Towards a Healthier 2020: Advancing Mental Health as a Global Health Priority

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ABSTRACT

Mental and behavioral disorders account for approximately 7.4 percent of the global burden of disease and represent the leading cause of disability worldwide. Intricately connected to educational achievement, overall health outcomes, and economic prosperity, mental and behavioral disorders have nonetheless largely been disregarded within the global health agenda. Recent efforts that more fully quantify the burden of mental and behavioral disorders, coupled with accumulating data of evidence-based approaches that successfully treat these disorders, even in low resource communities, serve as a cornerstone for envisioning a new era that prioritizes and integrates mental health in global health and development. A healthier 2020 depends on global collaboration, improved classification systems, expanded research networks that inform policy and practice globally, and innovative strategies to build capacity in terms of workforce and health care delivery systems. This work will require vigilance to combat ongoing stigma and vision to anticipate global demographic trends of an increasingly urban and ageing population. Such efforts have the potential to transform the lives of hundreds of millions of people around the globe.

Key Words: Mental health, global health, behavioral disorders, disease burden, policy

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ADVANCING MENTAL HEALTH AS A GLOBAL HEALTH PRIORITY

Mental and behavioral disorders are common, serious and global. Integral to the human condition since recorded history, mental and behavioral disorders have a profound, life-altering impact on the human experience and exact enormous tolls of suffering, loss, and disability. Ruthlessly indiscriminate, mental and behavioral disorders afflict individuals across race, ethnicity, religion, nationality, socioeconomic status, gender and age. Yet, these disorders have largely been absent from the global health agenda. Focused on other priorities, the field of global health has engaged in a practice of "inattentional blindness".[1] The global burden of mental and behavioral disorders has not been well articulated historically, and by extension, research, policy and practice initiatives to address them have largely been absent from the larger global health agenda.

It is time to bring mental health into focus. Momentum is gaining in terms of raising awareness, increasing understanding, and articulating strategies for advancing and integrating mental health as part of the global health agenda.[2-4] Much like stereograms that resemble a mass of fragments and random lines until the moment your eyes focus in just the right way that there emerges a 3D image right in front of you, the recent focus on mental disorders has brought into dramatic relief the central nature of mental health in advancing the broader global health agenda. Mental and behavioral disorders account for approximately 7.4 percent of the global burden of disease, and represent the leading cause of disability—accounting for 22.2 percent of years lived with disability globally.[5]

In terms of the most pressing public health priorities of our time, the overwhelming majority of countries face similar problems, irrespective of economic, social and cultural disparities and diversity, and have much to learn from shared experience. A healthier 2020 depends on articulating further the toll of mental disorders on societies worldwide, increasing capacity and developing a workforce that is prepared to address the mental health needs of a progressively urban and ageing global population, and on leveraging innovative strategies and technologies that expand both basic science and service delivery for mental disorders. Recognizing that there can be "no health without mental health,"[3] in May 2013, the 66th World Health Assembly (WHA) adopted the World Health Organization's (WHO) Comprehensive Mental Health Action Plan (CMHAP), which recommends that national and social sectors employ a comprehensive and coordinated approach to reduce the global burden of mental disorders. With the

imprimatur of WHO, strategies for a healthier 2020 have the potential to prioritize mental health research, policy and practice to achieve greater success in alleviating suffering and restoring dignity for those living with a mental disorder.

Mental and Behavioral Disorders are the Leading Cause of Disability Worldwide

Initiated in the 1990s, the Global Burden of Disease (GBD) Study represents a scientific collaboration of 500 researchers that quantifies the comparative magnitude of health loss due to disease and injury worldwide. Gathering data from across the globe in 1990, 2005 and 2010, the GBD Study has produced nearly one billion health estimates for 187 countries,[5] which has resulted in nothing less than a watershed event that brings into full relief the public health burden of mental disorders. By establishing the metric of disease burden known as the "disability-adjusted life year" ("DALY"), which represents the sum of years lived with disability (YLD) and years of life lost (YLL) attributable to a particular disorder, the GBD Study established a more comprehensive estimate of health burden. One DALY is equivalent to one lost year of healthy life, whether due to mortality or disability. Whereas historically the focus of disease burden concentrated on loss of life, the larger burden of disease connected to mental and behavioral disorders results from the extended number of years lived with disability. Thus, by incorporating disability in its analysis, the DALY rubric for the first time provided the appropriate lens for rendering visible the heretofore largely hidden burden associated with mental and behavioral disorders.

Mental and behavioral disorders are now recognized as the leading cause of disability worldwide, with an estimated 22.2 percent of all years lived with disability attributable to these disorders.[5] Mood disorders (including major depression, bipolar disorder and dysthymia), anxiety, alcohol and drug abuse, and schizophrenia are among the top twenty conditions that result in the greatest burden of disability worldwide.[3,5] In fact, disability associated with mental and behavioral disorders exceeds the burden associated with other non-communicable diseases such as cancer, diabetes, and cardiovascular disease, as well as HIV/AIDS, neurological diseases, war and injuries.[5] And left unabated, unipolar depressive disorder is on track to be the leading cause of total disease burden by 2030 throughout the world, regardless of country income-level.[6]

Given that many mental and behavior disorders emerge in adolescence and persist into adulthood, disability associated with mental illness has a particularly profound impact given that these developmental years would

otherwise typically be the most productive educationally, professionally and economically. Indeed, as illustrated in Figure 1, mental and behavioral disorders account for the greatest percentage of disability during the lifespan from ages 10 to 44 years. Additionally, the GBD Study provides the basis for standardized comparison across countries, which reveals that the burden of mental and behavioral disorders is not concentrated in high-income countries contrary to widely held assumptions. Instead, as illustrated in Figure 2, the burden of mental and behavioral disorders is remarkably comparable across countries from the lowest to the highest income brackets.

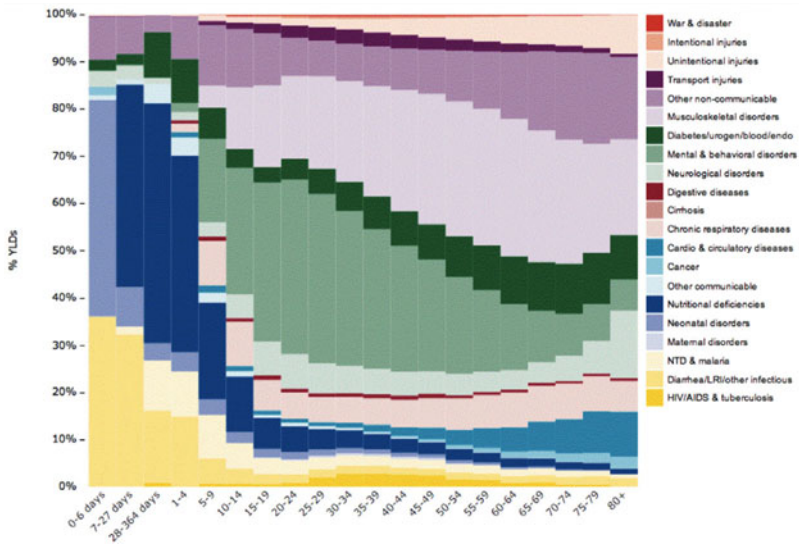

Fig. 1. Burden of disorders over the lifespan.

Source: Institute for Health Metrics and Evaluation. GBD Cause Patterns. 2012.[73]

Mental and Behavioral Disorders Increase All-Cause Mortality

It is well-documented that mental and behavioral disorders, particularly depression, schizophrenia, bipolar disorder, and dementia are associated with increased rates of all-cause mortality risk.[7] Mental and behavioral disorders are also significantly associated with increased risk for suicide and account for approximately 10-15 percent of death for individuals with bipolar disorder and schizophrenia, which represent approximately 90 percent of all completed suicides.[8]

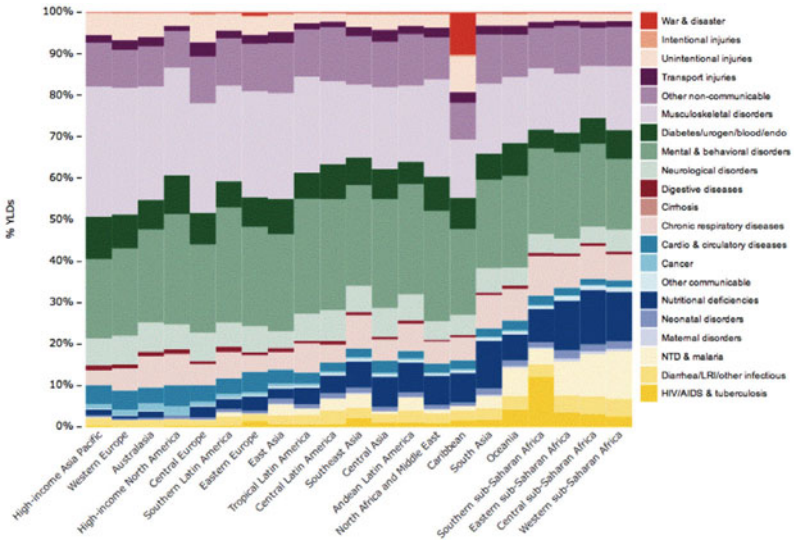

Fig. 2. Burden of disorders across countries.

Source: Institute for Health Metrics and Evaluation. GBD Cause Patterns. 2012.[73]

As dramatic as these data are, they are likely an underestimate of the true increases in all-cause mortality associated with mental and behavioral disorders because in many cases the mental disorder serves as the longer-term condition that increases risk for a more proximal cause of death. For example, impulsivity and substance abuse are associated with death by accidental injury (e.g., vehicular accidents), which would not necessarily be attributed to mental and behavioral disorders. Also, we can be fairly certain that suicide reporting is underestimated in many, if not all countries, which in turn would result in underestimates of mortality risk associated with mental and behavioral disorders.

Mental and Behavioral Disorders are Intimately Linked to and Interact with Other Health Conditions

The relationship between mental and behavioral disorders and other health conditions is multidirectional and complex. Mental and behavioral disorders are closely associated with other health conditions that carry their own burden of disease, and comorbid mental illness incrementally increases degree of morbidity and mortality risk for chronic diseases such as angina, arthritis, asthma, and diabetes,[9] cancer,[10] and coronary artery disease (CAD).[11]

Mental illness worsens outcome for other health conditions by negatively impacting treatment seeking, treatment received, and treatment adherence. The presence of major depression, for example, is associated with delayed treatment seeking, reduced likelihood of detection of other health conditions and reduced adherence to treatment.[3] The story is similar for HIV/AIDS where approximately two-thirds of HIV-infected patients are likely to have comorbid depression and/or anxiety at some point. In turn, such comorbidity is associated with less likelihood to initiate and adhere to treatment compared with patients without a mental or behavioral disorder.[12] There are also multiple examples of commonly co-occurring conditions, such as Type 2 diabetes mellitus and depression, although the mental health component of illness is frequently undiagnosed. In fact, a recent study found that depression went unrecognized and untreated in approximately two thirds of patients with both of these conditions.[13]

Certain biological mechanisms may mediate the impact of mental disorders on other health conditions. For example, major depression and psychological stress are associated with biological effects including reduced cell-mediated immunity and increased inflammatory processes,[14] as well as viral disease such as influenza A (H1N1) and other influenza viruses, varicella-zoster virus, herpes simplex virus, HIV/AIDS, and hepatitis C.[15] Moreover, certain health conditions can have a direct effect on the brain and result in mood or anxiety disorders as well as cognitive impairment.[3]

Not only does mental illness negatively affect outcomes for other health conditions, individuals with severe and persistent mental and behavioral disorders are more likely to be burdened with additional health problems like obesity, smoking and substance abuse when compared to those without mental illness. These comorbid health conditions increase risk for hypertension, heart disease, diabetes and cancer, each of which negatively impact overall health and life expectancy. In the case of cardiovascular disease, for example, mortality has declined in the general United States population over the past few decades; however, individuals with severe and persistent mental disorder (including primarily schizophrenia, bipolar disorder, and depression) continue to be at high risk for premature death due to cardiovascular disease, resulting in an average of 25 years of lost life expectancy.[16] This reduced life expectancy reflects, at least in part, two failures of current health care services. First, the lack of interventions promoting overall healthy lifestyle for individuals with severe and persistent mental illness frequently results in poor diet, high rates of smoking and sedentary behavior, and second, the interventions that are provided, namely typical antipsychotic agents, are associated with significant weight gain and worsen other metabolic cardiovascular risk factors.[17]

Global Capacity to Meet Mental Health Needs is Woefully Inadequate

Despite the clear need, disproportionately few resources, both in research and in service provision, are dedicated to mental health.[18,19] It is estimated that more than 75 percent of people with severe mental disorders in low- and middle-income countries (LMICs) receive no treatment for their disorders, and even in high-income countries, 35-50 percent of such individuals never receive care.[20] Stigma and practical barriers, such as distance and transportation to treatment centers for rural villagers, contribute to the yawning abyss between suffering and service. However, even if these first-order barriers were addressed, the mental health workforce is woefully unprepared in terms of sheer number and quality of training.

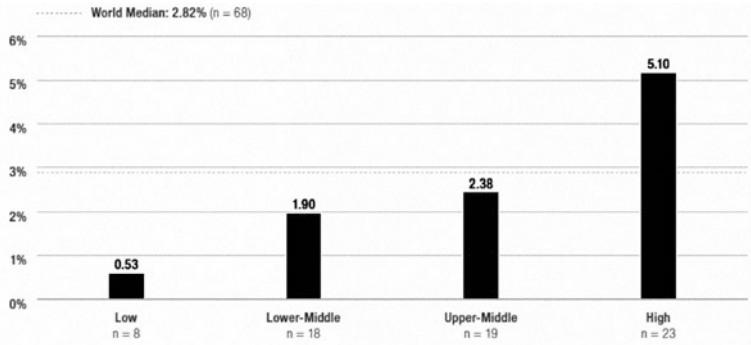

Fig. 3. Median percentage of health budget allocated to mental health by World Bank income group.

Source: World Health Organization. Mental Health Atlas 2011.[74]

As illustrated in Figure 3, the WHO Mental Health Atlas Project 2011 reveals that around the globe, median mental health expenditure per capita is $1.63 (USD), with hefty variation among income groups, ranging from $0.20 (USD) in low-income countries to $44.84 (USD) in high-income countries.[21] Relatedly, social workers, psychologists and psychiatrists are virtually non-existent outside high-income countries (Figure 4).

Globally, nurses represented the most prevalent professional group working in the mental health sector. The Mental Health Atlas 2011 Report underscores the urgent need to scale up resources within countries in order to meet the need presented by mental disorders; however, brut force attempts to increase numbers cannot be the singular strategy, nor may it be the most effective. With an estimated shortfall of over one million mental health specialists in LMICs,[19] we need to consider alternative models and innovative technologies to close this gap as well.

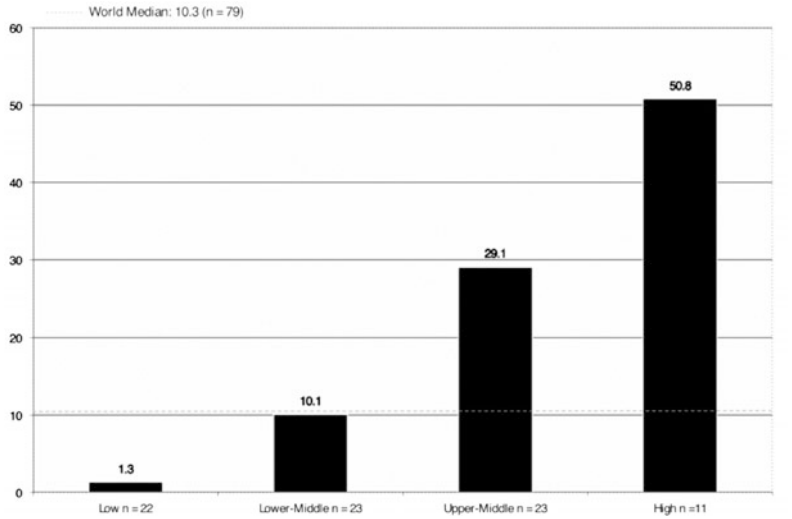

Fig. 4. Total number of human resources (per 100,000 population) working in the mental health sector by World Bank income group.

Source: World Health Organization. Mental Health Atlas 2011.[74]

Addressing mental and behavioral disorders will advance progress on the Millennium Development Goals

In 2000, the United Nations launched an audacious development campaign that aspired to meeting the following goals by 2015: eradicate extreme poverty and hunger, achieve universal primary education, promote gender equality and empowerment of women, reduce child mortality, improve maternal health, and end HIV/AIDS, malaria and other diseases.[22] Laudable and ambitious, these Millennium Development Goals (MDGs) focus on vital health and education priorities; however, with fewer than 1000 days until the finish line, it is evident more than ever that the omission of mental disorders from the agenda has profoundly hampered progression.

Mental disorders are inextricably linked to the MDGs. Consider, for example, the complex and bi-directional relationship between poverty and mental illness. Lifetime prevalence of mental disorder and suicide is inversely correlated with household income, and a reduction in household income is associated with increased risk for incident mental disorders.[23] Poverty and common mental disorders interact with each other much the same way that infectious diseases such as tuberculosis and poverty interact. Meanwhile, salient factors such as insecurity, hopelessness, poor physical health, rapid social change and limited opportunities appear to mediate the

increased risk of suffering from mental disorders associated with poverty.[24] Conversely, people with mental disorders may become impoverished by loss of income due to inability to work, increased health expenditure, and the exclusionary impact of stigma.[25] In terms of education, data from across the globe, including LMICs, document a positive correlation between years of education completed and mental health functioning. Early onset of mental and behavioral disorders increases risk of premature termination of education and thereby increases long-term adverse social and economic consequences, which themselves are associated with an enhanced risk of psychological disorder.[26,27]

A steadily growing body of research demonstrates the intimate and often indissoluble ties between women's mental health in general, and maternal mental health specifically, with women's social and economic roles both in the family and in the larger community. In LMICs particularly, environmental factors such as exposure to violence (both personal and regional), sexual victimization, poor prenatal care and nutrition, and limited access to medical and mental health resources, adversely impact women's mental health, which consequently impacts their physical health and the health of their children at all stages of life. Studies undertaken in the area of women's health across the globe indicate that a focus on improving women's mental health will significantly contribute to the attainment of the MDGs related to ending violence against women and improving maternal and child health.[28,29] As discussed above, HIV/AIDS and depression, anxiety, impulsivity and substance abuse are often inextricably entwined such that it is naive to imagine treating HIV/AIDS without commensurate attention to comorbid mental health concerns.[14]

TOWARDS A HEALTHIER 2020: POLITICAL WILL, GLOBAL COLLABORATION, STRATEGIC SOLUTIONS

Between September 2012 and March 2013, the Global Thematic Consultation on Health in the Post-2015 Development Agenda engaged over 150,000 individuals in discussion and debate around framing priorities that had local, regional and global resonance for the post-2015 era.[30] The April 2013 Report on the Global Thematic Consultation on Health substantiates evolving notions of well-being and the essential role of mental health in the broader health and sustainable development agenda. There is a groundswell of recognition that health is not simply the absence of illness and that the next era must address not only mental disorders but also fashion an agenda that strives to create and sustain good health and well-being. Advancing mental

health requires setting global objectives beyond the MDGs, and as discussed below, a number of strategies should be prioritized to achieve the goals of a healthier 2020. Basic building blocks for advancing our understanding and treatment of mental and behavioral disorders are improved classification of disorders and expanded global research collaborations that have the potential to integrate regional information into a global database to more effectively study mental disorder across cultures. We must also pursue strategies that leverage new technologies to facilitate collaboration, enhance capacity and develop innovative practices and systems of care.

Set Standards: The WHO Comprehensive Mental Health Action Plan (CMHAP)

Improving outcomes related to mental health and behavioral disorders hinges on global leadership and conviction at multiple levels. The WHO CMHAP recommends that national and social sectors employ a comprehensive and coordinated approach to reduce the global burden of mental disorders. The four main objectives of the plan are to: 1) strengthen effective leadership and governance for mental health; 2) provide comprehensive, integrated and responsive mental health and social care services in community-based setting; 3) implement strategies for promotion and prevention in mental health; and 4) strengthen information systems, evidence and research for mental health. Global targets and related indicators have been established for each objective to measure collective action and achievement by each and all WHO Member States towards the global goals. This WHO commitment to mental health priorities, including the articulation of global targets and assessment strategies, sets the stage for increased recognition and investment in advancing mental health as a core priority of the global health agenda.

Develop a classification system that is clinically useful and feasible

Advancing mental health globally necessitates a unifying language to define, classify and quantify mental health disorders. This common lexicon is an essential prerequisite to enhancing our understanding and treatment of mental illness, and ultimately advocating for, and initiating real change in policy and resource-provision for mental health. Without an internationally standardized and clinically useful language, progress in the public health realm and dissemination of evidence-based treatments, would be constricted by sociopolitical borders, historical divisions and cultural difference—fissures that discount the universality of mental illness and the common threads of human experience. We are in the midst of an era of revision for

both the Diagnostic and Statistical Manual of Mental Disorders (DSM)[31] and the International Classification of Diseases and Related Health Problems (ICD),[32] as well as the development of an orthogonally designed system focused on dimensions and the underlying neurobiological mechanisms of pathology known as the Research Domain Criteria (RDoC).[33] Although we have witnessed enormous advances in basic science, the classification of mental disorders continues to be dominated by descriptions of behavior and subjective reports. Improving the identification and outcome of mental disorder requires two parallel approaches: 1) Research in basic science and development of alternative models of classification such as RDoC are needed to move the field closer to more etiologically valid descriptors of psychopathology; and 2) Development and dissemination of a classification system that prioritizes clinical utility is essential to improve assessment and access to care, particularly in low-resource communities where the majority of individuals never receive treatment. The challenge ahead lies in developing a system that maximizes clinical utility and feasibility across cultures and health care settings based on the extant knowledge base but that is also sufficiently agile such that it can evolve in tandem with emerging science.

Develop Collaborative Global Networks for Research and Clinical Capacity Building

The computing and networking potential available today is a disruptive technology of the best sort, with the ability to shepherd in an era that not only promotes but demands large-scale, dynamic and permeable collaborative research models. The historical tradition of small, independent studies may retain a place in the scientific process for generating and piloting new ideas or for particular or localized issues, but major advances in mental health globally will require developing networks for collaboration among mental health sites around the world. Today's technologies offer the potential to establish research platforms that amass large and sophisticated data sets. These changes in potential research methodologies will reduce barriers to entry and ensure that LMICs are represented in the post-2015 health and development agenda in a more efficient and cost-effective manner. Such large-scale networks extend the diversity, breadth and depth of the research conducted, draw attention to mental health priorities in LMICs, contribute significantly to building regional capacity in mental health, and improve care for individuals with mental and behavioral disorders worldwide. Initiatives such as the WHO Global Mental Health Survey Consortium,[20] the Global Burden of Disease Study,[5] and the Grand Challenges Delphi Study,[2] stand as testimony to the transformative impact that such models can have on the field.

Increasing Capacity will Require Comprehensive and Coordinated Policy, Training and Systems Initiatives that Prioritize and Rethink Strategies for Treating Mental Disorder

As noted above, the burden of mental disorder has profound consequences across the human experience in terms of overall health, human rights, civil society and economic development, and our current capacity to care for individuals with mental disorder is dwarfed by the need. In 2011, the WHO Mental Health Atlas Project reported that 40 percent of countries have no dedicated mental health policy, 30 percent have no mental health plan, and 41 percent report having no dedicated mental health legislation.[31] As a result resource allocation and program development are often misaligned with best practices. Globally, for example, 67 percent of financial resources are directed towards mental hospitals despite the fact that this model of care is the most costly and required for only a minority of individuals with mental and behavioral disorders.[34,35]

A healthier 2020 requires that policy and program strategies rethink both the work force training as well as the systems of health care delivery. At the policy level, it is important to advance legislation that protects and supports individuals and families so as to minimize the potential adverse affects of mental illness. Policies should aim to ensure that mental health care is cost-effective, affordable and feasible.[34] Governments need to consider how to best provide equitable access to care as well as financial protection for the most vulnerable individuals and families adversely affected by mental illness.

In addition to policy considerations, it is essential that we increase the number and variety of skilled workers prepared to address mental health needs, and that this increased human capacity be deployed in integrated community-care settings beyond the stand-alone mental health hospital. Multiple demonstrations validate innovative strategies involving task-sharing, as both cost-effective and feasible (e.g., see references[28,29,36]). The WHO Mental Health Gap Action Programme has articulated a prioritized set of conditions and promotes capacity building by enhancing the training of non-specialized health care providers in integrated, often primary care community settings.

Prepare for and Leverage an Increasing Urban Global Population

For the first time in human history, most of the world's population resides in cities. The global shift to an increasingly urbanized global population is—together with population ageing—the sentinel demographic shift of our time. It is projected that approximately two thirds of the world's population

will live in cities by 2030, with as many as 6.4 billion global urban dwellers forecast for 2050.[37] In the next thirty years, the majority of this growth will occur in cities of low-income countries; the urban population in such countries is expected to double from 2.5 billion in 2009 to almost 5.2 billion in 2050.[37] The heterogeneity of urban areas worldwide allows for several definitions of what comprises a city. However, broadly, all definitions concern residence in a densely populated area, either in one zone or in a wider region.[38,39] Features of the urban environment have been shown to drive population health and influence how we feel, think, and behave. In the particular context of mental health, there is good evidence for heterogeneity in the prevalence of mental illness in urban *vs.* non-urban areas. For example, there is ample evidence documenting the higher prevalence of psychotic disorders in cities compared to non-cities.[40,41] Reasons for these differences are numerous, including the potentially greater concentration of urban stressors, infectious pathogens, or social influences.[42,43]

Increasing urbanization creates unique opportunities and challenges for global mental health. First, for mental illness that is directly influenced by urban conditions, this represents an opportunity to develop, modify, and improve urban environments so they may become more health promoting. Successful examples in this regard remain few, but include for example, efforts to improve urban architecture to minimize risk of mood and anxiety disorders, or to improve safety and reduce the risk of traumatic events.

Second, while urban areas have long represented areas of economic opportunity, they are also areas where vulnerable populations congregate. Consequently, cities are oftentimes environments in which persons with mental illness can be marginalized and endangered, or alternatively, provided with opportunities for economic advancement and access to services and draw public attention to mental health issues of particular importance to urban populations. Furthermore, this could strengthen support and prioritize the provision of targeted interventions and assistance. For example, much work has been done characterizing homeless/chemically dependent populations,[44,45] and the initiatives, such as critical time interventions,[46] that can assist these populations.

Finally, the growth of cities worldwide offers a historic opportunity to improve health care delivery systems given that as population density increases, the demand for services becomes more geographically concentrated. Therefore, health care services can be centralized and barriers to access reduced. Current shortages in expertise and limited access to health care, especially mental health care, for rural and remote communities is well-documented worldwide.[2-4] Cities that successfully promote collaborative efforts in urban planning and health care systems development,

that are grounded in scientific evidence for promoting population health, will effectively reduce the risk for mental disorder. Likewise, by maximizing effective and efficient service delivery, such cities will distinguish themselves as leading population centers and exemplars of communal/societal innovation for the twenty-first century.

Prepare for an Ageing Global Population

The world population is ageing at an accelerated rate, reflecting both increasing life expectancy and declining fertility. Between 1950 and 2000, the number of elderly (65 years and older) has increased from four to 6.9 percent of the world population.[47] These changing demographics require a major shift of focus in terms of policy and practice if we are to successfully anticipate and meet the mental health care needs of older adults.

One of the first considerations related to mental health and ageing is the extension of years lived with disability. As noted above, many individuals with mental illness have multiple chronic conditions and their life expectancy is significantly reduced compared to non-affected peers. The aim of improving their life expectancy must be matched by a commensurate commitment to enhancing quality of life for those extended years. This in turn, means reducing the cumulative years lived with disability while also increasing life expectancy.

As is the case across the lifespan, mental illness among older adults can have a substantial negative impact on one's general state of health; however, given the increased rates of other health conditions as people age, the impact of mental illness can be especially profound. Data suggest that older adults with mental disorder are more likely to experience unnecessary hospitalizations and nursing home placements. And as noted above, individuals with mental disorder are at risk for poorer health outcomes from other common health conditions; for older adults this includes worse outcomes after medical events such as hip fractures, heart attacks, or cancer as well as increased rates of suicide in many parts of the world.[48]

A number of transitions in late life are also associated with increased risk for mental disorder, particularly mood disorder. These transitions include retiring, role changes, caring for ageing parents/spouses, relocating, loss of physical health, institutionalization, or death of loved ones. Inadequate social support, unresolved grief, preexisting psychiatric illness or inadequate coping resources all serve to exacerbate the risk associated with these transitions. Of course, risk for the development of dementia, including Alzheimer's Disease, is especially significant among older adults. Older adults are especially vulnerable given the combined increased risk

for onset of dementia, the enduring nature of other mental disorders such as schizophrenia and depression, and the increased risk of mental disorder due to challenges particular to this stage of life.

The increasing health care needs of older adults calls for innovative solutions that focus on both professional training and the health care delivery systems. Not only in low-income countries, but around the globe, the rapidity with which this cohort is growing far exceeds the number of mental health specialists (and psychiatrists in particular) trained to specifically manage the complex mental health issues of a geriatric population. In the US, by 2030, 10.1 million to 14.4 million American adults aged 65 and over will meet criteria for a diagnosis of mental health or substance abuse disorders yet there will only be 1,650 geriatric psychiatrists practicing in this country—fewer than one per 6000 older adults with mental health and substance abuse issues.[49]

Given the severe shortage of health care providers specializing in geriatrics (and especially in geriatric mental health), one strategy that has been promoted for high-income countries is to adapt models of care that have been developed in low-income countries where "lay health counselors" and primary care providers collaborate on the screening for and brief treatment of mental disorders in older adult populations.[50] These innovative strategies of care have proven to be effective in enhancing psychosocial functioning and adherence with medication regimens, and hold promise for enabling older adults to live more productive and healthy lives. Given that individuals with severe and persistent mental illness will continue to need specialty mental health care, the field should also consider the reverse strategy, i.e., integrating primary, preventive and wellness care into specialty mental health settings.

Finally, as we consider the mental health needs of the ageing population, it is also essential to consider the issues associated with caregiving. The majority of caregivers are typically middle-aged women caring for ageing parents.[51] Caregivers provide essential services, however, their work can be extremely stressful. Any intervention focused on mental health and ageing must consider creating community linkages to support integration between the health care system and the caregiver, including support for the caregiver. While there have been multiple studies evaluating interventions for caregivers, the degree of clinical significance of their effects has generally not been impressive.[52] Moreover, expectations and demands surrounding caregiving are highly variable across cultural and national contexts. Research on developing and testing models for reducing caregiver burden and enhancing mental health that are adapted to these contexts is a key priority.

Integrate Mental Health into Primary Health Where Appropriate and Feasible

Integration of mental health services into other health care platforms offers the promise of reducing stigma, providing health services that are centralized and patient-centered, optimizing both mental and physical health outcomes, and strengthening the overall health system. At this point, the strategy of integration is best developed for common mental and behavioral disorders, such as depression, anxiety, and substance abuse. Integrated care helps to strengthen the capacity of primary care systems to address several types of health issues more broadly, including mental health. Despite these advantages, most countries have not attempted to integrate mental health into primary care, perhaps largely due to lack of political will, inadequate management, and already overburdened health services. Although promising by design, many LMICs lack basic primary care infrastructure, which inhibits the development and success of mental health integration. In fact, WHO estimates that we have a current shortage on the order of 4.3 million health care providers globally, mostly concentrated in 57 of the world's poorest countries.[21]

Collaborative and co-located services that utilize emerging technologies and existing human resources may be best suited and most successful in addressing the mental health needs of populations in LMICs. In many countries, HIV programs constitute the first large-scale chronic disease programs, offering local and effective tools, models and approaches that can be replicated, adapted and expanded.[53] Borrowing from innovative models for HIV/AIDS programs, it is possible similar structures for mental disorders could be adopted in low-resource communities to broadly contribute to improved continuity of care.

Expand Models of Care for Severe and Persistent Mental Disorder

Another high priority for global mental health is to generate sustained progress toward expanding access to community health care for individuals with severe mental disorders. We envision this as an integrated system of primary care and secondary mental health services that are delivered in as close proximity as possible to the communities they are intended to serve, accessible to all people with severe mental disorders and their families, promote full community integration, and engage the affected individuals, their families, and their communities in shaping the health services provided to them.[54] The appropriate way to progress toward this overarching goal will depend on the disorder, the time in the life course at which care is provided as well as the point in the course of the illness, and the local, country and regional context.

In the case of psychotic disorders in youth, the accepted premises for high quality care are presently undergoing a radical transformation that could ultimately bring them closer to meeting the expressed needs of the affected individuals, increase their effectiveness, and accelerate movement toward community health care. It is important to acknowledge the diversity of approaches currently, and the ongoing controversies about the appropriate nature of each of them. With this caveat, however, we draw attention to four increasingly salient themes: 1) "Balanced care" where community-based services (preferably delivered both at clinics and in community settings, including home visits) are the norm, but access to hospital care remains available when needed[55]; 2) "Recovery orientation" models that typically impart hope for improvement and strategies to achieve it, involve consumers and their families in decision making about care, and include formal roles in service provision for persons who have themselves experienced a severe mental disorder[56]; 3) "Early intervention" targeted to the initial phase of the illness, or sometimes even the prodromal phase, are rapidly increasing, motivated by the view that this will prevent or at least mitigate long-term disability[57]; and 4) "Social integration" models that prioritize the right to participate in civil society that can be fostered in services and legislation at all levels. It includes but is not limited to housing, employment, and the right to vote.[58]

These themes are relevant to the widely varying contexts encountered in global mental health. The formulation and testing of specific practices that they imply, however, depends very much upon context. In some high-income countries, for example, efforts to transform services along these lines are now widely seen in proposed models of care and in demonstration projects. This is not so evident, however, in actual delivery of care within universally accessible services. We are optimistic that in the near future, as the evidence base grows, our understanding of when and how these themes can best be translated into useful practices will be greatly refined, and systemic changes will accelerate.

In comparison, several examples from middle-income countries in Latin America[59] demonstrate the potential of replacing hospitals as the primary locus of care with community mental health clinics. Initiatives that are now underway aim to move these countries further towards a community health care model, by extending the number of mental health clinics, strengthening their ties to primary care, and emphasizing truly community-based care. Legislation mandating that mental health services prioritize civil rights and social integration of people with severe mental disorders has been passed (although it is not consistently enforced). Nonetheless, budgets for mental health care are generally still very limited, and there are scant

resources for testing new approaches. One way to advance in this regard is to incorporate these salient themes into models adapted for use in Latin America, and to collect rigorous evidence as to the efficacy and potential for wide-scale implementation of these models. An illustrative example of this solution can be found in Critical Time Intervention-Task Shifting.[60,61]

In some low-income countries of sub-Saharan Africa, partly due to the shortage of trained mental health professionals noted above, most people with severe mental disorders still receive no care at all from "formal" (or western type) services in their local communities.[61] To extend care much more widely and make it more readily available in the local community, efforts are underway to engage primary care workers as the frontline providers, and develop a cadre of mental health professionals to provide them with supervision and support. In some instances, collaboration between formal health services and traditional healers may offer a complementary pathway toward more locally accessible community based care.[62] These efforts represent important progress toward community health care for people with psychoses. Despite the scarcity of resources as well as cultural and other differences, the four salient themes discussed above sometimes are relevant and are reflected in low-income country initiatives, though occasionally requiring such reformulation so that the underlying commonality is not immediately recognizable.

Persevere in the Campaign to End Stigma and Human Rights Violations of People with Mental Disorders

The human rights violations and stigma associated with mental illness are well-documented.[63-65] Stigma and human rights violations are often undetected or disregarded, despite the significant adverse consequences at an individual, local, and national level. For not only does stigma surrounding mental illness fuel ignorance and prejudice towards individuals with mental disorder,[66] which in turn can foster social isolation and increased self-stigma[67-68]—but it is also associated with reduced allocation of financial resources for mental health research and treatment in countries that span the spectrum of resources and income level.[66] In essence, stigma around mental health is not simply an unfortunate or inconvenient phenomenon, but rather, it lies at the root of the many fundamental health inequalities, which in turn, deleteriously impact quality of life and life expectancy.[69-70] On an individual level, stigma surrounding mental illness can impede individual treatment-seeking, while on a global level, it can have a heavy hand in contributing to and perpetuating the dearth of funding allocated for mental health research and appropriate interventions.

According to the WHO Quality Rights Project, in many parts of the world, the care offered to mentally ill individuals across all care settings is inefficacious at best, and at its worst, violates the basic human rights guaranteed to the mentally ill. The grim reality is that many individuals with mental illness end up housed in "prison-like cells," deprived of clinically sound support services, therapy and psychopharmacology, and in the most egregious cases, of any human contact whatsoever.[71] Seeking to address this dire situation, that WHO Quality Rights Tool Kit provides a means for assessing and improving the quality of services and respect for human rights in mental health and social care facilities .[71]

In addition to the immediate impact of stigma on health seeking and health care, it also linked to a critical loss of "second generation" rights including employment, housing and education. Facing rejection by both their family as well as the larger community, people with mental illness are frequently disenfranchised and excluded from their natural social networks. As a result, they may lack the emotional and material support they need to manage their psychiatric symptoms. Being denied the opportunity to benefit from a sense of belonging and kinship can contribute to individuals with mental illness experiencing "aggravated feelings of rejection, loneliness and demoralization," which further exacerbates the effects of the mental illness.[71]

Ultimately, the stigma surrounding mental illness generates endemic discrimination, and thereby enables these prejudices to become socially normative, which in turn leads to further social and legal injustices. In the vast majority of countries around the world, a wide discrepancy exists between health coverage provided for "physical" *vs.* "mental" illnesses such that people suffering from "physical" illness are afforded more adequate coverage for care. Similarly, labor and housing policies tend to more favorably support individuals with physical disabilities as compared to people with mental illness.[71] For children and adolescents, stigma commonly results in difficulty accessing appropriate educational programs, which has the domino effect that individuals with mental illness are not able to acquire the skills and training necessary to obtain gainful employment in the future.

It is critically necessary, therefore, to address issues of stigma affecting individuals with mental illness on a number of levels. International agencies such as the United Nations, WHO, and the World Bank command a critical role in prioritizing mental illness in health care policy and global development. Resolutions adopted by international agencies have provided leverage for passing legislation at the country level that protects the rights of people with mental illness. For example, the UN Convention on the Rights of Persons with Disabilities explicitly covers people with disability

due to mental as well as physical impairments, and specifies protections that they should be afforded. WHO's Comprehensive Mental Health Action Plan (CMHAP) can further serve as a cornerstone for policymaking at a national level.[71] These essential UN and WHO positions emphasize that globally we must strive to promote autonomy, dignity and the right to self-determination of mentally ill individuals around the world. Reducing stigma of mental illness is an essential step in establishing a global context that will ensure that we achieve the overall health and development goals to which we aspire for a healthier 2020.

CONCLUSION

Mental and behavioral disorders are the source of enormous human suffering across the lifespan and around the globe. The accumulating evidence base documents the burden of mental and behavioral disorders and the relationship of mental and behavioral disorders to global health, education and development. Lack of health care capacity and stigma result in flagrant human rights violations and unabated suffering and loss of life due to mental and behavioral disorders, and achieving a healthier 2020 requires that mental health be advanced and integrated in the global health agenda. In articulating the post-2015 development goals, the UN, WHO, the International Monetary Fund, and the World Bank, aim to set goals that will promote policy and programs that make it possible to "Realize the Future We Want for All".[72] Realizing this future will depend on the integration of mental health within the broader development agenda. Strategies to improve mental health should prioritize improving classification systems, expanding research capacity and collaborations to grow the extant knowledge base, and re-envisioning the workforce and systems delivery. Conviction and commitment to advancing mental health as a global health priority will transform for the better the lives of hundreds of millions of people around the globe.

Acronyms List:
CMHAP = Comprehensive Mental Health Action Plan
DALY = disability-adjusted life year
GBD Study = Global Burden of Disease Study
LMICs = low- and middle-income countries
MDGs = Millennium Development Goals
RDoC = Research Domain Criteria

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