interventions for each specific stage, which could lead to personalised care for psychosis and other mental disorders.[75]

Adulthood

Although most mental disorders have their origins early in the life course, they often become visible to health services in adulthood, with clinical phenotypes precipitated by stressful life events such as those related to interpersonal conflicts, financial hardships, and loneliness. In old age, progressive neuronal loss leads to mild cognitive impairment and neurodegenerative pathologies can lead to the onset of dementias.

A review[212] of the evidence reported that anxiety and depression can be prevented, and that methods to prevent first-episode psychosis appear promising. Even though the effect sizes identified were small, these can have meaningful effects at the population level. Organisational level interventions can promote mental health in the workplace, including mental health consistent workplace policies (eg, on bullying and enabling access to screening and cognitive behavioural therapy for symptoms of depression and anxiety), and mental health training for managers can reduce sickness absence.[213] The evidence from low-resource settings is limited, although there is promising evidence for the SOLVE package, developed by the International Labour Organization, which focuses on integration of stress reduction and awareness of alcohol and drug misuse into occupational health and safety policies.[214] Interventions to prevent alcohol and drug misuse include limiting their availability through taxes and measures to control price (eg, market regulations and setting minimum prices together with measures to prevent price discounts); limiting sales, advertising, and promotion; implementing national policies that reduce legal blood alcohol content for drivers; and enforcing minimum drinking ages.[215]

The limited evidence of the effect of interventions targeting social determinants of mental disorders shows that interventions for poverty reduction, especially in LMICs, including conditional and unconditional cash transfers, microcredit (lending small amounts of money at low interest rates to new businesses or to tide over acute debts), and asset promotion programmes have positive effects on mental health. Examples include the Kenyan unconditional cash transfer programme for rural households that led to reductions in domestic violence, improvements in adult psychological wellbeing, and reductions in salivary cortisol;[216] the Ugandan asset promotion programme that reported improvements in the self-esteem of adolescents orphaned by AIDS;[217] unconditional cash transfers for criminally engaged young men in Liberia that led to reductions in violent behaviour and criminality; and unconditional cash transfers among urban young people in Kenya that led to reduced odds of depression in young men.[218] Such financial poverty alleviation interventions could improve nutrition, use of health care, parenting, income, and food security, and can provide opportunities for further education and serve as a buffer against negative life events.[219] However, not all financial poverty alleviation interventions have shown benefits; one study[220] reported that short-term loans in South Africa increased the amount of perceived stress in study participants. Additionally, concerns have been raised regarding the conditional nature of some cash transfer programmes—for example, negative outcomes for loans and some forms of microcredit.[221]

A wide range of interventions have been shown to be effective for the treatment of mental disorders or substance use disorders in adults. Effective interventions range from brief psychosocial therapies for common mental disorders to antipsychotic medication for psychoses, mood stabilisers for bipolar disorder, and antidepressant medication for depression. Screening and brief interventions with components of feedback and motivational enhancement, medical detoxification, and the use of medications to prevent relapses form the range of interventions for substance use disorders.[222] Mutual and self-help organisations can contribute to recovery from substance use disorders. Opioid substitution therapies are recommended for harm reduction in opioid dependence, including physical health problems and overdose.

The emergence of chronic conditions, mostly non-communicable disorders but also HIV/AIDS, as the leading causes of the burden of disease globally offers a unique opportunity for integration of mental health care in these platforms (eg, settings such as schools, health facilities, or workplaces where health-related interventions can be delivered).[223,224] Health-care

systems that have traditionally focused on acute care need to be re-engineered for the care of people with chronic conditions. Underpinning the chronic care approach are the following factors: the recognition that many mental disorders are chronic; mental and physical health conditions often co-occur with common antecedents and consequences (appendix p 27, figure S2: Shared determinants, interactions and actions for long term mental and physical conditions); the treatment of co-occurring mental disorders can also improve the outcomes of physical conditions; and the risk factors for premature mortality in people with severe mental disorders are largely cardiovascular, metabolic, and pulmonary, and so integrated care could also reduce avoidable premature mortality in people with mental disorders.[152,225]

A specific delivery model for the integration of mental health in primary health-care platforms, and for the management of multiple morbidities, is collaborative care (appendix p 16, panel S15: The TEAMcare model, USA).[226] Task-sharing innovations can be embedded in routine care primarily through a collaborative care approach, in which the lay or community health worker takes the role of case manager who coordinates care with the primary care provider and with specialists.[227] Rather than taking a disease-specific, vertical approach, integrated care adopts a person-centred approach, providing continuity of services after initial diagnosis for as long as necessary (appendix p 32, table S4: Benefits of delivering mental health care within integrated care).[156] The active ingredients of the integrated and collaborative care models are screening to identify cases; promotion of self-care; provision of psychosocial interventions and adherence management; support of visiting mental health professionals; and active patient monitoring and follow up, including (for people with severe mental disorders) rehabilitation, referral to community agencies, and health promotion (appendix p 17, panel S16: Universal mental health coverage, Peru).[228] Examples that show the feasibility of planning and providing care at the system level (including integrated primary health care, district and national multistakeholder involvement, capacity building, policy support, and training and supervision for clinical staff) are the Programme for Improving Mental Health Care[229] and the Emerging Mental Health Systems in Low- and Middle-Income Countries programme[230] in several countries in sub-Saharan Africa and Asia.

A variant of integrated care for people with serious mental disorders entails bringing medical services to the psychiatric hospital; this model of care has been used in Rwanda where HIV services were integrated into psychiatric care at tertiary hospitals, enabling patients to receive testing and treatment in the hospital and also to return for psychiatric care and HIV care during outpatient visits (appendix p 18, panel S17: Integrated HIV care for people with mental disorders, Rwanda). Interventions to support work and vocation, such as the US's Clubhouse, which builds livelihood skills and social support (appendix p 19, panel S18: The Clubhouse model), and the individual placement and support programmes are essential components of a comprehensive response to the goal to achieve inclusion for people with serious mental disorders.

Later life

Healthy active ageing is an attainable goal, already achieved by many, even in the presence of adversity such as declining health, increasing functional limitation, bereavement with loss of lifelong partners and friends, and social isolation. In terms of health promotion, mental health and wellbeing among older people cannot be separated from general health and functioning and social welfare. Health promotion across the life course, chronic disease prevention, optimisation of functioning and enabling participation, and improving the quality and accessibility of general health care are highly relevant to improving mental health in older people. The actions required to achieve progress are encompassed in the WHO Global Strategy and Action Plan on Ageing and Health (2016–20)[231] and include aligning health systems to the needs and human rights of older people, developing age-friendly environments, and strengthening long-term care. Within each of these areas, the need to empower older people, respect and promote autonomy, and strive for effective and comprehensive social protection against the economic and health risks is important.

Chronic diseases and associated disability, the prevalence of which increases with age, are by far the most important risk factors for the onset of late-life depression. Such multimorbidity among older people is a major driver of health and social care costs, and a substantial challenge to the design and delivery of health-care services that meet the needs of older people.[232] Interventions to prevent chronic diseases, such as those that promote smoking cessation and reduce hypertension, should have secondary benefits in reducing the incidence of depression. The rate of deaths from suicide is higher in older people than in other age groups, and suicide attempts have a high case fatality; low mood together with physical illness, pain, and social disconnectedness are the main associated factors.[233] Suicide prevention efforts require improved detection and treatment of depression (awareness among community gatekeepers, education of health-care professionals, and indicated screening) and systematic assessment and management of all suicide attempts; additionally, telephone contacts to engage vulnerable older people is a promising strategy.[233] Presence of functional impairment has been used to target older people with subsyndromal depression who are likely to progress to clinical episodes, and provision of low-level, stepped-care interventions seem to be cost-effective under these circumstances.[233]

Dementia prevalence doubles with every 5-year increase in age, and is the dominant contributor to the mental disorder burden in older people.[232] The diagnosis gap for dementia is as high as 50% in many high-income countries and can exceed 90% in LMICs. Reviews of modifiable risk factors for dementia support a causal role for reduced education, midlife hypertension, smoking, physical inactivity, and diabetes across the life course.[130] Reinvigorated preventive efforts to reduce exposure to these risk factors can yield important and widespread health benefits for older people in ageing populations. As many as a third of dementia cases could be preventable,[234] with tentative evidence of declining incidence shown in some high-income countries.[235]

Most interventions for mental disorders in adults are applicable to older people, although medication doses might need to be reduced and the risk of side-effects and drug interactions could restrict options for some. Low-intensity psychological interventions with efficacy across the spectrum of severity should be prioritised as the first phase of stepped care for depression.[236] Behavioural activation, focusing on renewed engagement in pleasurable activities and increased social participation, is a promising therapeutic option and could have transdiagnostic applications; behavioural activation is helpful for patients with depression as well as dementia and shares common elements with cognitive stimulation therapy (appendix p 20, panel S19: The IMPACT program, USA).[237]

The progressive course of dementia cannot be altered through therapeutic intervention, but symptomatic treatments and support are helpful. Acetylcholinesterase inhibitors and cognitive stimulation can improve aspects of cognitive function. Education, training, and support reduce carer strain and psychological morbidity, and, in high-resource settings, delay or avoid transition into care homes.[234] Such interventions could be more effective early in the disease course, and earlier diagnosis allows patients to participate in advanced care planning while they retain capacity to do so. Beyond these specific evidence-based interventions, the key principles of dementia care are similar to those for chronic disease care described earlier and include the need for care to continue from diagnosis to death, be holistic and person-centred, and be well integrated from primary to specialist care (and also between health and social care sectors).[238] Emerging evidence supports the effectiveness of case management to coordinate care for people with dementia and their carers (appendix p 21, panel S20: The Kintun program, Chile); WHO's iSupport is an example of an online training programme to support caregivers of people living with dementia.[239]

Governments and health systems around the world face a fundamental challenge—how to increase the very low coverage of diagnostic, treatment, and continuing care services, while maintaining or improving quality and keeping costs under control in the face of rising numbers of older people affected by mental disorders.[238] In high-resource settings, the focus should be on increasing the efficiency of service provision through integration, coordination, and task sharing. Across most low-resource settings, specialist multidisciplinary care for older people has been slow to develop, and primary and community care are ill-equipped to offer age-appropriate services, including support for carers. In this context, WHO has released the Integrated Care for Older People, an evidence-based guideline for the assessment and management of common, and usually multimorbid, impairments, including cognition, mood, nutrition, mobility, vision and hearing, and continence. The guidelines are designed for non-specialist health workers using home-based interventions for older people to prevent, reverse, or slow decline in intrinsic capacities.[236]

Interventions for vulnerable groups

A key focus of this Commission is redressing health inequalities and addressing human rights. Within the range of groups of people with mental disorders, specific groups of vulnerable people have greater need, including people in humanitarian emergencies, in institutions, and those who are both mentally ill and homeless.

People in humanitarian emergencies

The Inter-Agency Standing Committee Reference Group on mental health and psychosocial support in emergency settings was established in 2005 in the aftermath of the Asian tsunami to develop intersectoral normative guidelines and provide ongoing coordination for future emergencies. These guidelines recognise the need for protection and human rights standards, and to identify, monitor, prevent, and respond to threats through social and legal protection.[240] The guidelines are designed to apply to disaster management, general health, education, water and sanitation, food security and nutrition, shelter, camp management, community development, and mass communication,[33] and reinforce the minimum standards in the Sphere Project guidelines, which also include mental health standards.[241] The guidelines use a stepped approach to care and detail: the promotion of wellbeing of the general population through basic security and services, and supporting family and community networks; non-specialised worker delivered interventions[104] for people requiring targeted individual, family, or group interventions to recover from their distress; and specialised services delivered by professionals to severely distressed individuals (appendix p 22, panel S21: Resources for mental health and psychosocial support in humanitarian settings).

For the **Sphere project** see http://www/sphereproject.com

A substantial body of evidence exists on effective clinical interventions for people with mental disorders in humanitarian emergencies. The guiding principles include reinforcement of existing community resilience, avoiding medicalisation of distress, proactive case identification with referral to appropriate interventions, integration into emergency medical and social care responses, and actively promoting service use.[242] A range of psychosocial

interventions, such as trauma-focused cognitive behavioural therapy,[243] narrative exposure therapy, and transdiagnostic psychological therapies[244] (including those specifically targeted for children[164]), have some empirical support. Through these interventions, mental health and psychosocial support (MHPSS) are now more strongly aligned in the humanitarian context and other global mental health initiatives than previously. Importantly, people already living with mental disorders might be at particularly high risk during environmental or humanitarian disasters and special efforts could be needed to protect them from harm and to maintain therapeutic and other supports during a time of crisis. An active role for members of local communities and local authorities at every stage of organising mental health care in these contexts is essential for successful, coordinated action and the enhancement of local capacities and sustainability. A coordinated response should ensure that the response builds the foundation of a sustainable mental health-care system (appendix p 23, panel S22: The post-disaster experience, Indonesia).

For **MHPSS** see http://www.mhpss.net

People living in institutions

The evidence from deinstitutionalisation in high-income countries is unequivocal—when hospital closure programmes have been done reasonably well, and not used as a reason to reduce the overall mental health budget, the overall quality of life, satisfaction, and met needs of people with long-term mental disorders who move from hospital to community care is improved.[245] In terms of the overall global picture regarding de-institutionalisation, community-based models of care are not inherently more costly than institutions, once the needs of individuals and the quality of care are taken into account.[246] Yet such hospital closure programmes have proven to be slow and cultures of institutionalised care stubbornly resistant to change. This observation is true for most regions of the world but is a serious problem in relatively wealthy countries that have a legacy of large-scale institutionalisation, such as eastern Europe.[247] The WHO Mental Health Atlas shows little change since 2002 in service structures in low-income countries,[25] but some middle-income countries have shown a moderate shift towards development of community care.

A major concern is that, in some countries, as the number of patients in mental hospitals has gone down, prisons are becoming modern day mental asylums. The number of people with serious mental disorders in US prisons—estimated at nearly 400 000 in 2014—is nearly ten times the number remaining in the nation's state hospitals.[248] Conditions in prison can exacerbate mental distress[249] and release from prison often results in discontinuity of treatment and care.[250] When intensive treatment options for people in psychiatric crises are few, prisons could serve as inappropriate replacement institutions.[251] This finding reinforces the need to provide services in the community to support people with long-term and complex needs[252] and to provide appropriate mental health and substance abuse programmes in prisons that include a range of psychological, social, and medication-based therapies. The SDG call for universal health coverage should also apply to people with mental disorders in prisons and in other forms of detention.

Institutions large or small can operate with low standards of care. Indeed, the call to close the care quality gap is arguably as important as reducing the mental health treatment gap. Advocacy for improved institutional standards and respect for human rights is integral to quality care. Initiatives such as WHO's Quality Rights Program[26] that promotes the inclusion and empowerment of people with severe mental disorders, show the principles and feasibility of change for the better (appendix p 24, panel S23: QualityRights Gujarat program, India). In addition to evidence-based measures to reduce admissions to hospital whenever possible, improving living conditions and care in institutions is a crucial goal as part of a balanced mix of services.[253] Successful hospital reform requires sustained strategic leadership, a realistic time-scale for a phased transition to a community-based pattern of care (in which running costs could briefly double while community services are initially established), and active support from the relevant governmental and municipal authorities, including housing and social services or insurance agencies.[254]

Homeless people

Homelessness is both a risk factor for, and a recognised consequence of, mental disorders, and it increases the risk of suicide.[255] The prevalence of mental disorders is markedly raised among children and young people who are homeless.[256] Addressing barriers to health care and social interventions in this diverse group of people can lead to lasting health gains.[255] The provision of secure housing[257,258] and focused substance use interventions, such as motivational interviewing, are effective in reducing mental health and substance use problems in people who are homeless. Provision of community-based support, such as assertive community teams or crucial time interventions for mental and substance use disorders, is associated with improved quality-of-life outcomes and reduced hospital admissions.[257] Recognised interventions include Chez Soi or At Home, an example of a Housing First initiative in Canada, rehabilitation centres and community re-engagement in west Africa,[259] and The Banyan's Home Again programme in India (appendix p 25, panel S24: The Banyan, India).

The way forward

Considerable progress has been made in the global mental health agenda in the past decade, but much more needs to be achieved in all countries, especially in resource-poor settings, by overcoming the barriers already described. The sustainable development framework provides an opportunity to reframe mental health and make it an integral component of the broader global development

agenda. Although mental health is explicitly recognised in SDG 3, all other SDGs have been conceptualised to be integrated and indivisible—progress on each SDG supports all others. Hence, the target of reducing the burden of mental disorders is supported by progress made on other goals and targets and vice versa. This two-way interaction is an important conceptual shift because mental health has always been isolated from mainstream efforts in health and development. This Commission sets out a new perspective to show how such integration is urgently needed, justified, and ready to be implemented. The previous sections of this Commission provide a historical overview of the journey to this milestone, propose three principles to reframe mental health in line with this paradigmatic shift, and identify the actions needed to make this a reality. In this final section, we present a way forward for transforming mental health globally within the SDG era.

The Commission strongly recommends a public health approach to the objective of promoting mental health and reducing the global burden of mental disorders within the sustainable development framework. Such a public health approach consists of actions aimed at protecting mental health for all, preventing mental disorders among people at high risk, and providing treatment and care to people with lived experience of mental health problems. This approach encompasses both policies and actions to create an environment that decreases risks and vulnerabilities while also developing and strengthening services to provide timely and comprehensive quality mental health care to people who need it. This approach follows the principles of being evidence based and supporting equity and human rights. We do not see a dichotomy between the public health and clinical approaches; indeed, we explicitly include delivery of clinical interventions as an integral and essential component of the public health approach.

The Commission fully endorses the objectives of WHO's Mental Health Action Plan 2013–20 and goes beyond them, not least in aligning with the SDGs. We provide evidence for many of the actions recommended by the Action Plan, but importantly also identify innovative ways in which mental health can be reframed and these actions can be implemented in a variety of diverse settings. The Commission adds the how to the Action Plan's what. The Commission fully recognises the diversity of settings across countries as well as within countries and suggests that its recommendations are implemented in an incremental manner depending on the starting point within a particular setting and the likely availability of human and financial resources.

Key messages and recommendations

1 Mental health needs to be reframed within the sustainable development framework

1.1 Mental health is a global public good

Mental health has often been considered as a concern exclusive to people with biomedically defined mental disorders. Although that focus continues to be important, mental health should be viewed as a universal human attribute and an indivisible component of overall health—important to all people in all countries and at all ages. Indeed, mental health is a global public good. In its simplest conceptualisation, global public goods are those that should be accessible to all people worldwide, to present and future generations. No person should be excluded from a public good (non-excludable) and possession by one person does not deny it from others (non-rivalrous). Mental health is a crucial contributor to the concept of human capital, which is considered a key driver of the wealth of nations.[49] The dimensional concept of mental health lends itself to identifying public policies that promote and protect mental health for all people, irrespective of the presence of a mental disorder, much more than the restrictive concept of dividing people into those who do not have a mental disorder and those who do. However, this proposal should not be interpreted as a rejection of categorical diagnoses and classification systems such as ICD, which remain useful and are indispensable for clinical practice. Application of a staged model of care across the spectrum of severity can enhance the efficiency and effectiveness of services, overcoming some of the constraints of binary categories.

1.2 Mental health is the unique outcome of the interaction of environmental, biological, and developmental factors across the life course

Mental health is determined by multiple risk and protective factors interacting in a complex and dynamic manner over the life course, so that the mental health of each person is the product of a unique trajectory. Mental disorders have been known to be caused by social, biological, and genetic factors for a long time, but the most important advance in recent years is the evidence of brain development and plasticity throughout the life course, especially in the first two decades, which provides a convergent explanatory framework to explain how social determinants influence brain functioning and, ultimately, mental health, mediated by biological and genetic mechanisms. This convergence has substantial implications for promoting mental health during developmentally sensitive periods, such as early childhood, adolescence, and old age.

1.3 Mental health is a fundamental human right

The sustainable development agenda is a rights-based framework. Countries agree that "enjoyment of the highest attainable standard of physical and mental health" is a right of every person;[260] however, mental health is not included in the basic health-care package offered to people in most countries. Although a rights-based approach to mental health applies to all people, an equity perspective suggests that priority should be given to vulnerable populations. These populations include people affected by conflicts and natural disasters, and those living in extreme poverty. Groups of people who are discriminated against as

a result of their sex, age, race, ethnicity, sexual orientation, disability, or beliefs are often vulnerable, requiring specific protection from risks to their mental health. A special case needs to be made for the rights of people with mental disorders because these rights are very often violated within communities and institutions such as mental hospitals and prisons. Strong safeguards exist within UN conventions such as the CRPD,[261] but specific actions to ensure implementation of these conventions are inadequate. Consensus-driven operational guidelines and capacity for the realisation of CRPD should be urgently developed, keeping in mind the realities of diverse resource settings and the best interests of the beneficiaries.

2 Mental health care is an essential component of universal health coverage

2.1 The call for action to scale up services for mental disorders is still very much relevant

More than 10 years since *The Lancet* issued a call for action to scale up services for mental disorders in 2007,[3] access to mental health services remains very poor and fragmented for most people in the world. Although effective interventions exist and affordable methods for their delivery have been shown to work, the scale-up of quality mental health services has not happened in most countries. Therefore, this Commission re-emphasises the call for action to scale up mental health care with even more urgency. Mental health care should be included as an essential component of universal health coverage, and access to quality care and financial risk protection should be ensured. Inclusion of mental health within universal health coverage ensures that the concept of indivisibility of physical and mental health is operationalised and new silos are not created or perpetuated. As the 40th anniversary of the Alma Ata declaration on health for all is celebrated, it should be ensured that mental health is fully integrated in primary health care. This goal will involve inclusion of mental health within the basic care packages within primary health care and within reimbursement and insurance schemes as a standard, not as an option. Appropriate attention needs to be placed on people with severe mental disorders, who often find it difficult to access care, including for physical health conditions. In view of the established evidence of the effectiveness of task-sharing strategies by non-specialist providers, this focus should form the foundation of the mental health-care system. However, such task sharing can only achieve its full potential with the active engagement of mental health specialists including psychiatrists. Such engagement requires an expansion in the roles of mental health specialists to include training, supervision, and coordination tasks. These revised roles would also ensure optimal use of specialists' clinical expertise and consequent rationalisation of their clinical workload. A balanced care model should be used for scaling up services; specific elements of such a model for each of the resource settings are presented in figure 8.

2.2 Anticipating and counteracting threats to mental health

Demographic change, particularly the increase in life expectancy and the rising number of young adults and older people, is a key transition; this change will put increased demands on mental health and related social care services. Increasing social inequities, unplanned urbanisation, changing family structures, and economic and employment uncertainties, coupled with large-scale migration due to war and climate change, pose their own challenges to global mental health. Child maltreatment and gender-based violence are common, enduring, and substantial contributors to poor mental health that are also exacerbated in the presence of these new threats. Policy actions should not only counteract these drivers of poor mental health (as described in recommendation 3·1), but should also simultaneously invest in the capacity of the mental health system to address the increase in the number of people who will need care.

2.3 Embracing technological solutions

Digital technology offers potential to bring about substantial changes in mental health care, including training and supporting providers, monitoring care practices, strengthening information systems, and promoting self-help. Digital technology could be used to disseminate information about mental disorders through antistigma campaigns and offer platforms for sharing lived experiences. Quality assurance and potential mental health risks of digital technologies are key concerns and further work is urgently needed on effective strategies to respond to these concerns. Furthermore, digital interventions should only be used as an additional tool, rather than a substitute for traditional approaches to mental health care, not least to avoid increasing inequities since the most vulnerable groups might not have access to these technologies.

3 Protecting mental health with public policies and development efforts

3.1 Actions on social determinants of mental health are crucial

The promotion of mental health and wellbeing, and the prevention and treatment of mental and substance use disorders, requires action on the other SDGs, and can also contribute to the achievement of them. Although a detailed discussion of these actions is outside the scope of this Commission, table 1 summarises some actions for the relevant SDGs.

3.2 Actions should target developmentally sensitive periods early in the life course

The evidence for the large effect of social determinants during childhood and adolescence on mental health and on the effectiveness of interventions to prevent mental disorders during this phase of the life course should be acted upon. Early identification of risks and

	Actions for protecting mental health
SDG 1: End poverty in all its forms everywhere	• Directing poverty alleviation interventions to people with mental disorders • Providing welfare payments (basic income grant) for people in extreme poverty • Providing financial protection to people and families with mental disorders
SDG 2: End hunger, achieve food security and improved nutrition, and promote sustainable agriculture	• Ensuring adequate nutrition to all children and pregnant women for optimum brain development • Reducing prevalence of depression and anxiety through improved food security
SDG 3: Ensure healthy lives and promote wellbeing for all at all ages	• Integrating mental health promotion, prevention, and care across the life course within the context of national efforts to achieve universal health coverage • Shifting mental health care from institutions to community platforms • Developing and implementing a suicide prevention strategy • Decreasing harmful use of alcohol and psychoactive substances • Identifying and treating substance use disorders
SDG 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all	• Providing early child stimulation and school readiness programmes • Integrating life skills in school curricula • Identifying and assisting education of children with developmental disabilities early • Tailoring education to the abilities and interests of children • Providing lifelong learning to people with mental disorders to assist recovery • Providing cognitive stimulation and learning to older adults to prevent and manage dementia
SDG 5: Achieve gender equality and empower all women and girls	• Preventing violence against women and children • Ensuring that mental health services are gender-sensitive and specifically geared to address mental health problems in women, such as maternal depression and the consequences of violence • Increasing support for caregivers, who are more frequently women
SDG 8: Promote sustained, inclusive, and sustainable economic growth, full and productive employment, and decent work for all	• Implementing mental health in the workplace programmes • Providing social and occupational interventions and support for people with mental disorders and their families • Assisting workforces affected by changing needs of industries, for example due to the growing role of technology
SDG 10: Reduce inequality within and among countries	• Providing welfare payments (basic income grant) for those in extreme poverty • Reducing stigma and discrimination for people and families with mental disorders • Promoting and increasing opportunities for social inclusion for people with mental disorders
SDG 11: Make cities and human settlements inclusive, safe, resilient, and sustainable	• Creating built environments that minimise the social determinants of poor mental health • Ensuring safe use of chemicals, including pesticides, to prevent neurotoxicity, self-harm, and suicides
SDG 13: Take urgent action to combat climate change and its impacts	• Integrating psychosocial support in all humanitarian assistance related to natural disasters and other consequences of climate change • Adding the voice of the mental health community to highlight the importance of climate change action, because of its effect on mental health
SDG 16: Promote peaceful and inclusive societies for sustainable development, provide access to justice for all, and build effective, accountable, and inclusive institutions at all levels	• Developing and implementing progressive laws related to mental health and human rights • Preventing the incarceration of people with mental disorders in institutions (eg, prisons and institutions for the care of children) • Implementing mental health programmes in prisons
SDG 17: Strengthen the means of implementation and revitalise the global partnership for sustainable development	• Showing the effect of mental health interventions on work in other sectors related to Sustainable Development Goals • Developing and sustaining a partnership to transform mental health globally

Table 1: **Actions for protecting mental health and wellbeing for the relevant Sustainable Development Goals**

vulnerabilities to mental health and delivery of evidence-based interventions, such as life-skills curricula, parenting interventions, whole-school programmes, and protection from neglect and violence, should be applied in all populations.

4 Strengthening public awareness and engagement of people with mental disorders

Engagement of civil society with mental health should be increased, in particular of people with lived experience of mental disorders. This engagement is likely to enhance both self-help and demand for services when needed. Social contact between people with and without experience of mental disorders is the central active ingredient to reduce stigma and discrimination,[172] as used in many international and national campaigns.[262] More people with lived experiences of mental disorders should be encouraged to be leaders, advocates, and peers to address barriers to accessing mental health care, social inclusion, and full citizenship.

Examples of priority mental health research in the Sustainable Development Goal framework*	
Goal A: identify root causes, risk, and protective factors	• Understand how genetic, neurodevelopmental, and social risk and protective factors interact across the life course influencing mental health and mental disorders • Understand the influence of gender on mental health and mental disorders across the life course • Discover biomarkers for mental health and mental disorders
Goal B: advance prevention and implementation of early interventions	• Understand early stages in the development of mental disorders • Identify novel interventions for prevention and early interventions targeting key determinants across the life course • Identify sensitive and specific tools for early detection and improved diagnosis
Goal C: improve treatments and expand access to care	• Identify more effective pharmacological, psychosocial, and social treatment interventions, including those that are transdiagnostic • Develop improved decision-making algorithms for diagnosis and for person-centred care (precision medicine) • Design, evaluate, and compare delivery mechanisms for care, ensuring equity and quality • Elaborate and test approaches for supported decision-making for mental health care for people with severe mental disorders
Goal D: raise awareness of the global burden	• Develop, evaluate, and disseminate effective methods for communicating the burden of mental disorders • Develop, evaluate, and disseminate effective methods to increase the demand for mental health care
Goal E: build human resource capacity	• Identify skills needed by non-specialist care providers to deliver mental health care, and feasible and scalable ways to train, support, and supervise them • Develop and evaluate innovations for synergising and integrating services delivered by human and digital methods
Goal F: transform health system and policy responses	• Identify the most feasible and effective ways to integrate mental health within universal health coverage in a variety of health systems • Implement a comprehensive monitoring system to assess the determinants of mental health and the inputs and outputs of mental health services • Evaluate the feasibility and impact of innovative financing mechanisms for mental health care (eg, social impact bonds and insurance schemes)

*The list of examples is intended to be illustrative rather than exhaustive.

Table 2: **Research priorities for global mental health and sustainable development**[34]

5 Investments for mental health should be enhanced

5.1 National financing of mental health care

Countries at all income levels allocate a far lower proportion of their health budget to mental health care than is warranted on the basis of proportional burden and cost-effectiveness estimates. Health budgets need to have an increased allocation of funds for mental health care; although the exact percentage can be arrived at after an assessment of needs along with other priorities, in general, LMICs should increase their mental health allocation to at least 5% and high-income countries to at least 10% of the total health budget. This increase should be in addition to allocation for other developmental priorities that will also be supportive of mental health. Although additional resources are essential, immediate opportunities exist for more efficient and effective use of existing resources—for example, through the redistribution of mental health budgets from large hospitals to district hospital and community-based local services, the introduction of early interventions for emerging mental disorders, and the re-allocation of budgets for other health priorities to promote integration of mental health care in established platforms of delivery.

5.2 International development assistance should prioritise mental health

Mental health should be a priority within international development assistance, which currently contributes a pitifully small proportion to support mental health care in the least resourced countries, despite evidence of the cost-effectiveness of mental health interventions that compare favourably with other health and development interventions. The past two decades have seen the emergence of several large foundations investing heavily in health and development and we call on these foundations to recognise the alignment between their current priorities and mental health (appendix pp 33–34, table S5,).

5.3 A partnership for financing and investing in mental health is urgently needed

We call for a partnership for transforming mental health globally through the mobilisation, disbursement, and utilisation of funds and performing an accountability and oversight role, as described below. A partnership should include engagement of UN agencies and development banks, academic institutions with expertise in implementation and prevention relevant to mental health, the private sector (for example, technology and pharmaceutical industries), civil society organisations representing the voices of people with lived experience of mental disorders, and policy makers from national and international agencies.

6 Innovation and implementation should be guided by research

Investments are needed not only to scale up mental health interventions but also to continue knowledge creation. A crucial opportunity for mental health science is the convergence of knowledge from diverse disciplines,

	Proposed indicators	Data source and availability
A: mental health determinants		
A1: demographic	• Whether or not legal frameworks are in place to promote, enforce, and monitor equality and non-discrimination on the basis of sex (SDG 5.1.1)*	• The World Bank and the Organisation for Economic Cooperation and Development; indicator under development
A2: economic	• Proportion of population below the international poverty line (%), by sex, age, employment status, and geographical location (urban or rural; SDG 1.1.1)*	• The World Bank (134 countries)
	• Unemployment rate, by sex, age, and percentage of people with disabilities (SDG 8.5.2)*	• ILO (169 countries)
	• Income inequality (Gini index)	• The World Bank (100 countries)
A3: neighbourhood	• Proportion of urban population living in slums, informal settlements, or inadequate housing (SDG 11.1.1)*	• UN Habitat (at least all low-income and middle-income countries)
	• Proportion of population that feel safe walking alone around the area they live (SDG 16.1·4)*	• UNODC (63 countries between 2000 and 2010)
A4: environmental†	• Proportion of population subjected to physical, psychological, or sexual violence in the previous 12 months (SDG 16.1.3)*	• UNODC (33 countries since 2010, physical and sexual violence only)
	• Proportion of children aged 1–17 years who experienced any physical punishment or psychological aggression by caregivers in the past month (SDG 16.2.1)*	• UNICEF (73 countries)
A5: social or cultural†	• Proportion of children and young people in grades two or three, at the end of primary, and at the end of lower secondary achieving at least a minimum proficiency level in reading and mathematics by sex (SDG 4·1·1)*	• UN Educational, Scientific and Cultural Organization (79 countries)
B: mental health systems and services		
B1: governance	• Existence of a national policy or plan for mental health in line with international and regional human rights instruments (MHAP 1.1)‡	• WHO Mental Health Atlas (158 countries in 2014)
B2: financing	• Government expenditure on mental health (US$)	• WHO Mental Health Atlas (41 countries in 2014)
B3: workforce capacity	• Mental health workers (number per 100 000 population)	• WHO Mental Health Atlas (78 countries in 2014)
B4: service availability and provision	• Total mental health beds (number per 100 000 population), disaggregated by type of inpatient care facility including mental hospitals	• WHO Mental Health Atlas (80 countries in 2014)
	• Mental health outpatient visits (rate per 100 000 population)	
B5: service access and coverage†	• Proportion of people with a severe mental disorder who are using services (MHAP 2.1)‡	• WHO Mental Health Atlas (73 countries in 2014)
B6: service quality†	• Proportion of discharged inpatients with severe mental disorder followed up in the community within 1 month	• WHO Mental Health Atlas (43 countries in 2014)
C: mental health outcomes and risk protection		
C1: health, social, and economic outcomes†	• Suicide mortality (suicides per 100 000 population; SDG 3.4.2)*	• WHO (171 countries)
	• Harmful use of alcohol (litres of pure alcohol per capita; SDG 3.5.2)*	• WHO Global Information System on Alcohol and Health (190 countries)
	• Proportion of children under 5 years of age who are developmentally on track in health, learning, and psychosocial wellbeing by sex (%; SDG 4.2.1)*	• UNICEF (58 low-income and middle-income countries)
	• Subjective wellbeing (ladder score, 0–10)	• World Happiness Report (153 countries in 2014)
C2: social and financial risk protection	• Proportion of population covered by social protection floors or systems, by sex, distinguishing children, people who are unemployed, older people, and people with disabilities (SDG 1.3.1)*	• ILO (183 countries)
	• Proportion of population with large household expenditures on health as a share of total household expenditure or income (%; SDG 3.8.2)*	• WHO and the World Bank (120 countries by the end of 2017); new mental health data are needed

SDG=Sustainable Development Goal. ILO=International Labour Organization. UNODC=UN Office on Drugs and Crime. MHAP=Mental Health Action Plan. *Indicators that are agreed SDG indicators (2016–30). †Indicators for these targets should be disaggregated by sex and age whenever possible. ‡Indicators that are agreed in the WHO Mental Health Action Plan (2013–20).

Table 3: **Indicators for mental health and sustainable development**

which offers the promise of new understanding of the nature of mental disorders and how they develop, more effective psychosocial and pharmacological interventions, and an understanding of how to implement these effective interventions at scale. For example, integrating genetics, neuroscience, and clinical disciplines could result in improved clinically meaningful phenotypes, an ability to detect disorders early, and the potential for uncovering new environmental and biological mechanisms as targets for intervention. Similarly, expertise from political, economic, and social sciences should be used to answer crucial questions around how to deliver interventions at scale. Efforts to scale up mental health interventions present an important opportunity to embed scientific research alongside the implementation of programmes. These research themes are aligned with the Grand Challenges in Global Mental Health[34] that set the stage for the implementation science that has transformed the evidence base of the field and whose broader goals have the potential to guide actions towards the achievement of the SDG targets on mental health and wellbeing (table 2). Research investments should be increased and coordinated across funders, and developments such as the emergence of the International Alliance of Mental Health Research Funders indicate that progress is being made. Early and continuous dialogue

For the **International Alliance of Mental Health Research Funders** see http://iamhrf.org

***Panel 9:* Mental health and wellbeing: what are the key predictors?**

On the basis of the Commission's proposed set of indicators for monitoring mental health and sustainable development (table 3), we did a quantitative analysis to identify which of these variables had greatest explanatory value in predicting the Sustainable Development Goal target of promoting mental health and wellbeing (as measured by surveys of subjective wellbeing). To account for the substantial amount of missing data (at random) across domains and countries, this analysis focused on indicators for which data are available for at least 75 countries. Since many data points were still missing for even these indicators, we used a Markov chain Monte Carlo algorithm to impute values for missing country variables, then we averaged across multiple iterations to obtain one dataset. Given the anticipated multicollinearity between predictors (variance inflation factor >5 for eight of ten predictors), we used principal component analysis to extract five principal components with eigenvalues greater than 1 from the following domains:

- Mental health determinants: poverty, literacy, and income inequality component (47·88% of variance); employment and income inequality component (26·10% of variance)
- Mental health systems and services component (56·97% of variance)
- Mental health system goals: social and financial risk protection component (45·51% of variance) and suicide and alcohol consumption component (27·58% of variance)

We then used a least absolute shrinkage and selection operator regression model with the principal components as predictors of subjective wellbeing to enhance prediction accuracy and interpretability. Out of the five principal components of the indicators identified and profiled, key drivers of subjective wellbeing at the national level are the social and financial risk protection component of mental health system goals (standardised coefficient β=0·383), and the poverty, literacy, and income inequality component of mental health determinants (β=–0·362; goodness of fit R^2=0·61, R^2adj=0·588, R^2reg=0·583, F(3,185)=32·39, p<0·001). These findings support a central hypothesis and argument of this Commission—that social and environmental determinants play a crucial part in shaping population-level mental health.

between researchers and policy planners is especially important in LMICs to ensure that the research done is relevant to the needs of the country and has a direct and immediate effect on policy and practice.

7 Strengthening monitoring and accountability for global mental health

7·1 A comprehensive monitoring mechanism for mental health should be implemented

Although WHO's Mental Health Action Plan has a set of indicators and targets, these are insufficient for monitoring the reframed mental health agenda proposed by this Commission. WHO's Mental Health Atlas provides a unique source of comparable information from almost all countries, but has inadequate data on some variables and issues of quality since the information is collected exclusively from government sources. Steps should be taken to improve data coverage and quality in the WHO Mental Health Atlas. One of the specific indicators for monitoring mental health in SDGs (suicide mortality rate) tracks a very specific final negative outcome. For an all-round effect on global mental health within sustainable development, robust, long-term, and comprehensive monitoring and accountability mechanisms are needed. The Commission has proposed a set of mental health and sustainable development indicators that cover not only key aspects of the mental health-care system itself but that also acknowledge the influence of external factors, such as poverty, inequality, and access to education. Over and above core indicators of mental health system capacity, provision, and outcomes, we identified other indicators relating to domains of social and environmental determinants of mental health, for which widely available global data being collected for SDG or other reporting are available (table 3).

For the **WHO Mental Health Atlas 2017** see http://www.who.int/mental_health/evidence/atlas/mental_health_atlas_2017/en

Reporting of these data can take more than one form. Most simply, a compilation of available data can be pulled together into a country profile, such as the WHO Mental Health Atlas. Such profiles do not provide information about overall performance relative to other countries or to agreed notions of better or worse performance or to inequities within the country. For that purpose, country-specific and subnational scores for selected indicators can be fitted to a common scale and then, if desired or justified, scores can be partitioned into categories of relative achievement or synthesised into an overall index, as has been done for human development or sustainable development itself.[263–265] Such a synthesis, however, is a highly simplified abstraction of what we have already argued is a complex system of influences and their interactions. Accordingly, the Commission considers it premature to produce a mental health system performance index, and instead, we present a preliminary investigation of the selected indicators that we consider have the most influence or predictive value for the SDG targets for mental health (panel 9).

7·2 Accountability frameworks for mental health should be put in place

Increased investments should be matched with strengthened accountability frameworks. WHO already has a

mechanism for reporting progress to its governing bodies against the agreed goals and targets of the WHO Mental Health Action Plan.[25,266] Monitoring and accountability in an era of global mental health and sustainable development needs an oversight body with a broad intersectoral representation and mandate. At the global level, this part could be played by the multisectoral partnership for transforming mental health globally (as proposed earlier). The partnership's accountability function could be undertaken by a network of hubs, governed by a secretariat, with specific expertise needed for supporting countries in the collection, analysis, and reporting of data, and could take on other roles, including priority setting, resource allocation, quality assurance, capacity building, evaluation of impact, and continued tracking of needs. Similarly, at the national level, accountability can be enhanced through an autonomous, intersectoral oversight body charged with similar tasks, with a focus on reducing mental health disparities within countries. The incorporation of mental health into the remit of existing accountability mechanisms, such as those established for child and maternal health or for non-communicable disease prevention and control, would be complementary to this approach. Additionally, existing UN Conventions, in particular those relating to the rights of the child and the rights of people with disabilities, provide a powerful basis for calling responsible authorities to account by use of established mechanisms for reporting on their implementation.

Conclusion

When world leaders adopted the SDGs, they were committing themselves to action on a much larger scale than ever before in the history of humanity. Promoting mental health, preventing mental disorders, and including mental health care in universal health coverage are part of this agenda. Although "no health without mental health"[267] is an important aspiration, the era of "no sustainable development without mental health" has begun. Mental health has remained in the shadows for far too long. Knowledge accumulated in the past two decades, and new international and national commitments made at the highest levels over the same period, have the potential to transform this situation. On the basis of this knowledge and opportunity, this Commission proposes that mental health needs to be reframed. Urgent action is needed to protect mental health and prevent mental disorders, alongside scaling up services to detect, treat, and support recovery of people with mental disorders. This action places mental health at the very centre of sustainable development in all countries and communities, and for all people. To realise this vision, substantial and urgent investments are needed at international, national, and community levels not only within the health sector but also in other development sectors. Most importantly, a concerted and coordinated effort involving all the stakeholders concerned with realising the mental health aspirations of the SDGs is needed. We therefore call for a partnership to transform mental health globally, with engagement of key sectors concerned with mental health, both at the global and at country and subnational levels, and with the full involvement of people with the lived experience of mental disorders. We, the *Lancet* Commissioners on global mental health and sustainable development, believe that urgent action to fully implement our recommendations will contribute to the attainment of the health targets, and many other targets of the SDGs.

Contributors

All authors made contributions towards the scope, structure, and key messages of the Commission. VP and SS oversaw the drafting of the final report. CL coordinated the drafting of section 2 (Reframing mental health) and GT coordinated the drafting of section 3 (Interventions). Other authors made contributions to specific sections of the Commission and all authors reviewed the drafts of the Commission and approved the final version.

Declaration of interests

PYC reports employment by the US National Institute of Mental Health (NIMH), which was one of the funders of the work of the Commission. EM is a consultant for, and was previously an employee of, Grand Challenges Canada, which receives funding from Johnson and Johnson. DJS reports personal fees from Lundbeck, Biocodex, Servier, and Sun Pharmaceutical Industries. CS reports grants from the South African National Department of Health. All other authors declare no competing interests.

Acknowledgments

Grants from the US National Institute of Mental Health (NIMH, grant number 3U19MH095687-05S2), Grand Challenges Canada, and MQ (UK) supported the work of the Commission. The Wellcome Trust provided requisite support for hosting Commission meetings. All Commissioners were supported by their employing organisations to undertake this work. VP, CL, and MDJ are supported by the PRogramme for Improving Mental Health carE (PRIME), funded by the UK Department for International Development. The views expressed in this study are not necessarily those of the UK government. VP is also supported by The Wellcome Trust, the NIMH (U19MH113211), and the Medical Research Council (UK). The majority of the work was completed while SS was working for WHO. DC is staff of WHO and SS was staff of WHO when the majority of the work was completed; however, the views expressed in this article are those of the authors and do not represent the official policies or positions of WHO. The majority of the work was completed while PYC was in the NIMH Office for Research on Disparities and Global Mental Health (USA). The views expressed in this Commission do not necessarily reflect those of NIMH or the US Government. The majority of the work was completed while EM was the programme officer for Global Mental Health with Grand Challenges Canada. GT is supported by the National Institute for Health Research (NIHR) Collaboration for Leadership in Applied Health Research and Care South London at King's College London NHS Foundation Trust. The views expressed are those of the author(s) and not necessarily those of the NHS, the NIHR or the Department of Health. GT acknowledges financial support from the Department of Health via the National Institute for Health Research (NIHR) Biomedical Research Centre and Dementia Unit awarded to South London and Maudsley NHS Foundation Trust in partnership with King's College London and King's College Hospital NHS Foundation Trust. GT is supported by the European Union Seventh Framework Programme (FP7/2007-2013) Emerald project. GT also receives support from the National Institute of Mental Health of the National Institutes of Health under award number R01MH100470 (Cobalt study). GT is also supported by the UK Medical Research Council in relation to the Emilia (MR/S001255/1) and Indigo Partnership (MR/R023697/1) awards. MP serves as the director of the NIHR Global Health Research Unit on Health System Strengthening in Sub-Saharan African Countries at

King's College London (16/136/54). HH is supported by the Australian National Health and Medical Research Council. IS is supported by The Wellcome Trust and the UK NIHR. DJS is supported by the South African Medical Research Council. In the past 3 years, DJS has received research grants or consultancy honoraria from Biocodex, Lundbeck, Servier, and Sun Pharmaceutical Industries. The views expressed are those of the authors and not necessarily those of the NHS, the NIHR, or the UK Department of Health and Social Care. The Commission gratefully acknowledges the valuable contributions of members of Advisory Group who advised us at crucial junctures: Keshav Desiraju, Sophie Dix, Tedla W Georgis, Steve E Hyman, Thomas R Insel, Lord Richard Layard, Sheila Ndyanabangi, Andy Shih, Chris Underhill, and Zeping Xiao. The Commission gratefully acknowledges the contribution of data on psychotherapies from Pim Cuijpers, the Global Burden of Disease from Harvey Whiteford, and inputs received from William Eaton on some of the content. We also acknowledge the role of the *Lancet* editors (Niall Boyce and Helen Frankish) who provided important feedback through the process of developing the Commission.Research administration of the Commission was coordinated by Deepti Beri (Public Health Foundation of India and Sangath).We acknowledge the role of research team members of the working groups who provided assistance with literature searches and synthesis, data extraction, and preparation of figures, namely colleagues from Autism Speaks, Alexandra Almeida, Supriya Bhavnani, Jeff Cheng, Jayashree Dasgupta, Nastassja Koen, Heidi Lempp, Grace Ryan, Tessa Roberts, and Beatriz Santana Suarez.

References

1 Beaglehole R, Bonita R. What is global health? *Global Health Action* 2010; **3:** 10.3402.

2 Patel V, Prince M. Global mental health: a new global health field comes of age. *JAMA* 2010; **303:** 1976–77.

3 Chisholm D, Flisher AJ, Lund C, et al. Scale up services for mental disorders: a call for action. *Lancet* 2007; **370:** 1241–52.

4 WHO. Planning and budgeting to deliver services for mental health. WHO mental health policy and service guidance package. 2003. http://www.who.int/mental_health/policy/services/5_planning%20budgeting_WEB_07.pdf (accessed Aug 31, 2018).

5 Pathare S, Brazinova A, Levav I. Care gap: a comprehensive measure to quantify unmet needs in mental health. *Epidemiol Psychiatr Sci* 2018; published online March 9. DOI:10.1017/S2045796018000100.

6 Kleinman A. Anthropology and psychiatry. The role of culture in cross-cultural research on illness. *Br J Psychiatry* 1987; **151:** 447–54.

7 Littlewood R. From categories to contexts: a decade of the 'new cross-cultural psychiatry'. *Br J Psychiatry* 1990; **156:** 308–27.

8 Engel GL. The need for a new medical model: a challenge for biomedicine. *Science* 1977; **196:** 129–36.

9 Kleinman A, Das V, Lock MM. Social Suffering. Berkeley: University of California Press, 1997.

10 Volkow ND, Poznyak V, Saxena S, Gerra G, and the UNODC-WHO Informal International Scientific Network. Drug use disorders: impact of a public health rather than a criminal justice approach. *World Psychiatry* 2017; **16:** 213–14.

11 Ferrannini L, Ghio L, Gibertoni D, et al, and the Italian Mental Health Data Group. Thirty-five years of community psychiatry in Italy. *J Nerv Ment Dis* 2014; **202:** 432–39.

12 Lambo TA. A form of social psychiatry in Africa (with special reference to General Features of Psychotherapy with Africans). *World Mental Health* 1961; **13:** 190–203.

13 Patel V, Araya R, Chatterjee S, et al. Treatment and prevention of mental disorders in low-income and middle-income countries. *Lancet* 2007; **370:** 991–1005.

14 Rose D. Collaborative research between users and professionals: peaks and pitfalls. *BJPsych Bull* 2003; **27:** 404–06.

15 Davidson L, Lawless MS, Leary F. Concepts of recovery: competing or complementary? *Curr Opin Psychiatry* 2005; **18:** 664–67.

16 Lund C, Breen A, Flisher AJ, et al. Poverty and common mental disorders in low and middle income countries: a systematic review. *Soc Sci Med* 2010; **71:** 517–28.

17 Institute for Health Metrics and Evaluation. GBD Research Tools. 2018. https://vizhub.healthdata.org/gbd-compare/ (accessed April 24, 2018).

18 Vigo D, Thornicroft G, Atun R. Estimating the true global burden of mental illness. *Lancet Psychiatry* 2016; **3:** 171–78.

19 Charlson FJ, Baxter AJ, Dua T, Degenhardt L, Whiteford HA, Vos T. Excess mortality from mental, neurological and substance use disorders in the Global Burden of Disease Study 2010. *Epidemiol Psychiatr Sci* 2015; **24:** 121–40.

20 WHO. Mental Health Atlas 2005. Geneva: World Health Organization, 2005.

21 Wang PS, Aguilar-Gaxiola S, Alonso J, et al. Use of mental health services for anxiety, mood, and substance disorders in 17 countries in the WHO world mental health surveys. *Lancet* 2007; **370:** 841–50.

22 Patel V, Kleinman A, Saraceno B. Protecting the human rights of people with mental disorders: a call to action for global mental health. In: Dudley M, Silove D, Gale F, eds. Mental health and human rights. Oxford: Oxford University Press, 2012: 362–75.

23 Gilbert BJ, Patel V, Farmer PE, Lu C. Assessing development assistance for mental health in developing countries: 2007–2013. *PLoS Med* 2015; **12:** e1001834.

24 WHO. mhGAP: Mental Health Gap Action Programme: scaling up care for mental, neurological and substance use disorders. 2008. http://apps.who.int/iris/handle/10665/43809 (accessed Aug 31, 2018).

25 WHO. Mental Health Atlas 2014. Geneva: World Health Organization Press, 2015.

26 WHO. WHO QualityRights Tool Kit. Geneva: World Health Organization, 2012.

27 WHO. Mental Health Action Plan 2013–2020. Geneva: World Health Organization Press, 2013.

28 Patel V, Chisholm D, Dua T, Laxminarayan R, Medina-Mora ME, eds. Mental, neurological, and substance use disorders. Disease Control Priorities, 3rd edition, vol 4. Washington, DC: World Bank, 2015.

29 Mateus MD, Mari JJ, Delgado PGG, et al. The mental health system in Brazil: policies and future challenges. *Int J Ment Health Syst* 2008; **2:** 12.

30 Patel V. Legislating the right to care for mental illness. *Econ Polit Wkly* 2013; 48–49.

31 Patel V, Xiao S, Chen H, et al. The magnitude of and health system responses to the mental health treatment gap in adults in India and China. *Lancet* 2016; **388:** 3074–84.

32 Clark DM, Layard R, Smithies R, Richards DA, Suckling R, Wright B. Improving access to psychological therapy: initial evaluation of two UK demonstration sites. *Behav Res Ther* 2009; **47:** 910–20.

33 WHO. Building back better: sustainable mental health care after emergencies. Geneva: World Health Organization, 2013.

34 Collins PY, Patel V, Joestl SS, et al, and the Scientific Advisory Board and the Executive Committee of the Grand Challenges on Global Mental Health. Grand challenges in global mental health. *Nature* 2011; **475:** 27–30.

35 Huang Y, Liu Z, Wang H, et al. The China Mental Health Survey (CMHS): I. Background, aims and measures. *Soc Psychiatry Psychiatr Epidemiol* 2016; **51:** 1559–69.

36 Gururaj G, Varghese M, Benegal V, et al. National Mental Health Survey of India, 2015–16: prevalence, patterns, and outcomes. Bengaluru: National Institute of Mental Health and Neuro Sciences, NIMHANS publication no 129, 2016.

37 Thornicroft G, Chatterji S, Evans-Lacko S, et al. Undertreatment of people with major depressive disorder in 21 countries. *Br J Psychiatry* 2017; **210:** 119–24.

38 Lund C. Mental health and human rights in South Africa: the hidden humanitarian crisis. *S Afr J Hum Rights* 2016; **32:** 403–05.

39 Charlson F, Dieleman J, Singh L, Whiteford H. Donor financing for global mental health, 1995–2015: an assessment of trends, channels, and alignment with the disease burden. *PLoS One* 2012; **12:** e016938.

40 Lu C, Li Z, Patel V. Global child and adolescent mental health: the orphan of development assistance for health. *PLoS Med* 2018; **15:** e1002524.

41 Bloom DE, Cafiero ET, Jané-Llopis E, et al. The global economic burden of non-communicable diseases. September, 2011. http://www3.weforum.org/docs/WEF_Harvard_HE_GlobalEconomicBurdenNonCommunicableDiseaGlo_2011.pdf (accessed May 1, 2018).

42 Leucht S, Hierl S, Kissling W, Dold M, Davis JM. Putting the efficacy of psychiatric and general medicine medication into perspective: review of meta-analyses. *Br J Psychiatry* 2012; **200:** 97–106.

43 Jorm AF, Patten SB, Brugha TS, Mojtabai R. Has increased provision of treatment reduced the prevalence of common mental disorders? Review of the evidence from four countries. *World Psychiatry* 2017; **16:** 90–99.

44 Berry HL, Waite TD, Dear KBG, Capon AG, Murray V. The case for systems thinking about climate change and mental health. *Nat Clim Chang* 2018; **8:** 282–90.

45 Patel V, Burns JK, Dhingra M, Tarver L, Kohrt BA, Lund C. Income inequality and depression: a systematic review and meta-analysis of the association and a scoping review of mechanisms. *World Psychiatry* 2018; **17:** 76–89.

46 Summerfield D. Afterword: against "global mental health". *Transcult Psychiatry* 2012; **49:** 519–30.

47 Freeman MC, Kolappa K, de Almeida JMC, et al. Reversing hard won victories in the name of human rights: a critique of the General Comment on Article 12 of the UN Convention on the Rights of Persons with Disabilities. *Lancet Psychiatry* 2015; **2:** 844–50.

48 WHO. Time to deliver: report of the WHO Independent High-level Commission on Noncommunicable Diseases. June 1, 2018. http://www.who.int/ncds/management/time-to-deliver/en/ (accessed June 6, 2018).

49 Flabbi L, Gatti RV. A primer on human capital (English). Jan 19, 2018. http://documents.worldbank.org/curated/en/514331516372468005/A-primer-on-human-capital (accessed May 20, 2018).

50 Helliwell J, Layard R, Sachs J. World Happiness Report 2016. 2016. http://worldhappiness.report/ed/2016/ (accessed March 15, 2018).

51 Diener E, Oishi S, Lucas RE. Personality, culture, and subjective well-being: emotional and cognitive evaluations of life. *Annu Rev Psychol* 2003; **54:** 403–25.

52 Saxena S, Carlson D, Billington R, and the WHO Quality Of Life Group. The WHO quality of life assessment instrument (WHOQOL-Bref): the importance of its items for cross-cultural research. *Qual Life Res* 2001; **10:** 711–21.

53 WHO. Promoting mental health: concepts, emerging evidence and practice. Geneva: World Health Organization, 2004. http://www.who.int/mental_health/evidence/en/promoting_mhh.pdf (accessed Sept 1, 2018).

54 Wilkinson I. Suffering: a sociological introduction. Indianapolis, Indiana: Polity, 2005.

55 Pan African Network of People with Psychosocial Disabilities. The Cape Town Declaration. *Disability and the Global South* 2014; **1:** 385–86.

56 American Psychological Association. The road to resilience. 2014. http://www.apa.org/helpcenter/road-resilience.aspx (accessed April 15, 2018).

57 Keyes CL, Dhingra SS, Simoes EJ. Change in level of positive mental health as a predictor of future risk of mental illness. *Am J Public Health* 2010; **100:** 2366–71.

58 Delude CM. Deep phenotyping: the details of disease. *Nature* 2015; **527:** S14–15.

59 Galderisi S, Heinz A, Kastrup M, Beezhold J, Sartorius N. Toward a new definition of mental health. *World Psychiatry* 2015; **14:** 231–33.

60 Helliwell J, Layard R, Sachs J. World happiness report 2018. 2018. http://worldhappiness.report/ed/2018/ (accessed March 29, 2018).

61 Office for National Statistics. Measuring national wellbeing—governance 2014. Feb 20, 2014. https://www.ons.gov.uk/peoplepopulationandcommunity/wellbeing/articles/measuringnationalwellbeing/qualityoflifeintheuk2018 (accessed Sept 5, 2018).

62 Sen A. Development as freedom. Oxford: Oxford University Press, 1999.

63 Wilkinson RG, Pickett K. The spirit level: why more equal societies almost always do better. London: Allen Lane, 2009.

64 WHO. WHO Commission on social determinants of health. 2010. http://apps.who.int/iris/bitstream/handle/10665/43943/9789241563703_eng.pdf?sequence=1 (accessed Jul 10, 2017).

65 Clark LA, Cuthbert B, Lewis-Fernández R, Narrow WE, Reed GM. Three approaches to understanding and classifying mental disorder: ICD-11, DSM-5, and the National Institute of Mental Health's Research Domain Criteria (RDoC). *Psychol Sci Public Interest* 2017; **18:** 72–145.

66 Kendler KS. DSM issues: incorporation of biological tests, avoidance of reification, and an approach to the "box canyon problem". *Am J Psychiatry* 2014; **171:** 1248–50.

67 Gandal MJ, Haney JR, Parikshak NN, et al. Shared molecular neuropathology across major psychiatric disorders parallels polygenic overlap. *Science* 2018; **359:** 693–97.

68 Kendler KS. What psychiatric genetics has taught us about the nature of psychiatric illness and what is left to learn. *Mol Psychiatry* 2013; **18:** 1058–66.

69 St Pourcain B, Robinson EB, Anttila V, et al, and the iPSYCH-SSI-Broad Autism Group. ASD and schizophrenia show distinct developmental profiles in common genetic overlap with population-based social communication difficulties. *Mol Psychiatry* 2018; **23:** 263–70.

70 Cuthbert BN. The RDoC framework: facilitating transition from ICD/DSM to dimensional approaches that integrate neuroscience and psychopathology. *World Psychiatry* 2014; **13:** 28–35.

71 Felger JC, Lotrich FE. Inflammatory cytokines in depression: neurobiological mechanisms and therapeutic implications. *Neuroscience* 2013; **246:** 199–229.

72 Bolton P, Tang AM. An alternative approach to cross-cultural function assessment. *Soc Psychiatry Psychiatr Epidemiol* 2002; **37:** 537–43.

73 McGorry P, Keshavan M, Goldstone S, et al. Biomarkers and clinical staging in psychiatry. *World Psychiatry* 2014; **13:** 211–23.

74 McGorry P, van Os J. Redeeming diagnosis in psychiatry: timing versus specificity. *Lancet* 2013; **381:** 343–45.

75 Berk M, Post R, Ratheesh A, et al. Staging in bipolar disorder: from theoretical framework to clinical utility. *World Psychiatry* 2017; **16:** 236–44.

76 Fusar-Poli P, McGorry PD, Kane JM. Improving outcomes of first-episode psychosis: an overview. *World Psychiatry* 2017; **16:** 251–65.

77 McGorry PD. Early intervention in psychosis: obvious, effective, overdue. *J Nerv Ment Dis* 2015; **203:** 310–18.

78 Das-Munshi J, Goldberg D, Bebbington PE, et al. Public health significance of mixed anxiety and depression: beyond current classification. *Br J Psychiatry* 2008; **192:** 171–77.

79 Knowledge Translation Unit, University of Cape Town Lung Institute, British Medical Journal. Practical Approach to Care Kit (PACK): BMJ Publishing Group, 2018.

80 Bryant RA, Schafer A, Dawson KS, et al. Effectiveness of a brief behavioural intervention on psychological distress among women with a history of gender-based violence in urban Kenya: a randomised clinical trial. *PLoS Med* 2017; **14:** e1002371.

81 Jacob KS, Patel V. Classification of mental disorders: a global mental health perspective. *Lancet* 2014; **383:** 1433–35.

82 Patel V. Why mental health matters to global health. *Transcult Psychiatry* 2014; **51:** 777–89.

83 Haroz EE, Ritchey M, Bass JK, et al. How is depression experienced around the world? A systematic review of qualitative literature. *Soc Sci Med* 2017; **183:** 151–62.

84 Singla DR, Kohrt BA, Murray LK, Anand A, Chorpita BF, Patel V. Psychological treatments for the world: lessons from low- and middle-income countries. *Annu Rev Clin Psychol* 2017; **13:** 149–81.

85 Bolton P, Bass J, Neugebauer R, et al. Group interpersonal psychotherapy for depression in rural Uganda: a randomized controlled trial. *JAMA* 2003; **289:** 3117–24.

86 Leamy M, Bird V, Le Boutillier C, Williams J, Slade M. Conceptual framework for personal recovery in mental health: systematic review and narrative synthesis. *Br J Psychiatry* 2011; **199:** 445–52.

87 Hatzenbuehler ML, Phelan JC, Link BG. Stigma as a fundamental cause of population health inequalities. *Am J Public Health* 2013; **103:** 813–21.

88 Pathare S, Kalha J, Joseph T, Funk M, Drew-Bold N, Khenti A. QualityRights Gujarat. In: Kerrigan P, Bhattacharya S, Peel S, Romero SáM, Kishore R, Wade A, eds. Mental health: pasts, current trends and futures. University of York Centre for Global Health Histories and Orient Blackswan, 2017: 64–78. https://dlib.york.ac.uk/yodl/app/home/detail?id=york%3a932416&ref=search (accessed June 14, 2017).

89 WHO, Calouste Gulbenkian Foundation. Social determinants of mental health. Geneva: World Health Organization, 2014.

90 Lund C, Brooke-Sumner C, Baingana F, et al. Social determinants of mental disorders and the Sustainable Development Goals: a systematic review of reviews. *Lancet Psychiatry* 2018; **5:** 357–69.

91 Whiteford HA, Degenhardt L, Rehm J, et al. Global burden of disease attributable to mental and substance use disorders: findings from the Global Burden of Disease Study 2010. *Lancet* 2013; **382:** 1575–86.

92 Chandra PS, Satyanarayana VA. Gender disadvantage and common mental disorders in women. *Int Rev Psychiatry* 2010; **22:** 513–24.

93 Veling W. Ethnic minority position and risk for psychotic disorders. *Curr Opin Psychiatry* 2013; **26:** 166–71.

94 Yoshikawa H, Aber JL, Beardslee WR. The effects of poverty on the mental, emotional, and behavioral health of children and youth: implications for prevention. *Am Psychol* 2012; **67:** 272–84.

95 Gilman SE. Childhood socioeconomic status, life course pathways and adult mental health. *Int J Epidemiol* 2002; **31:** 403–04.

96 Kwok W. Is there evidence that social class at birth increases risk of psychosis? A systematic review. *Int J Soc Psychiatry* 2014; **60:** 801–08.

97 Dohrenwend BP, Levav I, Shrout PE, et al. Socioeconomic status and psychiatric disorders: the causation-selection issue. *Science* 1992; **255:** 946–52.

98 Savell E, Fooks G, Gilmore AB. How does the alcohol industry attempt to influence marketing regulations? A systematic review. *Addiction* 2016; **111:** 18–32.

99 Ahmad FB, Rossen LM, Spencer MR, Warner M, Sutton P. Provisional drug overdose death counts. 2017. https://www.cdc.gov/nchs/nvss/vsrr/drug-overdose-data.htm (accessed March 15, 2018).

100 McCarthy M. How inappropriate prescribing prompted the opioid addiction ravaging small town America. *BMJ* 2017; **359:** j4730.

101 Walters J. America's opioid crisis: how prescription drugs sparked a national trauma. Oct 25, 2017. https://www.theguardian.com/us-news/2017/oct/25/americas-opioid-crisis-how-prescription-drugs-sparked-a-national-trauma (accessed Dec 12, 2018).

102 National Institute on Drug Abuse. Opioid overdose crisis. 2017. https://www.drugabuse.gov/drugs-abuse/opioids/opioid-crisis (accessed Oct 7, 2017).

103 Ryan H, Girion L, Glover S. OxyContin goes global—"We're only just getting started". Dec 18, 2016. http://www.latimes.com/projects/la-me-oxycontin-part3/ (accessed Sept 1, 2018).

104 Goldmann E, Galea S. Mental health consequences of disasters. *Annu Rev Public Health* 2014; **35:** 169–83.

105 Kertes DA, Bhatt SS, Kamin HS, Hughes DA, Rodney NC, Mulligan CJ. *BNDF* methylation in mothers and newborns is associated with maternal exposure to war trauma. *Clin Epigenetics* 2017; **9:** 68.

106 Brayne C, Ince PG, Keage HA, et al, and the EClipSE Collaborative Members. Education, the brain and dementia: neuroprotection or compensation? *Brain* 2010; **133:** 2210–16.

107 Esch P, Bocquet V, Pull C, et al. The downward spiral of mental disorders and educational attainment: a systematic review on early school leaving. *BMC Psychiatry* 2014; **14:** 237.

108 Ehsan AM, De Silva MJ. Social capital and common mental disorder: a systematic review. *J Epidemiol Community Health* 2015; **69:** 1021–28.

109 Bhugra D, Becker MA. Migration, cultural bereavement and cultural identity. *World Psychiatry* 2005; **4:** 18–24.

110 Kessler RC, McLaughlin KA, Green JG, et al. Childhood adversities and adult psychopathology in the WHO World Mental Health Surveys. *Br J Psychiatry* 2010; **197:** 378–85.

111 Singer M, Bulled N, Ostrach B, Mendenhall E. Syndemics and the biosocial conception of health. *Lancet* 2017; **389:** 941–50.

112 Kleinman A, Das V, Lock MM, eds. Social suffering. Berkeley: University of California Press, 2003.

113 McCarroll SA, Feng G, Hyman SE. Genome-scale neurogenetics: methodology and meaning. *Nat Neurosci* 2014; **17:** 756–63.

114 Sullivan PF, Daly MJ, O'Donovan M. Genetic architectures of psychiatric disorders: the emerging picture and its implications. *Nat Rev Genet* 2012; **13:** 537–51.

115 Breen G, Li Q, Roth BL, et al. Translating genome-wide association findings into new therapeutics for psychiatry. *Nat Neurosci* 2016; **19:** 1392–96.

116 Sonuga-Barke EJS, Kennedy M, Kumsta R, et al. Child-to-adult neurodevelopmental and mental health trajectories after early life deprivation: the young adult follow-up of the longitudinal English and Romanian Adoptees study. *Lancet* 2017; **389:** 1539–48.

117 McKinney B, Ding Y, Lewis DA, Sweet RA. DNA methylation as a putative mechanism for reduced dendritic spine density in the superior temporal gyrus of subjects with schizophrenia. *Transl Psychiatry* 2017; **7:** e1032.

118 Ponchel F, Burska AN. Epigenetic modifications: are we closer to clinical applicability? *J Pharmacogenom Pharmacoproteom* 2016; **7:** 158.

119 Zhang N. Epigenetic modulation of DNA methylation by nutrition and its mechanisms in animals. *Animal Nutr* 2015; **1:** 144–51.

120 Slavich GM, Irwin MR. From stress to inflammation and major depressive disorder: a social signal transduction theory of depression. *Psychol Bull* 2014; **140:** 774–815.

121 Felger JC, Miller AH. Neurotherapeutic implications of brain-immune interactions. *Neuropsychopharmacology* 2014; **39:** 242–43.

122 Bick J, Nelson CA. Early adverse experiences and the developing brain. *Neuropsychopharmacology* 2016; **41:** 177–96.

123 Hair NL, Hanson JL, Wolfe BL, Pollak SD. Association of child poverty, brain development, and academic achievement. *JAMA Pediatr* 2015; **169:** 822–29.

124 Hackman DA, Farah MJ, Meaney MJ. Socioeconomic status and the brain: mechanistic insights from human and animal research. *Nat Rev Neurosci* 2010; **11:** 651–59.

125 Foulkes L, Blakemore S-J. Is there heightened sensitivity to social reward in adolescence? *Curr Opin Neurobiol* 2016; **40:** 81–85.

126 Blakemore S-J, Robbins TW. Decision-making in the adolescent brain. *Nat Neurosci* 2012; **15:** 1184–91.

127 Apicella CL, Carré JM, Dreber A. Testosterone and economic risk taking: a review. *Adapt Human Behav Physiol* 2015; **1:** 358–85.

128 Bowers B, Kuipers P, Dorsett P. A 10-year literature review of the impact of community based rehabilitation. *Disabil CBR Incl Dev* 2015; **26:** 104–19.

129 Tang Y-Y, Hölzel BK, Posner MI. The neuroscience of mindfulness meditation. *Nat Rev Neurosci* 2015; **16:** 213–25.

130 Prince M, Albanese E, Guerchet M, Prina M. World Alzheimer report 2014: dementia and risk reduction. 2014. https://www.alz.co.uk/research/world-report-2014 (accessed Nov 20, 2017).

131 Prince MJ, Acosta D, Guerra M, et al. Leg length, skull circumference, and the incidence of dementia in Latin America and China: a 10/66 population-based cohort study. *PLoS One* 2018; **13:** e0195133.

132 da Silva J, Gonçalves-Pereira M, Xavier M, Mukaetova-Ladinska EB. Affective disorders and risk of developing dementia: systematic review. *Br J Psychiatry* 2013; **202:** 177–86.

133 Butters MA, Young JB, Lopez O, et al. Pathways linking late-life depression to persistent cognitive impairment and dementia. *Dialogues Clin Neurosci* 2008; **10:** 345–57.

134 Soysal P, Veronese N, Thompson T, et al. Relationship between depression and frailty in older adults: a systematic review and meta-analysis. *Ageing Res Rev* 2017; **36:** 78–87.

135 Boccardi V, Pelini L, Ercolani S, Ruggiero C, Mecocci P. From cellular senescence to Alzheimer's disease: the role of telomere shortening. *Ageing Res Rev* 2015; **22:** 1–8.

136 Bagyinszky E, Giau VV, Shim K, Suk K, An SSA, Kim S. Role of inflammatory molecules in the Alzheimer's disease progression and diagnosis. *J Neurol Sci* 2017; **376:** 242–54.

137 Buitenweg JI, Murre JM, Ridderinkhof KR. Brain training in progress: a review of trainability in healthy seniors. *Front Hum Neurosci* 2012; **6:** 183.

138 Hart H, Rubia K. Neuroimaging of child abuse: a critical review. *Front Hum Neurosci* 2012; **6:** 52.

139 Moffitt TE. Genetic and environmental influences on antisocial behaviors: evidence from behavioral-genetic research. *Adv Genet* 2005; **55:** 41–104.

140 Stein DJ, Lund C, Nesse RM. Classification systems in psychiatry: diagnosis and global mental health in the era of DSM-5 and ICD-11. *Curr Opin Psychiatry* 2013; **26:** 493–97.

141 Jain S, Orr DM. Ethnographic perspectives on global mental health. *Transcult Psychiatry* 2016; **53:** 685–95.

142 Pūras D. Special Rapporteur on the right of everyone to the enjoyment of the highest attainable standard of physical and mental health. 2017. http://www.ohchr.org/EN/NewsEvents/Pages/DisplayNews.aspx?NewsID=21480&LangID=E (accessed April 19, 2017).

143 UNICEF. Children and young people with disabilities: fact sheet. May, 2013. https://www.unicef.org/disabilities/files/Factsheet_A5__Web_REVISED.pdf (accessed Sept 5, 2018).

144 UN. Women's rights are human rights. 2014. https://www.ohchr.org/Documents/Events/WHRD/WomenRightsAreHR.pdf (accessed June 15, 2017)

145 McDonald A, Buswell M, Khush S, Brophy M. Invisible wounds: the impact of six years of war on the mental health of Syria's children. 2017. https://www.savethechildren.org.uk/content/dam/global/reports/emergency-humanitarian-response/invisible-wounds.pdf (accessed Nov 22, 2017).

146 UN. Convention of the Rights of Persons with Disabilities. 2006. https://www.un.org/development/desa/disabilities/convention-on-the-rights-of-persons-with-disabilities.html (accessed Sept 5, 2018).

147 Drew N, Funk M, Tang S, et al. Human rights violations of people with mental and psychosocial disabilities: an unresolved global crisis. *Lancet* 2011; **378:** 1664–75.

148 Batha E. Mentally ill tied to trees and left to die in Somalia. Oct 7, 2013. http://news.trust.org//item/20131007132825-oupwe/ (accessed April 24, 2017).

149 Human Rights Watch. "Like a Death Sentence"—abuses against persons with mental disabilities in Ghana. Oct 2, 2012. https://www.hrw.org/report/2012/10/02/death-sentence/abuses-against-persons-mental-disabilities-ghana (accessed Jan 5, 2018).

150 WHO, the Gulbenkian Global Mental Health Platform. Promoting rights and community living for children with psychosocial disabilities. Geneva: World Health Organization, 2015.

151 Biggeri M, Deepak S, Mauro V, et al. Impact of CBR: impact of community-based rehabilitation programme in Mandya district (Karnataka, India). 2012. http://english.aifo.it/disability/documents/books_manuals/MandyaCBR_phase01_research_light_version.pdf (accessed Dec 10, 2017).

152 Walker ER, McGee RE, Druss BG. Mortality in mental disorders and global disease burden implications: a systematic review and meta-analysis. *JAMA Psychiatry* 2015; **72:** 334–41.

153 Mental Disability Advocacy Centre. Legal Capacity in Europe. Budapest, Hungary, 2013. http://mdac.info/sites/mdac.info/files/legal_capacity_in_europe.pdf (accessed May 15, 2017).

154 Perlin ML. Striking for the guardians and protectors of the mind: the convention on the rights of persons with mental disabilities and the future of guardianship law. Feb 21, 2013. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2221452 (accessed June 10, 2017).

155 World Medical Association. Comments from the World Medical Association on Report of the Special Rapporteur on the right of everyone to the enjoyment of the highest attainable standard of physical and mental health (A/HRC/35/21). Ferney-Voltaire, 2017. https://www.wma.net/wp-content/uploads/2018/01/WMAContribution-SRMentalHealthReport-June2017.pdf (accessed Sept 5, 2018).

156 Patel V, Chisholm D, Parikh R, et al. Addressing the burden of mental, neurological, and substance use disorders: key messages from *Disease Control Priorities*, 3rd edition. *Lancet* 2016; **387:** 1672–85.

157 WHO. mhGAP intervention guide for mental, neurological and substance use disorders in non-specialized health settings. Geneva: World Health Organization, 2016.

158 Thornicroft G, Tansella M. The balanced care model for global mental health. *Psychol Med* 2013; **43:** 849–63.

159 Gurung D, Upadhyaya N, Magar J, Giri NP, Hanlon C, Jordans MJD. Service user and care giver involvement in mental health system strengthening in Nepal: a qualitative study on barriers and facilitating factors. *Int J Ment Health Syst* 2017; **11:** 30.

160 Mendenhall E. Syndemics: a new path for global health research. *Lancet* 2017; **389:** 889–91.

161 van Ginneken N, Tharyan P, Lewin S, Rao GR, Romeo R, Patel V. Non-specialist health worker interventions for mental health care in low- and middle-income countries. *Cochrane Database Syst Rev* 2013; **11:** CD009149.

162 Cuijpers P, Sijbrandij M, Koole SL, Andersson G, Beekman AT, Reynolds CF 3rd. The efficacy of psychotherapy and pharmacotherapy in treating depressive and anxiety disorders: a meta-analysis of direct comparisons. *World Psychiatry* 2013; **12:** 137–48.

163 Becker DR, Bond GR, Drake RE. Individual placement and support: the evidence-based practice of supported employment. In: Thornicroft G, Szmukler GI, Mueser KT, Drake RE, eds. Oxford textbook of community mental health. Oxford: Oxford University Press, 2011: 204–17.

164 Purgato M, Gross AL, Betancourt T, et al. Focused psychosocial interventions for children in low-resource humanitarian settings: a systematic review and individual participant data meta-analysis. *Lancet Glob Health* 2018; **6:** e390–400.

165 Asher L, Patel V, De Silva MJ. Community-based psychosocial interventions for people with schizophrenia in low and middle-income countries: systematic review and meta-analysis. *BMC Psychiatry* 2017; **17:** 355.

166 Hoeft TJ, Fortney JC, Patel V, Unützer J. Task-sharing approaches to improve mental health care in rural and other low-resource settings: a systematic review. *J Rural Health* 2018; **34:** 48–62.

167 Barry MM, Clarke AM, Jenkins R, Patel V. A systematic review of the effectiveness of mental health promotion interventions for young people in low and middle income countries. *BMC Public Health* 2013; **13:** 835.

168 Bernstein A, Chorpita BF, Daleiden EL, Ebesutani CK, Rosenblatt A. Building an evidence-informed service array: considering evidence-based programs as well as their practice elements. *J Consult Clin Psychol* 2015; **83:** 1085–96.

169 Murray LK, Dorsey S, Haroz E, et al. A common elements treatment approach for adult mental health problems in low- and middle-income countries. *Cogn Behav Pract* 2014; **21:** 111–23. 138

170 Marchette LK, Weisz JR. Practitioner review: empirical evolution of youth psychotherapy toward transdiagnostic approaches. *J Child Psychol Psychiatry* 2017; **58:** 970–84.

171 Naslund JA, Aschbrenner KA, Araya R, et al. Digital technology for treating and preventing mental disorders in low-income and middle-income countries: a narrative review of the literature. *Lancet Psychiatry* 2017; **4:** 486–500.

172 Thornicroft G, Mehta N, Clement S, et al. Evidence for effective interventions to reduce mental-health-related stigma and discrimination. *Lancet* 2016; **387:** 1123–32.

173 Hamdani SU, Minhas FA, Iqbal Z, Rahman A. Model for service delivery for developmental disorders in low-income countries. *Pediatrics* 2015; **136:** 1166–72.

174 Alvarez-Jimenez M, Gleeson J, Bendall S, et al. SU125. Momentum: a novel online social media, mindfulness, and strengths-based intervention to promote functional recovery in ultra high risk (UHR) patients. *Schizophr Bull* 2017; **43**(suppl 1)**:** S206–07.

175 Unutzer J, Choi Y, Cook IA, Oishi S. A web-based data management system to improve care for depression in a multicenter clinical trial. *Psychiatr Serv* 2002; **53:** 671–73, 678.

176 Thornicroft G, Tansella M. The balanced care model: the case for both hospital and community-based mental healthcare. *Br J Psychiatry* 2013; **202:** 246–48.

177 Nadkarni A, Hanlon C, Bhatia U, et al. The management of adult psychiatric emergencies in low-income and middle-income countries: a systematic review. *Lancet Psychiatry* 2015; **2:** 540–47.

178 Power P, McGorry P. Early interventions for people with psychotic disorders. In: Thornicroft G, Szmukler GI, Mueser KT, Drake RE, eds. Oxford textbook of community mental health. Oxford: Oxford University Press, 2011: 129–41.

179 Clement S, Schauman O, Graham T, et al. What is the impact of mental health-related stigma on help-seeking? A systematic review of quantitative and qualitative studies. *Psychol Med* 2015; **45:** 11–27.

180 Alonso J, Liu Z, Evans-Lacko S, et al, and the WHO World Mental Health Survey Collaborators. Treatment gap for anxiety disorders is global: results of the World Mental Health Surveys in 21 countries. *Depress Anxiety* 2018; **35:** 195–208.

181 Degenhardt L, Glantz M, Evans-Lacko S, et al, and the World Health Organization's World Mental Health Surveys collaborators. Estimating treatment coverage for people with substance use disorders: an analysis of data from the World Mental Health Surveys. *World Psychiatry* 2017; **16:** 299–307.

182 Henderson C, Robinson E, Evans-Lacko S, Thornicroft G. Relationships between anti-stigma programme awareness, disclosure comfort and intended help-seeking regarding a mental health problem. *Br J Psychiatry* 2017; **211:** 316–22.

183 Jordans MJ, Kohrt BA, Luitel NP, Lund C, Komproe IH. Proactive community case-finding to facilitate treatment seeking for mental disorders, Nepal. *Bull World Health Organ* 2017; **95:** 531–36.

184 Shidhaye R, Lyngdoh T, Murhar V, Samudre S, Krafft T. Predictors, help-seeking behaviour and treatment coverage for depression in adults in Sehore district, India. *BJPsych Open* 2017; **3:** 212–22.

185 Maulik PK, Devarapalli S, Kallakuri S, et al. Evaluation of an anti-stigma campaign related to common mental disorders in rural India: a mixed methods approach. *Psychol Med* 2017; **47:** 565–75.

186 Thornicroft G, Henderson C. Joint decision making and reduced need for compulsory psychiatric admission. *JAMA Psychiatry* 2016; **73:** 647–48.

187 Henderson C, Brohan E, Clement S, et al. A decision aid to assist decisions on disclosure of mental health status to an employer: protocol for the CORAL exploratory randomised controlled trial. *BMC Psychiatry* 2012; **12:** 133.

188 Levin C, Chisholm D. Cost-effectiveness and affordability of interventions, policies, and platforms for the prevention and treatment of mental, neurological, and substance use disorders. In: Patel V, Chisholm C, Dua T, Laxminarayan R, Medina-Mora ME, eds. Mental, neurological, and substance use disorders disease control priorities, 3rd edn. Washington, DC: The World Bank, 2015: 219–37.

189 Chisholm D, Burman-Roy S, Fekadu A, et al. Estimating the cost of implementing district mental healthcare plans in five low- and middle-income countries: the PRIME study. *Br J Psychiatry* 2016; **208** (suppl 56): s71–78.

190 Chisholm D, Heslin M, Docrat S, et al. Scaling-up services for psychosis, depression and epilepsy in sub-Saharan Africa and South Asia: development and application of a mental health systems planning tool (OneHealth). *Epidemiol Psychiatr Sci* 2017; **26:** 234–44.

191 GBD 2015 Disease and Injury Incidence and Prevalence Collaborators. Global, regional, and national incidence, prevalence, and years lived with disability for 310 diseases and injuries, 1990–2015: a systematic analysis for the Global Burden of Disease Study 2015. *Lancet* 2016; **388:** 1545–602.

192 Erskine HE, Moffitt TE, Copeland WE, et al. A heavy burden on young minds: the global burden of mental and substance use disorders in children and youth. *Psychol Med* 2015; **45:** 1551–63.

193 Patel V. Acting early: the key to preventing mental health problems. *J R Soc Med* 2018; **111:** 153–57.

194 McGorry PD, Goldstone SD, Parker AG, Rickwood DJ, Hickie IB. Cultures for mental health care of young people: an Australian blueprint for reform. *Lancet Psychiatry* 2014; **1:** 559–68.

195 Richter LM, Daelmans B, Lombardi J, et al, and the Paper 3 Working Group and the Lancet Early Childhood Development Series Steering Committee. Investing in the foundation of sustainable development: pathways to scale up for early childhood development. *Lancet* 2017; **389:** 103–18.

196 Britto PR, Lye SJ, Proulx K, et al, and the Early Childhood Development Interventions Review Group, for the Lancet Early Childhood Development Series Steering Committee. Nurturing care: promoting early childhood development. *Lancet* 2017; **389:** 91–102.

197 Thomas R, Zimmer-Gembeck MJ. Accumulating evidence for parent-child interaction therapy in the prevention of child maltreatment. *Child Dev* 2011; **82:** 177–92.

198 Jordans MJD, Pigott H, Tol WA. Interventions for children affected by armed conflict: a systematic review of mental health and psychosocial support in low- and middle-income countries. *Curr Psychiatry Rep* 2016; **18:** 9.

199 Goodman SH, Rouse MH, Connell AM, Broth MR, Hall CM, Heyward D. Maternal depression and child psychopathology: a meta-analytic review. *Clin Child Fam Psychol Rev* 2011; **14:** 1–27.

200 Kieling C, Baker-Henningham H, Belfer M, et al. Child and adolescent mental health worldwide: evidence for action. *Lancet* 2011; **378:** 1515–25.

201 Gertler P, Heckman J, Pinto R, et al. Labor market returns to an early childhood stimulation intervention in Jamaica. *Science* 2014; **344:** 998–1001.

202 Patel V, Chisholm D, Parikh R, et al. Global priorities for addressing the burden of mental, neurological, and substance use disorders. In: Patel V, Chisholm D, Dua T, Laxminarayan R, Medina-Mora ME, eds. Mental, neurological, and substance use disorders, 3rd edn. Washington DC: The World Bank, 2016: 1–28.

203 Scott J, Mihalopoulos C, Erskine H, Roberts J, Rahman A. Childhood mental and development disorders. Mental, neurological and substance use disorders: disease control priorities (DCP3). Seattle: Disease Control Priorities (DCP3), 2015.

204 Rahman A, Divan G, Hamdani SU, et al. Effectiveness of the parent-mediated intervention for children with autism spectrum disorder in south Asia in India and Pakistan (PASS): a randomised controlled trial. *Lancet Psychiatry* 2016; **3:** 128–36.

205 Patton GC, Sawyer SM, Santelli JS, et al. Our future: a Lancet commission on adolescent health and wellbeing. *Lancet* 2016; **387:** 2423–78.

206 Shackleton N, Jamal F, Viner RM, Dickson K, Patton G, Bonell C. School-based interventions going beyond health education to promote adolescent health: systematic review of reviews. *J Adolesc Health* 2016; **58:** 382–96.

207 Wells J, Barlow J, Stewart-Brown S. A systematic review of universal approaches to mental health promotion in schools. *Health Educ* 2003; **103:** 197–220.

208 Knapp M, McDaid D, Parsonage M. Mental health promotion and prevention: the economic case. April 14, 2011. https://www.gov.uk/government/publications/mental-health-promotion-and-mental-illness-prevention-the-economic-case (accessed June 6, 2017).

209 WHO. Preventing suicide: a global imperative. Geneva: World Health Organization, 2014.

210 Patel V, Flisher AJ, Hetrick S, McGorry P. Mental health of young people: a global public-health challenge. *Lancet* 2007; **369:** 1302–13.

211 Valero de Vicente M, Ballester Brage L, Orte Socías MC, Amer Fernández JA. Meta-analysis of family-based selective prevention programs for drug consumption in adolescence. *Psicothema* 2017; **29:** 299–305.

212 Mendelson T, Eaton WW. Recent advances in the prevention of mental disorders. *Soc Psychiatry Psychiatr Epidemiol* 2018; **53:** 325–39.

213 Milligan-Saville JS, Tan L, Gayed A, et al. Workplace mental health training for managers and its effect on sick leave in employees: a cluster randomised controlled trial. *Lancet Psychiatry* 2017; **4:** 850–58.

214 Probst TM, Gold D, Caborn J. A preliminary evaluation of SOLVE: addressing psychosocial problems at work. *J Occup Health Psychol* 2008; **13:** 32–42.

215 WHO. Global Strategy to reduce the harmful use of alcohol. Geneva: World Health Organization, 2010.

216 Haushofer J, Shapiro J. The short-term impact of unconditional cash transfers to the poor: experimental evidence from Kenya. *Q J Econ* 2016; **131:** 1973–2042.

217 Ssewamala FM, Han CK, Neilands TB. Asset ownership and health and mental health functioning among AIDS-orphaned adolescents: findings from a randomized clinical trial in rural Uganda. *Soc Sci Med* 2009; **69:** 191–98.

218 Kilburn K, Thirumurthy H, Halpern CT, Pettifor A, Handa S. Effects of a large-scale unconditional cash transfer program on mental health outcomes of young people in Kenya. *J Adolesc Health* 2016; **58:** 223–29.

219 Lund C, De Silva M, Plagerson S, et al. Poverty and mental disorders: breaking the cycle in low-income and middle-income countries. *Lancet* 2011; **378:** 1502–14.

220 Fernald LC, Hamad R, Karlan D, Ozer EJ, Zinman J. Small individual loans and mental health: a randomized controlled trial among South African adults. *BMC Public Health* 2008; **8:** 409–23.

221 Lund C. Poverty and mental health: towards a research agenda for low and middle-income countries. Commentary on Tampubolon and Hanandita (2014). *Soc Sci Med* 2014; **111:** 134–36.

222 Medina-Mora ME, Montiero M, Room R, et al. Alcohol use and alcohol use disorders. In: Patel V, Chisholm D, Dua T, Laxminarayan R, Medina-Mora ME, eds. Mental, neurological, and substance use disorders, 3rd edn. Washington DC: The World Bank, 2015: 127–43.

223 Patel V, Chatterji S. Integrating mental health in care for noncommunicable diseases: an imperative for person-centered care. *Health Aff (Millwood)* 2015; **34:** 1498–505.

224 GBD 2015 Mortality and Causes of Death Collaborators. Global, regional, and national life expectancy, all-cause mortality, and cause-specific mortality for 249 causes of death, 1980–2015: a systematic analysis for the Global Burden of Disease Study 2015. *Lancet* 2016; **388:** 1459–544.

225 Liu NH, Daumit GL, Dua T, et al. Excess mortality in persons with severe mental disorders: a multilevel intervention framework and priorities for clinical practice, policy and research agendas. *World Psychiatry* 2017; **16:** 30–40.

226 Archer J, Bower P, Gilbody S, et al. Collaborative care for depression and anxiety problems. *Cochrane Database Syst Rev* 2012; **10:** CD006525.

227 Patel V, Belkin GS, Chockalingam A, Cooper J, Saxena S, Unützer J. Grand challenges: integrating mental health services into priority health care platforms. *PLoS Med* 2013; **10:** e1001448.

228 Fairall L, Bateman E, Cornick R, et al. Innovating to improve primary care in less developed countries: towards a global model. *BMJ Innov* 2015; **1:** 196–203.

229 Lund C, Tomlinson M, De Silva M, et al. PRIME: a programme to reduce the treatment gap for mental disorders in five low- and middle-income countries. *PLoS Med* 2012; **9:** e1001359.

230 Semrau M, Evans-Lacko S, Alem A, et al. Strengthening mental health systems in low- and middle-income countries: the Emerald programme. *BMC Med* 2015; **13:** 79.

231 WHO. Global strategy and action plan on ageing and health (2016–2020). Geneva: World Health Organization, 2016.

232 Prince MJ, Wu F, Guo Y, et al. The burden of disease in older people and implications for health policy and practice. *Lancet* 2015; **385:** 549–62.

233 Lapierre S, Erlangsen A, Waern M, et al, and the International Research Group for Suicide among the Elderly. A systematic review of elderly suicide prevention programs. *Crisis* 2011; **32:** 88–98.

234 Livingston G, Sommerlad A, Orgeta V, et al. Dementia prevention, intervention, and care. *Lancet* 2017; **390:** 2673–734.

235 Prince M, Ali GC, Guerchet M, Prina AM, Albanese E, Wu YT. Recent global trends in the prevalence and incidence of dementia, and survival with dementia. *Alzheimers Res Ther* 2016; **8:** 23.

236 WHO. Integrated care for older people: guidelines on community-level interventions to manage declines in intrinsic capacity. Geneva: World Health Organization, 2017. http://apps.who.int/iris/bitstream/handle/10665/258981/9789241550109-eng.pdf?sequence=1 (accessed Aug 30, 2018).

237 Orgeta V, Brede J, Livingston G. Behavioural activation for depression in older people: systematic review and meta-analysis. *Br J Psychiatry* 2017; **11:** 274–79.

238 Prince M, Comas-Herrera A, Knapp M, Guerchet M, Karagiannidou M. World Alzheimer report 2016. 2016. https://www.alz.co.uk/research/WorldAlzheimerReport2016.pdf (accessed Nov 20, 2017).

239 WHO. iSupport for dementia. 2018. https://www.isupportfordementia.org/en (accessed April 22, 2018).

240 Inter-Agency Standing Committee. IASC guidelines on mental health and psychosocial support in emergency settings. 2007. http://www.who.int/mental_health/emergencies/9781424334445/en/ (accessed May 30, 2017).

241 The Sphere Project. Humanitarian charter and minimum standards in humanitarian response. 2018. http://www.sphereproject.org/ (accessed 04 Apr 2018).

242 Derr AS. Mental health service use among immigrants in the United States: a systematic review. *Psychiatr Serv* 2016; **67:** 265–74.

243 Lopes AP, Macedo TF, Coutinho ESF, Figueira I, Ventura PR. Systematic review of the efficacy of cognitive-behavior therapy related treatments for victims of natural disasters: a worldwide problem. *PLoS One* 2014; **9:** e109013.

244 Rahman A, Hamdani SU, Awan NR, et al. Effect of a multicomponent behavioral intervention in adults impaired by psychological distress in a conflict-affected area of Pakistan: a randomized clinical trial. *JAMA* 2016; **316:** 2609–17.

245 Thornicroft G, Deb T, Henderson C. Community mental health care worldwide: current status and further developments. *World Psychiatry* 2016; **15:** 276–86.

246 Knapp M, Beecham J, McDaid D, Matosevic T, Smith M. The economic consequences of deinstitutionalisation of mental health services: lessons from a systematic review of European experience. *Health Soc Care Community* 2011; **19:** 113–25.

247 Krupchanka D, Winkler P. State of mental healthcare systems in Eastern Europe: do we really understand what is going on? *BJPsych Int* 2016; **13:** 96–99.

248 Treatment Advocacy Center. Serious mental illness prevalence in jails and prisons. 2018. http://www.treatmentadvocacycenter.org/evidence-and-research/learn-more-about/3695 (accessed April 20, 2018).

249 Walker J, Illingworth C, Canning A, et al. Changes in mental state associated with prison environments: a systematic review. *Acta Psychiatr Scand* 2014; **129:** 427–36.

250 Shaw J, Conover S, Herman D, et al. Critical time Intervention for Severely mentally ill Prisoners (CrISP): a randomised controlled trial. February, 2017. https://www.journalslibrary.nihr.ac.uk/hsdr/hsdr05080/#/abstract (accessed Oct 1, 2017).

251 Ibrahim A, Esena RK, Aikins M, O'Keefe AM, McKay MM. Assessment of mental distress among prison inmates in Ghana's correctional system: a cross-sectional study using the Kessler Psychological Distress Scale. *Int J Ment Health Syst* 2015; **9:** 17.

252 Winkler P, Barrett B, McCrone P, Csémy L, Janoušková M, Höschl C. Deinstitutionalised patients, homelessness and imprisonment: systematic review. *Br J Psychiatry* 2016; **208:** 421–28.

253 Tiihonen J, Mittendorfer-Rutz E, Majak M, et al. Real-world effectiveness of antipsychotic treatments in a nationwide cohort of 29 823 patients with schizophrenia. *JAMA Psychiatry* 2017; **74:** 686–93.

254 Thornicroft G, Alem A, Antunes Dos Santos R, et al. WPA guidance on steps, obstacles and mistakes to avoid in the implementation of community mental health care. *World Psychiatry* 2010; **9:** 67–77.

255 Fazel S, Khosla V, Doll H, Geddes J. The prevalence of mental disorders among the homeless in western countries: systematic review and meta-regression analysis. *PLoS Med* 2008; **5:** e225.

256 Bassuk EL, Richard MK, Tsertsvadze A. The prevalence of mental illness in homeless children: a systematic review and meta-analysis. *J Am Acad Child Adolesc Psychiatry* 2015; **54:** 86–96.e2.

257 Aubry T, Nelson G, Tsemberis S. Housing first for people with severe mental illness who are homeless: a review of the research and findings from the at home-chez soi demonstration project. *Can J Psychiatry* 2015; **60:** 467–74.

258 Benston EA. Housing programs for homeless individuals with mental illness: effects on housing and mental health outcomes. *Psychiatr Serv* 2015; **66:** 806–16.

259 Eaton J, Des Roches B, Nwaubani K, Winters L. Mental health care for vulnerable people with complex needs in low-income countries: two services in west Africa. *Psychiatr Serv* 2015; **66:** 1015–17.

260 UN. Right of everyone to the enjoyment of the highest attainable standard of physical and mental health—Resolution 6/29. 2007. http://ap.ohchr.org/documents/E/HRC/resolutions/A_HRC_RES_6_29.pdf (accessed Apr 25, 2017).

261 UN. United Nations Convention on the Rights of Persons with Disabilities (UNCRPD). New York: United Nations, 2006. https://www.un.org/development/desa/disabilities/convention-on-the-rights-of-persons-with-disabilities.html (accessed Sept 5, 2018).

262 Mental Health Innovation Network. Chain-Free Pasung Program. 2017. http://www.mhinnovation.net/innovations/chain-free-pasung-program (accessed Oct 7, 2017).

263 Porter M, Stern S, Green M. Social progress Index 2017. Social Progress Imperative. 2017. http://www.socialprogressimperative.org/wp-content/uploads/2017/06/English-2017-Social-Progress-Index-Findings-Report.pdf (accessed Sept 1, 2018).

264 Sustainable Development Solutions Network. SDG index and dashboards report 2017. 2017. http://www.sdgindex.org/assets/files/2017/2017-SDG-Index-and-Dashboards-Report--full.pdf (accessed Sep 1, 2018).

265 UN Development Programme. Human Development Report 2016: Human Development for Everyone. 2016. http://hdr.undp.org/sites/default/files/2016_human_development_report.pdf (accessed Aug 31, 2018).

266 WHO. Mental Health ATLAS 2017. 2018. http://www.who.int/mental_health/evidence/atlas/mental_health_atlas_2017/en/ (accessed Sept 4, 2018).

267 Prince M, Patel V, Saxena S, et al. No health without mental health. *Lancet* 2007; **370:** 859–77.