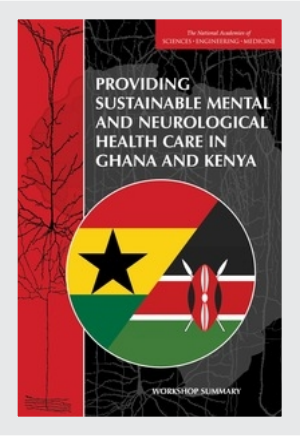

Providing Sustainable Mental and Neurological Health Care in Ghana and Kenya: Workshop Summary

DETAILS

246 pages | 6 x 9 | PAPERBACK
ISBN 978-0-309-37764-5 | DOI 10.17226/21793

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PROVIDING SUSTAINABLE MENTAL AND NEUROLOGICAL HEALTH CARE IN GHANA AND KENYA

WORKSHOP SUMMARY

Sheena Posey Norris, Erin Hammers Forstag, and
Bruce M. Altevogt, *Rapporteurs*

Forum on Neuroscience and
Nervous System Disorders

Board on Health Sciences Policy

Board on Global Health

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THE NATIONAL ACADEMIES PRESS
Washington, DC
www.nap.edu

THE NATIONAL ACADEMIES PRESS 500 Fifth Street, NW Washington, DC 20001

This activity was supported by the Alzheimer's Association; Brain Canada Foundation; Contract No. HHSN26300026 [Under Master Base # DHHS-10001292] with the U.S. Department of Health and Human Services' Food and Drug Administration and National Institutes of Health through the National Center for Complementary and Integrative Health, National Eye Institute, National Institute of Mental Health, National Institute of Neurological Disorders and Stroke, National Institute on Aging, National Institute on Alcohol Abuse and Alcoholism, National Institute on Drug Abuse, and NIH Blueprint for Neuroscience Research; Contract No. VA240-14-C-0057 with the U.S. Department of Veterans Affairs; Eli Lilly and Company; Foundation for the National Institutes of Health; the Gatsby Charitable Foundation; GlaxoSmithKline, Inc.; Johnson & Johnson Pharmaceutical Research and Development, LLC; Lundbeck Research USA; Merck Research Laboratories; The Michael J. Fox Foundation for Parkinson's Research; the National Multiple Sclerosis Society; Contract No. BCS-1064270 with the National Science Foundation; One Mind for Research; Orion Bionetworks; Pfizer Inc.; Pharmaceutical Product Development, LLC; Sanofi; the Society for Neuroscience; Takeda Pharmaceutical Company Limited; and Wellcome Trust. Any opinions, findings, conclusions, or recommendations expressed in this publication do not necessarily reflect the views of any organization or agency that provided support for the project.

International Standard Book Number-13: 978-0-309-37764-5
International Standard Book Number-10: 0-309-37764-1

Additional copies of this report are available from the National Academies Press, 500 Fifth Street, NW, Keck 360, Washington, DC 20001; (800) 624-6242 or (202) 334-3313; http://www.nap.edu.

Printed in the United States of America

Suggested citation: National Academies of Sciences, Engineering, and Medicine. 2016. *Providing sustainable mental and neurological health care in Ghana and Kenya: Workshop summary*. Washington, DC: The National Academies Press.

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Reviewers

This workshop summary has been reviewed in draft form by individuals chosen for their diverse perspectives and technical expertise. The purpose of this independent review is to provide candid and critical comments that will assist the institution in making its published workshop summary as sound as possible and to ensure that the workshop summary meets institutional standards for objectivity, evidence, and responsiveness to the study charge. The review comments and draft manuscript remain confidential to protect the integrity of the process. We wish to thank the following individuals for their review of this workshop summary:

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Although the reviewers listed above have provided many constructive comments and suggestions, they did not see the final draft of the workshop summary before its release. The review of this workshop summary was overseen by **HELLEN GELBAND,** Center for Disease Dynamics, Economics & Policy. She was responsible for making certain that an independent examination of this workshop summary was carried out in accordance with institutional procedures and that all review

comments were carefully considered. Responsibility for the final content of this workshop summary rests entirely with the rapporteurs and the institution.

Contents

1

Introduction and Overview[1]

Mental, neurological, and substance use (MNS) disorders have a substantial impact on global health and well-being. Disorders such as depression, alcohol abuse, and schizophrenia constitute about 13 percent of the total burden of disease (WHO, 2009). Worldwide, MNS disorders are the leading cause of disability, and the 10th leading cause of death (WHO, 2008a). Despite this high burden, there is a significant shortage of resources available to prevent, diagnose, and treat MNS disorders. Approximately four out of five people with serious MNS disorders living in low- and middle-income countries do not receive needed health services (WHO, 2011).

This treatment gap is particularly high in sub-Saharan Africa (SSA). Although data are limited, depression, schizophrenia, anxiety disorders, bipolar disorder, epilepsy, stroke, and alcohol abuse appear to be some of the most prevalent MNS disorders in SSA (Baingana et al., 2006; Silberberg and Katabira, 2006). Challenges to MNS care in SSA countries include a lack of trained mental health professionals, few mental health facilities, and low prioritization for MNS disorders in budget allocations. African countries, on average, have one psychiatrist for every 2 million people, whereas European countries have one psychiatrist per 12,000 people (WHO, 2011). Africa's ratio of mental health facilities to

[1]The planning committee's role was limited to planning the workshop, and the workshop summary has been prepared by the workshop rapporteurs as a factual summary of what occurred at the workshop. Statements, recommendations, and opinions expressed are those of individual presenters and participants, and are not necessarily endorsed or verified by the National Academies of Sciences, Engineering, and Medicine, and they should not be construed as reflecting any group consensus.

population is less than one-tenth of the global ratio (0.06 per 100,000 in Africa compared to 0.61 per 100,000 globally) (WHO, 2011). Many countries in Africa spend less than 1 percent of their national health budgets on MNS disorders (Saxena et al., 2007). In these resource-scarce settings, MNS disorders compete with communicable diseases such as HIV/AIDS and malaria, which are often the top priority of governments and funders (Omar et al., 2010).

Several current efforts are being made to improve mental health care in SSA and around the world. The World Health Organization (WHO) launched the Mental Health Gap Action Program (mhGAP) in 2008 to address the serious treatment gap for MNS disorders in low- and middle-income countries. mhGAP aims to scale up services for several priority MNS disorders—depression, schizophrenia, suicide, epilepsy, dementia, alcohol and drug disorders, and mental disorders in children—in resource-constrained countries such as those in SSA (WHO, 2008b). Although mhGAP focuses specifically on low-resource settings, another WHO program has a more global scope. The Mental Health Action Plan (MHAP) 2013–2020 was developed to provide guidance to member states in improving mental health systems. Its core principle is that there is "no health without mental health," and its goals are "to promote mental well-being, prevent mental disorders, provide care, enhance recovery, promote human rights, and reduce the mortality, morbidity, and disability for persons with mental disorders" (WHO, 2013, p. 9). The plan has six global objectives, and member states are expected to adapt the objectives appropriately based on their own national priorities and circumstances. The targets, to be accomplished by the year 2020, include reducing suicide rates, increasing service coverage for severe mental disorders, routinely collecting mental health indicators, and aligning mental health policies with human rights instruments.

ORIGINS OF THE WORKSHOP

Recognizing the importance of reducing the treatment gap for MNS disorders in the SSA region, the National Academies of Sciences, Engineering, and Medicine Forum on Neuroscience and Nervous System Disorders convened a number of workshops to address the development and improvement of sustainable mental health systems in SSA. In August 2009, the Neuroscience Forum and the Uganda National Academy of Sciences convened a joint workshop in Kampala, Uganda. This work-

shop, *Mental, Neurological, and Substance Use Disorders in Sub-Saharan Africa: Reducing the Treatment Gap, Improving Quality of Care*, focused on the entire sub-Saharan region. Participants examined the burden of MNS disorders, assessed the current system, and explored opportunities to improve quality of care and health care systems (IOM, 2010). The goal of this workshop was to identify major barriers to mental health care in SSA and then to develop a series of workshops to address these barriers. At this initial workshop, two critical barriers were identified: a lack of health care workers with appropriate training in care of MNS disorders, and a lack of access to essential medicines.

Following this workshop, the Neuroscience Forum and the African Science Academy Development Initiative held two more workshops, each focused on one of the two critical barriers identified. *Strengthening Human Resources Through Development of Candidate Core Competencies for Mental, Neurological, and Substance Use Disorders in Sub-Saharan Africa* was held in Kampala, Uganda, in September 2012. Workshop participants examined the human resource needs of African health districts and discussed training and partnership opportunities to improve capability (IOM, 2013). The participants developed a list of 111 core competencies that providers might need to ensure effective delivery of MNS care. The competencies applied to multiple disorders—depression, psychosis, epilepsy, and alcohol use—and to providers at all levels of the system, from community health workers to psychiatrists. Competencies focused on the areas of identification, diagnosis, and treatment and included skills such as awareness of common signs and symptoms, knowledge of when to refer to another provider, and communicating to the public about MNS disorders.

The third workshop, *Improving Access to Essential Medicines for Mental, Neurological, and Substance Use Disorders in Sub-Saharan Africa*, was held in Addis Ababa, Ethiopia, in January 2014 (IOM, 2014). The workshop focused on four critical barriers to access to essential medicines: insufficient demand, inappropriate selection, ineffective supply chains, and high pricing and poor financing. Workshop participants discussed potential strategies to ameliorate these barriers to improve the treatment and care of MNS disorders, including the development of coherent and comprehensive national strategies, the creation of national task forces to advocate for MNS disorders, and the development of evidence-based policies.

WORKSHOP OBJECTIVES

Expanding on these efforts, the Neuroscience Forum, in collaboration with the Academies' Board on Global Health and African Science Academy Development Initiative, convened this 2015 workshop series, *Providing Sustainable Mental Health Care in Ghana and Kenya*, bringing together key stakeholders to examine country-specific opportunities to improve the health care infrastructure in order to better prevent, diagnose, and treat MNS disorders. While mental health disorders were the primary focus of this workshop series, there was some discussion on neurological and substance use disorders. Given the mental health progress in both countries, stakeholders from all sectors of the health system, including government, providers, industry, nongovernmental organizations (NGOs), and others gathered in Nairobi, Kenya, on January 14–15, 2015, and Accra, Ghana, on April 28–29, 2015, to discuss the key elements of a sustainable mental health care system and the challenges to creating or maintaining such a system. Challenges discussed included inadequate health system infrastructure, a lack of national policy frameworks for mental health, deficient health information systems, and poor access to medicines. The workshops examined how stigma and a lack of awareness can negatively affect demand for care and treatment, and identified the need to increase the number of trained health care providers who can diagnose and treat MNS disorders in both hospital and community settings (see Box 1-1, Statement of Task). Participants in the workshop series were asked to identify specific opportunities to advance sustainable access to mental health care in order to ensure that the right patients get the right care and treatment, at the right time, and in the right setting.

BOX 1-1
Statement of Task

An ad hoc committee will plan and host a workshop series, inviting key stakeholders to examine country-specific opportunities to improve and develop sustainable access to mental health care and ensure that the right patients get the right care and treatment at the right time in the right setting. The workshop series will include two public workshops, one in Ghana and one in Kenya. Each workshop will include participants from key stakeholder groups representing components of the health system, including government, health professionals and providers (public and private sectors), industry, nongovernmental organizations (NGOs), and

others. Specifically, each workshop will include focused discussions on the following four topic areas:

- The elements of a mental health care system
  - Consider the components of a mental health care system that would be needed to provide access to mental health care (diagnosis, treatment, access to medicines, and continuing care) in both rural and urban environments.
  - Explore how existing health care infrastructure and available resources can be leveraged to enable sustainable access to mental health care.
    - Consider mechanisms for how mental health care could be integrated or coordinated with care for co- and multiple morbidities.
  - Articulate the core elements of near- and long-term plans that would be necessary to develop sustainable mental health services, including what could be included in a demonstration project.
- Engagement of key stakeholders
  - Consider the role of governments, NGOs, the private sector, home health care, faith-based organizations, and traditional medicine in the establishment of an integrated mental health care model.
  - Examine current policy, funding, and payment practices for each type of stakeholder, including identifying barriers to the development of a sustainable mental health care system.
  - Consider how non-health sectors, such as telecommunications, energy, and others, could strengthen the health care infrastructure.
- Access to medicines
  - Identify critical barriers to the delivery, selection, and prescription of medicines.
  - Examine successful activities that could be implemented in Ghana and Kenya to increase access to medicines, including characteristics of medicines that may improve patient adherence (e.g., modes of delivery).
- Stigma
  - Consider the impact of stigma on the seeking and provision of care and on mental health outcomes, and discuss how the mental health care system could be designed with concerns about stigma in mind.
  - Examine components of previous or existing antistigma campaigns that could be applied in Ghana and Kenya.

ORGANIZATION OF THE WORKSHOP SERIES AND REPORT

The workshops were organized around four major challenges to care of MNS disorders: (1) lack of diagnosis and treatment; (2) poor access to medicines; (3) stigma; and (4) inadequate mental health information systems (MHISs). Local experts from each country presented an overview of the health care system and the mental health care system in each country. Presenters discussed issues such as current gaps in the system, recent changes in laws and policies, and how funding and human resources are distributed. Each of the four challenges was presented by an expert who described the current situation and identified some opportunities for improvement. Case studies were presented by organizations that have had success in improving mental and/or other related health services in countries within and outside of SSA.

In addition to the overview sessions and the discussion of challenges, part of the workshop series focused on developing potential demonstration projects for a sustainable and scalable mental health system that could be integrated into the broader health system. Workshop participants had focused discussions on the four challenges, outlining the key elements of potential demonstration projects that are

- Comprehensive and holistic: Addressing a wide range of issues that affect the life of a person diagnosed with a MNS disorder, and offering services encompassing biological (medical), psychological, and social interventions (often in combination).
- Accessible: The services offered should be as easy to use as possible, considering issues such as proximity, cost, and cultural acceptability.
- Integrated: Should not create a parallel system for MNS disorders, but rather one that can be integrated into the structures and processes already present in the general health care system.
- Culturally appropriate: Adapted for the local context and cultural norms of the people who would use the services.
- Participatory: Developed by those who will use the system, from future users of the services to key decision makers whose buy-in at an early stage will facilitate future support.
- Sustainable: Considering the economic context of the country, and able to show good value for investment by potential donors.

- Replicable and scalable: Able to be replicated and adapted in other communities, and scaled up to a countrywide program.
- Able to be evaluated: Including a plan to evaluate the project, with metrics for success that can be collected in a methodologically sound way.

The following report summarizes the presentations and discussions by the expert speakers and individual participants. Chapters 2 and 3 are focused respectively on the Kenya and Ghana workshops, covering country-specific challenges, opportunities, and potential demonstration project components that were identified at each workshop. Chapter 4 summarizes the lessons learned from the case studies presented and discussed. The report ends with a road map for moving forward in Chapter 5, including a summary of key themes and practical considerations for implementing a demonstration project.

CHALLENGES TO SUSTAINABLE MENTAL AND NEUROLOGICAL HEALTH CARE IN SSA

Although Ghana and Kenya differ in many important ways, the challenges they face in the care of people with MNS disorders are similar. Both workshops focused on the same four challenges—lack of diagnosis and treatment, poor access to medicines, stigma, and inadequate mental health information systems—and asked participants to identify country-specific strategies to address these challenges.

Lack of Diagnosis and Treatment

The treatment gap for MNS disorders in SSA—that is, the percentage of people who need treatment but do not get it—is more than 80 percent and often higher in many countries (WHO, 2011). The reasons for this gap are myriad, many workshop participants said, including lack of human resources, particularly specialists; the effect of stigma and traditional beliefs on seeking treatment; poor access to medicines; and a lack of awareness and knowledge about MNS disorders among both the community and health care workers. The shortage of human resources is significant. The United States has more psychiatrists than China, India, and all of the countries of the African continent combined (Patel and Thornicroft, 2009). Several workshop participants suggested that in order

to fill this gap, primary care providers must be trained and given the tools to diagnose, treat, and refer MNS patients. Current providers receive little training in mental health, and they have poor access to treatment guidelines and protocols. Several participants said that any effort to improve mental health care in Ghana and Kenya must include training for providers, both during school and through continuing education, and better guidelines for treatment, diagnosis, and referral. As Sodzi Sodzi-Tettey, director at Project Fives Alive!, said at the workshop in Ghana, "We need to get to the point where every provider thinks of himself as a mental health provider."

Poor Access to Medicines

WHO recommends that a combination of psychosocial and pharmacological therapy is the best way to treat mental health disorders (WHO, 2009). Unfortunately in countries like Ghana and Kenya, several participants said that many people lack access to essential psychotropic medications and psychosocial treatment. A few participants noted that on the supply side, drugs are unavailable due to challenges such as unstable supply chains, poor forecasting of drug needs, and a lack of reliable financing, while on the demand side, barriers include the resistance of providers to new medications, a lack of treatment guidelines for providers, and the inability of patients to pay for medicines. Several workshop participants said a critical first step to improving access to medicines is performing a comprehensive needs assessment so that the drug needs of the community can be understood and forecasting can be improved. Many also suggested the use of a community revolving drug fund, in which proceeds from the sale of drugs are used to purchase more drugs, creating a sustainable supply of medicines.

Stigma

Stigma against mental health issues exists on all levels and has a significant impact on patient care, noted several workshop participants. Particularly in the community, stigma prevents people from seeking treatment when they need it, family members may shun patients with MNS disorders, and patients may have difficulty reintegrating into the community. From a workforce perspective, stigma can deter health care providers from choosing to work in mental health, and those who do specialize in mental health are often looked down on by other providers.

Stigma among government officials and policy makers can result in less attention and funding for mental health care. Several workshop participants stressed the need for more education about MNS disorders on all levels—in primary schools, community settings, medical schools, and for government officials. Many participants noted that one of the most effective destigmatization strategies is direct engagement with people who have struggled with MNS disorders, and demonstrating that treatment works—and that patients can lead normal lives—can reduce stigma significantly.

Inadequate Mental Health Information Systems

One pervasive theme at both workshops was a lack of data about mental health in the country: that is, information on the burden of mental health, on how MNS disorders are treated, or on patient outcomes is generally unavailable, said several participants. A robust MHIS could significantly increase available data and improve care, according to several participants. WHO defines an MHIS as "a system for collecting, processing, analyzing, disseminating, and using information about a mental health service and the mental health needs of the population it serves" and notes that an MHIS is also a "system for action" that can help guide decision making in all aspects of the mental health system (WHO, 2005, p. 1). Both Ghana and Kenya have some components of an MHIS in place, but a few participants stressed that improvement in data collection through training and understanding its usefulness for providers and decision makers is needed.

2

Kenya

MENTAL AND NEUROLOGICAL HEALTH CARE IN KENYA

Kenya is home to more than 44 million people, and mental disorders are common in the population, reported Catherine Syengo Mutisya, deputy medical superintendent at Mathari Hospital. A recent epidemiological survey found a prevalence rate of 10.8 percent in one community sample, similar to the rates found in neighboring countries (Jenkins et al., 2012). Mental disorders are a leading cause of years lived with disability in Kenya, behind only iron-deficient anemia (IHME, 2013b). Syengo Mutisya noted that in addition to common disorders such as depression and schizophrenia, Kenyans are at risk of other MNS disorders because of difficult conditions in the country: psychosis due to HIV infection, neurodevelopmental disorders and epilepsy due to poor mother–child health, posttraumatic stress disorder due to terrorism and political tensions, and anxiety due to high poverty rates. Furthermore, an estimated 1 million people suffer from epilepsy in Kenya, according to Osman Miyanji, founding director at the Kenya Association for the Welfare of People with Epilepsy (KAWE) (Youth on the Move, 2014).

Policy and Legislation

In 2010, Kenya adopted a new Constitution that created a "devolved" system of government, in which both the national and county governments have responsibility for health care. Under the Fourth Schedule to the Constitution, the national government is responsible for health policy, national referral health facilities, capacity building, and technical as-

sistance to counties. The counties' responsibilities include the delivery of care through government-operated health facilities and pharmacies, ambulance services, and promotion of primary health care. According to Isaac Adongo, head of the Directorate of Clinical Services of the Kenya Ministry of Health (MoH), this transfer of authority from the central government means that each of Kenya's 47 counties is now responsible for planning, budgeting, implementing, monitoring, and evaluating its own health care services, including mental health care. Adongo explained that under the new system, county governments provide mental health services at the community, primary, general, and specialized levels, while the national government operates national health referral health facilities. He speculated that this provision of mental health care at the county level would reduce disparities in access to care.

Kenya does not have a comprehensive national mental health law; the Kenya Mental Health Bill of 2014 has been introduced and is awaiting discussion in Parliament. However, David Kiima, director of Mental Health at the Ministry of Medical Services, noted that there are several relevant draft national policies, including the Kenya Health Policy 2014–2030, the Kenya Mental Health Policy 2014, and the Health Sector Strategic and Investment Plan, all of which include strategies to address mental health care. In addition, the 2010 Constitution includes a Bill of Rights that affects people with MNS disorders, according to Richard Muga, deputy vice chancellor and associate professor at Great Lakes University of Kisumu. Muga noted that the Bill of Rights guarantees everyone—including those with MNS disorders—certain rights, including the right "to the highest attainable standard of health, which includes the right to health care services and the right to emergency medical treatment" (Republic of Kenya, 2010). Muga expressed his hope that mental health stakeholders would capitalize on this constitutional guarantee of health for all people.

Overview of Challenges and Opportunities

A representative from Kenya's MoH set the stage for an in-depth discussion of the challenges of MNS disorders and encouraged participants to discuss country-specific solutions. Adongo stated that mental health often takes a back burner to communicable diseases, and even within the area of noncommunicable diseases. He listed several challenges to the mental health system, including an acute shortage of human resources, poor health infrastructure, inadequate supply of medicine, and

inadequate funding. Adongo noted that stigma associated with mental health—particularly mental illness—is one of the biggest challenges to the provision of mental health services. Adongo asked participants to contribute to solutions to these challenges in order to make mental health services "more equitable, acceptable, available, and accessible to all."

Vikram Patel, professor of international mental health at the London School of Hygiene and Tropical Medicine and cofounder of Sangath, asked participants to keep in mind that numbers alone do not tell the whole story of the burden of MNS disorders in Kenya. He stressed that MNS conditions have a tremendous impact on people's lives—not just the patients themselves but also their families and communities. Patel also noted that because of the recent attention on the Ebola outbreak in West Africa, getting governments or funders to prioritize MNS disorders would be even more difficult than usual. However, he drew a link between the two, positing that a weak health care system is a liability that can lead to both communicable disease outbreaks and inadequate care for noncommunicable diseases such as MNS disorders. He said that addressing the challenges discussed at these workshops—strengthening workforce capacity, improving the availability of essential medicines, addressing stigma, and building an information system—would be critical to strengthening the general health care system itself and to improving care for all people.

The mental health care system in Kenya faces a number of challenges, noted several participants. First, access to quality health care in general is hindered by "poverty, political instability, corruption, and rapid population increase" (Marangu et al., 2014, p. 2). The lack of a formal mental health policy, as well as the competing health priorities of HIV, malnutrition, malaria, and chronic disease, means that attention to mental health and resources for improving mental health care are scarce (Marangu et al., 2014). There is a severe shortage of mental health care specialists in Kenya, with only 54 psychiatrists and 418 trained psychiatric nurses for a population of 44 million (Marangu et al., 2014). Additionally, approximately 40 percent of these trained psychiatric nurses do not work in the field, with only 250 directly involved in mental health care services (Marangu et al., 2014). Stigma toward people with mental illness exists on every level, from the community to health care workers; this stigma may deter health professionals from choosing to work in mental health, further diminishing the workforce (Marangu et al., 2014).

Throughout the workshop, speakers and participants proposed potential ways to improve mental health care in Kenya, despite these pervasive

challenges. First, many participants repeatedly stressed that any mental health care effort must be integrated into the existing health care system. Integration can improve access and outcomes by providing more holistic care that can identify and treat patients earlier. In addition, integration can reduce stigma and can be a more effective use of limited resources. David Ndetei, founding director at the Africa Mental Health Foundation (AMHF), stated that integration is key, and "we must not be seen to be creating a parallel system." He warned that any proposal that included "extra staff doing extra work" would be very unlikely to get government support, saying that "they will show you the door immediately, because they do not have the money." He also cautioned that parallel systems would create a dichotomy between mental health workers and general health workers, and he stated that "it is time that every health worker [knows] that mental health is an essential part" of health care. He gave an example from a clinic in Nairobi, where patients who were referred to the psychiatric nurse were stigmatized as "mental case[s]," and suggested that all health workers—not just specialists—should be involved in mental health care to reduce stigma.

On a related note, many workshop participants recommended that in order to increase the number of people able to care for patients with MNS disorders, the mental health workforce must be expanded to include not just specialists but workers across the spectrum: from traditional and faith healers, to community health workers, to clinical nurses and primary providers. Although participants generally agreed that Kenya should continue to increase the number of mental health specialists, Ndetei declared that "we will never have enough … maybe in 1,000 years [there will be enough specialists]." Ndetei and his colleagues had noted nearly 10 years ago that "Kenya and other developing countries must … seriously consider shifting resources so as to allocate a significant component of their resources for mental health training of medical students and non-specialist medical personnel" (Ndetei et al., 2007). Patel and Paul Kioy, chairman of the Kenya Society for Epilepsy, both questioned whether specialists were even necessary for providing the bulk of care for MNS disorders, with Patel contending that the care "can actually be done by people with a much lesser amount of education" with sufficient training. He drew an analogy with HIV and noted that there are no HIV "expert centers" and much of HIV care is done by non-specialists and non-physician health workers. Kioy argued that Kenya cannot postpone the care of MNS disorders until a time when there are enough specialists and asked, "How long are we going to wait to treat?"

Ndetei said he believed that training of specialists was still essential to a robust mental health care system, but concluded that training specialists could go hand in hand with expanding the workforce to include others.

The third key element for improving the mental health system in Kenya, as phrased by Tedla Wolde-Giorgis, senior advisor at the Ethiopia MoH, is "buy-in, buy-in, buy-in." Many participants said if a mental health effort is going to succeed, it needs support from all decision makers and stakeholders involved in mental health care: the national government, NGOs, international partners, researchers, health care workers, communities, and patients and families affected by MNS disorders. To get buy-in on the national level, a mental health program must be aligned with the current priorities of the MoH, said Wolde-Giorgis. Because there are so many competing health priorities, advocates must present mental health as an "added value" to what the ministry is already doing. For example, if the ministry has prioritized malaria or maternal–child health, mental health must be integrated into these programs in a way that improves outcomes for these priority areas. Buy-in helps to ensure the obligation of sustained funding for mental health services, Wolde-Giorgies added.

POTENTIAL DEMONSTRATION PROJECTS

Experts in each of the four challenge areas—lack of diagnosis and treatment, poor access to medicines, stigma, and inadequate mental health information systems—presented information about how these issues hamper the care of MNS disorders. Workshop participants discussed the challenges and identified opportunities for improvement. To facilitate the discussions, Ndetei and Ana-Claire Meyer, assistant professor of neurology at Yale School of Medicine, developed a draft comprehensive demonstration project (see Box 2-1 for an overview; a full draft of the proposal can be found in Appendix E). Participants were encouraged to use the draft as a starting point and to diverge from it or expand on it as they saw fit. Moving forward, the goals and specific strategies that participants identified could be divided into discrete demonstration projects that could be implemented by various organizations. The following sections outline the goals and strategies that individual participants identified as possible specific components of potential demonstration projects.

BOX 2-1
Sustainable Mental Health Care in Kenya:
A Potential Demonstration Project

David Ndetei, founding director at the Africa Mental Health Foundation, and Ana-Claire Meyer, assistant professor of neurology at Yale School of Medicine, identified several challenges that they hoped to address with the proposed demonstration project. First, there is a significant shortage of resources in Kenya, including human resources, essential medicines, and data. Second, pervasive stigma around mental, neurological, and substance use (MNS) disorders limits access to care and decreases quality of life for those affected. Finally, there is an unmet need for collaboration with traditional and faith healers, as many people in Kenya attribute MNS disease causality and pathology to a spiritual dimension.

Ndetei and Meyer's proposed demonstration project was based on a decentralized, stepped-care approach that is evidence based and locally relevant. Three priority conditions were chosen for the proposed project—depression, epilepsy, and alcohol abuse—because they result in a high burden of disease in Kenya; they are not being addressed through other major initiatives; there are existing evidence-based algorithms for diagnosis, treatment, and care (i.e., a Mental Health Gap Action Program); and there is an opportunity to develop community-based interventions using lay or non-specialist health care workers.

The draft project included five key components:

1. Strengthen referral networks, including community-based referral by traditional and faith-based healers.
2. Build a supportive supervisory framework and referral pathways, including adequate numbers of specialists in MNS disorders.
3. Promote health literacy and community engagement through a model of social inclusion, self-help, and human rights for MNS disorders.
4. Strengthen and expand the existing health information system infrastructure.
5. Strengthen the existing infrastructure for the distribution of essential drugs.

The project was developed with a 4-year timeframe. In the first year, key stakeholders, including the Ministry of Health (MoH), would develop a learning curriculum and an implementation plan. In the second and third years, clinical services for MNS would be implemented in two counties. In the fourth year, the program would be evaluated and ownership would be transferred to the MoH.

SOURCE: Ana-Claire Meyer and David Ndetei presentation, January 14, 2015.

CHALLENGES AND OPPORTUNITIES TO SUSTAINABLE MENTAL HEALTH CARE

Lack of Diagnosis and Treatment

Although the burden of MNS disorders in Kenya is high, diagnosis of these disorders is quite low. A study conducted in 10 general health facilities (excluding psychiatric wards) found that 42 percent of inpatients and outpatients had symptoms of mild and severe depression (Ndetei et al., 2009). However, only 4.1 percent of patients had been diagnosed with a psychiatric condition, meaning most psychiatric disorders are going undiagnosed and unmanaged (Ndetei et al., 2009). Syengo Mutisya observed that anxiety and depression in African patients are often masked by somatic symptoms (e.g., stomachache or headache), which leads to delays in diagnosis and treatment.

There is a significant shortage of human resources to diagnose and treat MNS disorders, Syengo Mutisya reported. Kenya has only about 88 trained, working psychiatrists. Only 16 out of 47 counties have psychiatrists in the public sector, and none have psychologists. Syengo Mutisya drew a contrast between the public and private sector, and noted that the private sector has more psychiatrists and psychologists, and patients can more easily consult directly with a specialist or be referred to one. Syengo Mutisya noted, however, that in both the public and the private sector, the cost of diagnostic testing (e.g., blood tests or computerized tomography scans) can be prohibitive for patients.

In addition to the public- and private-sector health care workers, people with MNS disorders also seek care from traditional healers. Victoria Mutiso, senior researcher at AMHF, reported that traditional medicine is popular in rural communities, where people have little or no access to modern medicine. The clinician-to-patient ratio is extremely low in Kenya, particularly in the area of mental health, and health facilities in rural areas are overwhelmed due to understaffing. In contrast, many Kenyans have easy access to traditional healers: WHO estimates that up to 80 percent of the population in Africa uses traditional medicine for primary health care needs (WHO, 2003). Mutiso said that traditional healers can help patients with MNS disorders by taking a patient's history, offering medicinal herbs, and providing referrals to medical professionals. Workshop participant Lydia Matoke, president of the Herbalists Society of Kenya, added that traditional healers are "traditional counselors," noting that these healers can offer patients a listening ear morning,

afternoon, or evening. AMHF has had success in training community health workers, including traditional healers, to use standardized tools to assess mental conditions and make appropriate referrals. Mutiso reported that a review of their program revealed that nearly one-third of patients referred to the community clinic were confirmed to have some type of mental illness, and of these patients, 77.5 percent self-reported some degree of improvement after 12 months of intervention.

Goals and Potential Strategies Forward

Several workshop participants identified a number of goals to improve diagnosis and treatment, and they developed specific strategies to address each of these goals as part of a mental health demonstration project. Beverly Pringle, chief of Global Mental Health Research at the U.S. National Institute of Mental Health, summarized the participants' discussion.

Expanding the mental health workforce

Training primary care and community health workers in mental health: Throughout the workshop, many participants identified the shortage of mental health specialists in Kenya as a major barrier to diagnosis and treatment. Expanding the mental health workforce beyond traditional specialists (e.g., psychiatrists) to include primary care providers, nurses, and community health workers (CHWs) was suggested by many participants. They noted that these health workers often lack knowledge and awareness of MNS disorders, so training—both initial and ongoing—would be necessary for these providers to successfully diagnose and treat patients with MNS disorders. It was also suggested that CHWs, in addition to receiving training on recognizing MNS disorders and providing psychosocial services in a patient's home, could be taught to act as lay counselors for some conditions.

Establishing referral networks among providers: Even if general providers and CHWs were trained to recognize MNS disorders, these workers have limited time and resources to properly assess, diagnose, and treat patients. Some participants proposed that robust referral networks be established so that anyone who sees patients at the grassroots level—CHWs, primary providers, or traditional healers—could easily refer a patient to a facility or a specialist for further assessment and treatment.

AMHF has already had success with this model,[1] training traditional healers to recognize patients with possible MNS disorders and to refer them appropriately, and Muga noted that CHWs are a key component in this type of referral system. Because they are the only health care workers who enter households, they are in the unique position to initially recognize that a household member may have an MNS disorder and to motivate the person to seek care through a referral.

Improving the use of guidelines and diagnostic tools

Adapting existing diagnosis and treatment guidelines from other countries: Several participants observed that Kenya has a pressing need for consistent, evidence-based guidelines for the diagnosis and treatment of MNS disorders. Using the treatment guidelines for epilepsy as an example, Kioy discussed how to adapt existing guidelines from other countries for use in Kenya. He noted that epilepsy guidelines have been developed in many nations that have more resources and mental health providers. Because Kenya has few specialists, the guidelines were adapted to be usable by nonphysician health professionals and community workers, for example, allowing clinic officers and nurses to prescribe medicine. Kioy concluded that diagnosis and treatment guidelines must be "borrowed" from other countries, "adapted" to the context and culture of Kenya, and "followed wisely" by keeping the reality of available resources in mind. Several participants also noted that creating simple clinical fact sheets for health care providers might help facilitate appropriate diagnosis and treatment.

Using continuing education programs to help ensure implementation of guidelines: After diagnosis or treatment guidelines are developed or adapted, dissemination of the guidelines to providers is vital to their success. Kioy noted that if guidelines are simply handed out or sent through the mail, they are likely to go unread. He suggested using continuing education programs as a way of engaging providers with the guidelines. He noted that using local opinion leaders or respected practitioners in the

[1]To learn more about the Dialogue to Empower, Supervise, Support and Include the Informal Traditional and Faith Healers to Deliver Evidence-Based mhGAP-IG Adapted Psychosocial Interventions to Reduce Treatment Gap in Kenya (DIALOGUE), see http://www.africamentalhealthfoundation.org/dialogue.html (accessed July 14, 2015).

community to present information to their colleagues might increase the likelihood that practitioners will adopt the guidelines.

Developing information technology tools: The use of information technology to help providers diagnose and treat MNS disorders was discussed several times during the workshop. Frank Njenga, founding president at the Association of Psychiatrists and Allied Professionals, mentioned that mobile phone penetration in Kenya is high, and participants suggested using electronic and mobile-based applications to help specialists and non-specialists adhere to diagnosis or treatment guidelines for their patients. Ndetei reported that AMHF has had success with similar programs. The Drug and Alcohol Training Assessment in Kenya program provides free online training to health care workers about identifying and treating substance use disorders. AMHF has also developed a mobile app version of the mhGAP Intervention Guide depression module in order to train, supervise, support, and monitor non–mental health workers in the screening and management of depression.

Increasing patient knowledge

Implementing a public health awareness and education program: In addition to increasing the knowledge and skills of providers, many participants noted that patients and families also need to become more aware of their options and the benefits of treatment. They suggested using approaches such as informational brochures in the local language or text messaging as a means for the provider and the patient to communicate.

Using mobile-based diagnosis and treatment tools: Similar to the technologies suggested for providers, a few participants proposed that mobile-based tools be developed for certain conditions. For example, a person could text "schizophrenia" to a number and receive a link to a self-diagnosis app, or a diagnosed patient could use a mobile-based app to communicate with his or her doctor, report outcomes, and track care. Several participants noted that these types of tools could help patients who are reluctant to talk about mental health with a health care provider because of the fear of stigma.

Poor Access to Essential Medicines

Kenya has five major supply chains for essential medicines, noted Fred Siyoi, deputy registrar at the Pharmacy and Poisons Boards. The public supply chain is managed by the Kenya Medical Supplies Authority (KEMSA). Drugs are also supplied through faith-based organizations, NGOs, donations, and the private supply chain of wholesalers and retailers. KEMSA is a state corporation that is charged with distributing essential medicines to public health facilities in Kenya, said John Munyu, chief executive officer for KEMSA. It distributes to more than 5,000 health facilities. Two recent changes in KEMSA have improved access to essential medicines. First, in 2008, Kenya switched from a "push" system, in which predetermined medical kits were distributed, to a "pull" system, in which facilities can determine their needs based on demand in their particular community. Second, under the new devolved system of government, counties have autonomy to determine their own budgets for medicines, rather than being limited by the budget allocated by the MoH. These advances have increased distribution of all essential medicines, including psychotropic medicines, by 50 percent, noted Munyu. KEMSA now operates under a "supermarket" system, in which communities determine their own needs, wants, and budget, and order accordingly.

Munyu cautioned that despite this recent progress, many barriers remain to access to essential medicines. He said the absence of a national program to oversee treatment guidelines and to standardize treatment leads to an array of different treatment policies throughout the country, and there is a significant "lack of adherence to treatment guidelines and policies." Due to this lack of consistent treatment, individual counties have different procurement needs, so KEMSA loses the advantage of economy of scale. Munyu reported that health care workers, especially in local facilities, are not informed about the availability of new drugs or they resist adopting new drugs. Finally, he said a lack of accurate market data makes forecasting and quantifying supply needs difficult. He did note, however, that KEMSA is developing a Logistics Management and Information System that will help facilities order medicines, track order progress, and query stock status, as well as forecast and quantify needs based on historical data for each facility or county. KEMSA has integrated the psychotropic medicines into this system as well as the current manual ordering system.

Goals and Strategies

Fiona Dunbar, vice president of global medical affairs at Janssen Pharmaceuticals, Inc., and Imran Manji, senior pharmacist at Academic Model Providing Access to Healthcare (AMPATH), summarized a number of opportunities discussed by participants. Dunbar started by noting the intersection between essential medicines and the other challenges discussed. She emphasized that an effort to increase supply-side access to medicines will only succeed if demand for the medicines is increased as well—that is, without proper diagnosis and treatment, or without reducing stigma surrounding MNS disorders, simply increasing the supply of medicines will not be effective. She also observed that a robust health information system is essential for effective planning, managing, and monitoring of the drug supply chain. Many participants identified numerous goals and strategies for improving access to essential medicines.

Identifying medicines in the formulary

Performing a full epidemiology survey to determine prevalence of mental health disorders and assess the need for medicines: Several participants noted that, before implementing a demonstration project in a community, it would be important to determine the burden of disease in that community in order to evaluate and determine which medicines would be appropriate. A few participants suggested using existing data sources and models of cost-effectiveness to develop the essential drug list.

Holding a stakeholder meeting to review the survey and identify drugs to be procured: Several participants proposed that a therapeutic committee at the county level should engage a stakeholders' forum to review the evidence base and to decide what drugs should be procured and in what quantities. They cautioned, however, that consumption data should not be the sole factor used to determine procurement.

Improving delivery of drugs from the central level to the user level

Performing a market analysis: Manji observed that under the new devolved system of government, in which counties have responsibility for ordering their own drugs, managing a national supply chain efficiently could be difficult. Several participants suggested performing a market analysis to determine the needs, usage, prices, current availability, and

quality, as well as to describe the available personnel, distributors, and manufacturers.

Improving information flow to track drug use and inventory: Many participants discussed a pressing need for a robust health information system to improve quality and timely information flow across the supply chain system. By ensuring that data flow from the grassroots all the way to the top where decisions are made, Manji said, the health information system can provide the data necessary for drug tracking and inventory management. He noted that this system should also be linked to individual patient records in order to capture data on three points: availability of medications at a facility, contact coverage (what percentage of patients receive drugs), and effective coverage (what percentage of patients adhere). Manji noted that among other benefits, a health information system could prevent stock-outs.

Implementing a revolving drug fund to improve access at the community level: Manji mentioned that AMPATH is implementing a revolving drug fund program, in which a buffer stock of medications is kept at the facility level, distinct from the facility pharmacy. Patients are charged a small fee (with a waiver for those who cannot afford it), and the fees go back into restocking the pharmacy. Manji said this model may be a good stopgap measure that can ensure reliable access to medicines while the supply chain as a whole is being strengthened.

Improving the affordability of drugs

Expanding the National Health Insurance Fund (NHIF) to provide coverage for outpatient care: Several participants noted that NHIF now only covers inpatient care, and they suggested trying to expand the program to include drug benefits for outpatient care.

Subsidizing second and third line medications: Manji noted that funding is dwindling for drug donation programs, such as those for HIV or tuberculosis, in which private funders provide drugs free of charge. He said these types of models are not sustainable in the long term; however, he noted that using public–private partnerships to subsidize medications for MNS disorders could have a long-term positive effect by demonstrating the value of these drugs.

Increasing provider adherence

Developing national guidelines for screening, diagnosing, and prescribing: Many participants observed that one of the major challenges to keeping an efficient supply chain is the fact that different providers have different approaches for prescribing medications, and therefore, each county has different procurement needs. They suggested that developing national guidelines for screening, diagnosing, and prescribing for MNS disorders would help alleviate these differences as well as provide patients with more evidence-based treatment. Several participants proposed building off existing guidelines and adapting them to the culture and context of the community.

Using training and continuing education as a mechanism to improve provider awareness of clinical guidelines: Once guidelines are in place, providers must be made aware of them, several participants noted. Training programs, such as continuing medical education, could be used to ensure that providers are aware of new guidelines, familiar with new medications, and informed of the evidence base for rational use of medications. They noted that providers and patients sometimes resist using new drugs and that these training programs could lessen that resistance.

Stigma

Stigma surrounding MNS disorders is a pervasive problem in Kenya; as Syengo Mutisya said, "Most Kenyans hesitate to seek psychiatric care because of the stigma." She said that "people are scared" to seek services from mental health facilities out of fear of being labeled and facing stigmatization in the community and the workplace. Graham Thornicroft, consultant psychiatrist and professor of community psychiatry at Kings College, London, mentioned that because of a type of stigma called internalized or self-stigma, people anticipate discrimination and thus avoid seeking help for MNS conditions because of expected embarrassment or reputational damage. Thornicroft also drew attention to stigma from health care workers, reporting that research has shown that "primary care staff is one of the biggest stigmatizing forces" and that when patients "expect to be treated with less than full respect or not to meet a competent response," they will avoid seeking help. Several participants pointed out that even psychiatrists are stigmatized by other providers: "Psychiatry, in comparison to other courses taught in medical school, is ridiculed

and not taken seriously" (KNCHR, 2011, p. 39). Finally, stigma from politicians and decision makers results in scant attention and poor funding for MNS disorders (KNCHR, 2011).

The consequences of this pervasive stigma, Syengo Mutisya said, include delay in diagnosis, lack of compliance with treatment, increased health care expenditures, and increased school and work absenteeism due to untreated mental conditions. Thornicroft stressed that the delay in diagnosis is a serious problem, and he reported that one survey showed an average time of 11 years between the onset of a mental illness (social phobia) and seeking help. He said a major impact of this stigmatization is premature mortality: People with MNS disorders in high-income countries may live 15 to 20 fewer years than their peers, while in low-income countries serious mental disorders might result in death 30 years earlier (Fekadu et al., 2015; Thornicroft, 2011).

Goals and Strategies

Alan Leshner, chief executive officer emeritus of the American Association for the Advancement of Science and editor emeritus of *Science*, summarized both the three levels of stigma noted by several participants—community, government, and decision makers—and health care workers, and the three messages that should be conveyed:

- Everyone is susceptible to MNS disorders,
- Factual information about the nature of MNS disorders, and
- Success stories to show that MNS disorders are treatable and that affected people can return to normal functionality.

A few participants identified two mechanisms for conveying these messages and reducing stigma among the groups: education and social contact with people with MNS disorders. Research shows that one successful way to reduce stigma is to have direct personal contact with people with the stigmatized condition, Thornicroft said. He noted that this contact could be done face to face or through the Internet or social media. However, he cautioned that this approach was less effective with health care workers and that an antistigma effort for this group must be more subtle and use multiple methods, such as using MNS-affected "champions" presenting a stylized script, an emphasis on recovery, and supplemental materials.

Reducing stigma in the community

Holding small, targeted meetings with peer educators as facilitators and leaders: Joyce Kingori, country program manager of BasicNeeds Kenya, noted that helping people recognize that they have a mental health disorder is one key to improving diagnosis and treatment. She said efforts to encourage people to become aware of their condition must be done in a small, targeted setting where people feel safe talking about their condition. A few participants also suggested that using peer educators who have MNS disorders was crucial because when one person has the confidence to stand up and identify herself as a person with an MNS disorder, others are more likely to do so as well. The peer educator also provides face-to-face contact with the person, which has been shown to reduce stigma.

Using mobile phones for mental health education: As previously mentioned, Njenga noted that the percentage of Kenyans with mobile phones was nearly 70 percent, and several participants suggested capitalizing on this by using mobile phones or other technology to convey education and information about MNS disorders. Miyanji noted that KAWE has formed a partnership with the biggest mobile operator in Kenya, and people can dial a number to get basic information about epilepsy. Mobile phones and other technologies could also be a way to provide the face-to-face contact that reduces stigma.

Implementing MNS curriculum in primary and secondary schools: Several participants stressed the importance of implementing school-based stigma reduction programs to educate children early on about MNS disorders. Such programs, they added, might help to reduce the stigma by changing future generations' perception associated with people diagnosed with an MNS disorder.

Reducing stigma among health care workers

Integrating mental health services into primary care: Many participants noted throughout the workshop that in order to reduce stigma for MNS disorders, services must be integrated into primary care to avoid the appearance of a separate system. Ndetei stressed that creating a parallel system for mental health, rather than integrating services into primary

care, would further stigmatize patients and reduce the number of people seeking help.

Increasing training and continuing education in MNS disorders: Miyanji reported that medical doctors and other health care workers receive only about 2 hours of training regarding epilepsy, and other participants noted that psychiatry was looked down upon in medical school. Several participants said the health care curriculum should include adequate information about MNS disorders, including current information about the etiology and pathophysiology of disorders, because increased knowledge about the disorders might lessen stigma.

Improving stigma reduction training: Several participants also proposed incorporating stigma reduction training into health care education, using the methods outlined by Thornicroft: using MNS-affected "champions" presenting a stylized script, an emphasis on recovery, and supplemental materials. Several participants from KAWE reported great success using the social contact method to reduce stigma in the community. KAWE has "epilepsy ambassadors," patients who talk openly about their personal experiences and show people that epilepsy can be treated. One of these ambassadors, Sitawa Wafula, founder and team leader of My Mind, My Funk, said that by talking to communities about her epilepsy and bipolar disorder, she has been able to help other people go for checkups or be more open about their own experiences with MNS disorders. Miyanji noted that KAWE uses patients as volunteers in its clinics because they have such a big impact when they speak with patients and the community, in part by showing that patients who have sought treatment are now "living a normal life." Several participants identified specific strategies to reduce stigma in each group.

Reducing stigma among government and policy makers

Using patients as advocates: Some participants noted that patients can act as ambassadors and advocates in order to put a face on the issue of MNS disorders and to show that MNS disorders deserve funding and attention on a national scale.

Inadequate Mental Health Information Systems

The Health Informatics, Monitoring and Evaluation division within the MoH is in charge of collecting health data, said Peter Waiganjo Wagacha, associate professor in the school of computing and informatics at the University of Nairobi. He said information is gathered through several different tools and on several levels. At the community level, CHWs collect data using standardized paper-based tools. These data are then summarized by community health extension workers (CHEWs) and fed into the community health information system (CHIS). These data are forwarded by the CHEWs and entered into the district health information system (DHIS2), along with data from other health care providers and facilities. DHIS2 is free and open-source computer software that is used by many countries to monitor key health indicators. In addition, electronic medical records (EMRs) have been put in place in many health facilities to collect patient-level data.

The CHEW summary, which collects data on 66 indicators about the efforts and services offered at the household level, has only one MNS-related indicator: "total number of known cases of mental illness referred." DHIS2 collects district-level information on eight mental health areas:

- Mental disorders
- Psychosis
- Psychiatry attendance
- Psychiatric ward
- Epilepsy
- Drug-induced psychosis
- CHEW referred with mental illness
- Delayed development milestones

Wagacha suggested that a robust health information system would ideally contain four major components: EMRs, community-level information, district-level information, and patient tracking. He noted that the first three exist already in the Kenyan health information system, though they could be improved. He said the fourth, patient tracking, is important for tracking a patient through referral, to ensure that the patient's information moves with him and that there is follow-up after discharge. Wagacha stressed that "there are indeed systems that are already in place that we can actually piggyback on," and he suggested that because of

this, efforts to improve the MHIS "could move … forward pretty quickly." Wagacha noted that there is a fairly large amount of technological infrastructure that has been implemented in recent years, particularly within HIV programs, and that leveraging on these existing systems would be ideal. Wagacha warned, however, that a health information system is only as good as the human resources available to enter and interpret the data. It is not enough to simply build the system, there must be resources to manage it.

Goals and Strategies

Joyce Nato, mental health advisor in the WHO's Kenya office, and Francois Bompart, vice president, deputy head, and medical director of Sanofi's Access to Medicines department, summarized the discussion about MHISs. Several participants identified two overarching ideas: first, that any effort to improve health information systems for mental health must be integrated into existing systems, and second, that the communities being asked to contribute to a data collection system must see and reap the benefits of such a system (see Box 2-2 for a comprehensive checklist for strengthening an MNIS).

BOX 2-2
Checklist for a Mental Health Information System

An MHIS should not only collect, process, and analyze information about mental health determinants, needs, system response, and impact of interventions; it should also communicate findings in an accessible form that is useful to those who will use it, said Ahmed Heshmat, mental health advisor to the Afghanistan MoH. Only then can it perform its functions of facilitating effective planning, budgeting, delivery of mental health care, and evaluation.

Key components:

- ✓ National commitment and leadership to ensure that relevant high-quality information is collected and reported
- ✓ A minimum dataset of key mental health indicators
- ✓ Intersectoral collaboration with appropriate data sharing
- ✓ Routine data collection supplemented with periodic surveys
- ✓ Quality control and confidentiality
- ✓ Technology and skills to support data collection

- ✓ Sharing and dissemination

Key strategic interventions:

- ✓ Periodically assess and report the mental health resources and capacities available using standardized methodologies
- ✓ Routinely collect information and report on service availability, coverage, and continuity for priority mental disorders disaggregated by age, sex, and diagnosis
- ✓ Recording and reporting of health outcome data, such as suicides, at national level

Key recommendations and actions:

- ✓ Agree on the goals of the MHIS
- ✓ Evaluate existing frameworks and assess gaps
- ✓ Develop/strengthen National Mental Health Information Systems incorporating the developed indicators for mental, neurological, and substance use disorders
- ✓ Integrate the developed system/indicators into the National Information System and in the systems of other different sectors and settings (civil registration, vital statistic system health, etc.)
- ✓ Periodically assess and report the mental health resources and available capacities using standardized methodologies
- ✓ Establish a national focus of expertise and leadership to implement the development, reporting, and use of mental health surveillance and information
- ✓ Develop procedures, regulations, and training to ensure that the processes of collecting, analyzing, reporting, and using data meet standards of quality and confidentiality
- ✓ Routinely collect information and report on service availability, coverage, and continuity for priority mental disorders disaggregated by age, sex, and diagnosis

SOURCE: Adapted from Ahmed Heshmat presentation, January 14, 2015.

Collecting more MNS data

Adding more MNS indicators to the community health worker data tool: Of the 66 indicators on which community health workers collect data, several participants said only one refers to mental health—"total number

of known cases of mental illness referred"—and suggested adding more mental health indicators to the tool in order to track prevalence and outcomes. However, Wolde-Giorgis warned that the process is not as simple as asking the MoH to add an MNS indicator to the current data collection tool. He said that with so many competing health priorities in Kenya, the MoH is making hard decisions about what indicators should be included. Noting limited time and resources, Wolde-Giorgis said, "You cannot have 400, 500 indicators within the health information system and then half of the time of those workers is being spent just collecting data." He said a new indicator must be justified in terms of how it fits in with the MoH's priorities, for example, whether it supports the Millennium Development Goals (MDGs).[2] He encouraged mental health advocates to become involved in the ministry committees that make these decisions.

Using data from existing sources: Several participants observed that health workers are not the only people in a community who have data about the mental health of community members. They suggested that tribal chiefs, who play a pivotal role in the community, could be a source of data, as well as the police, prisons, NGOs, and faith-based organizations.

Performing routine surveys to gather data: Several routine data collection tools already exist, such as the Kenya Demographic and Health Survey, and several participants suggested trying to add mental health indicators to these tools. One participant said that because these surveys also include socioeconomic data, adding mental health indicators would enable sophisticated analyses that could be useful to policy makers and government officials.

Improving data collection processes

Adding MNS data collection to CHW responsibilities: According to several participants, CHWs already carry a heavy workload, and if a new indicator were to be added to their data collection tool, it would need to be integrated into their current tasks or leverage information that is already being collected. For example, if a CHW is visiting a household for

[2]MDGs are international development goals that were set by the United Nations. The goals include ending extreme poverty and hunger, promoting gender equality, and reducing child mortality.

mother–child health—for which there are eight indicators in the tool—the CHW could also inquire about postpartum depression or anxiety.

Using mobile phones to collect data: Several participants proposed using mobile phones to improve the MHIS. They suggested that health workers—CHWs or even primary providers—could use their mobile phones to collect data that could be transmitted immediately to a central database. Wagacha reported that this has been tried successfully in Kenya and that the workers were willing to absorb the costs of sending text messages because they preferred the convenience of using mobile technology instead of paper forms.

Aligning the health information system with diagnosis and treatment guidelines: Many participants stressed that any new health information system should align mental health indicators with existing training, diagnosis, and treatment guidelines.

3

Ghana[1]

MENTAL HEALTH CARE IN GHANA

Just over 25 million people live in Ghana (WHO, 2015). Although there is a lack of reliable data regarding the prevalence of mental and neurological disorders in the country, WHO estimates that approximately 13 percent of Ghanaians suffer from a mental disorder: of those, 3 percent suffer from a severe mental disorder and the other 10 percent suffer from a moderate to mild mental disorder (WHO, 2007). Mental disorders are a leading cause of years lived with disability in Ghana, behind iron-deficient anemia (IHME, 2013a). Among patients seeking treatment for mental health issues, schizophrenia, substance abuse, and mood disorders are the top three diagnoses, although a large percentage of people receive no specific diagnosis, according to Joseph B. Asare, chair of the Mental Health Authority Board in Ghana.

The treatment gap for mental health disorders in Ghana, said Sammy Ohene, senior lecturer and head of the department of psychiatry at the University of Ghana Medical School, is estimated to be more than 98 percent (WHO, 2007). Albert Akpalu, chief of neurology at Korle Bu Teaching Hospital, offered several reasons why Ghanaians diagnosed with an MNS disorder do not receive treatment, including

[1]Many of the statistics from this chapter are drawn from Dr. Joseph B. Asare's unpublished, informal data through his position as chairman of the Mental Health Authority Board.

- Fragmented mental health service delivery system and poor integration into primary care system;
- Poor supply of medicines;
- Poor health information systems;
- Community beliefs, attitudes, stigma, and lack of community support;
- Few financial resources allocated to MNS disorders;
- Lack of human resources and capacity for providing care;
- Lack of locally adapted, evidence-based training materials; and
- Lack of a clear referral and support system.

Policy and Legislation

In 2012, the Mental Health Act 846[2] was passed by Parliament, repealing the Mental Health Decree (NRCD 30) of 1972. The act seeks to accomplish several major goals, said Asare. First, the act protects the human rights of persons with mental disorders: they have the right to "humane and dignified" treatment, the right to seek education and employment, and the right to participate in leisure, recreational, cultural, and political activities (Republic of Ghana, 2012). Second, the act deemphasizes institutional care and encourages decentralization of mental health care by calling for the establishment of services and facilities at the primary, district, regional, and national levels. Third, the act calls for collaboration with providers of traditional and faith-based medicine and provides for the monitoring of care of people with mental disorders in all facilities, including those operated by traditional and faith healers.

The act also established a Mental Health Board, which is given the authority to propose and implement mental health policies in order to carry out the goals of the act. The board has already accomplished a great deal, said Asare, including drafting legislation, producing a strategic plan, and establishing regional mental health committees and coordinators. He said programs are being implemented to train non–mental health workers, and protocols are being developed for the treatment of mental health in primary care. Section 80 of the act established a Mental Health Fund to support the activities of the board; the fund is to be composed of governmental money, voluntary contributions from organizations and the private sector, grants, and gifts. However, Asare noted that no govern-

[2]See http://www.refworld.org/pdfid/528f243e4.pdf (accessed August 10, 2015).

mental funds have been provided since the inauguration of the board in 2013, and that the board is relying on funding from the U.K. Department for International Development.

Asare projected that under the new Mental Health Act, a number of significant improvements will be made to mental health care in Ghana:

- Mental health care will be decentralized and refocused on care in the community;
- More inpatient and outpatient facilities will be available for mental health;
- Care will be integrated into primary care, and non–mental health workers will be given specific training in education, case detection, support, and referral;
- Treatment protocols, including appropriate psychotropic medications, will be available for use in primary care; and
- Traditional and faith healers will be given clear guidelines for practice and will be trained in regard to their obligations to human rights of patients.

Overview of Challenges and Opportunities

Ebenezer Appiah-Denkyira, director general of the Ghana Health Service, welcomed participants on behalf of the Minister of Health. Appiah-Denkyira noted that mental health care often has not been a priority of governments, but that Ghana has recently made attempts to address this neglected area. He noted that the government has taken steps to decentralize mental health care by working to downsize the three psychiatric hospitals and to move services to other facilities. He said mental health is being implemented into the curriculum for health workers, which will help address the shortage of qualified providers. He cited the passage in 2012 of the Mental Health Act as an example of the government's dedication to improving mental health in the country, and he said the government is committed to supporting and funding the implementation of the act.

A panel discussion set the stage for the workshop, giving participants an overview of the mental health care system in Ghana and identifying some major issues that create challenges for people with an MNS disorder. Speakers discussed a myriad of challenges, including stigma, lack of material (e.g., beds) and human resources, shortage of medicines, lack of insurance coverage, and conflicts with traditional belief systems. Several

speakers also noted the challenge of getting the attention and necessary funding for mental health issues. Koku Awonoor Williams, regional director of the Upper East Region for Ghana Health Service, called mental health a "neglected disease." One speaker quoted an African MoH director who said: "Although mental health is important, it is not a major killer of people. In developing countries … we place more emphasis on diseases that kill people." Several workshop participants noted that such misconceptions often contribute to the inadequate government funding and low prioritization of MNS disorders.

In addition to identifying challenges, several participants also offered potential solutions. Integration into the primary care system was mentioned repeatedly as a way to address a number of issues, including lack of human resources and stigma. Although Ghana has a significant lack of specialists—fewer than 20 psychiatrists in the entire country—a few participants said that more specialists are not necessarily the answer (WHO, 2007). Rather than having specialty staff "in every corner of the country," primary providers need to be trained to recognize and refer mental health patients, said Humphrey Kofie, director of the Mental Health Society of Ghana. One participant suggested that physically integrating the facilities for mental illness care into general facilities would give patients better access to both physical and mental health care, and it would help to destigmatize mental health. Several participants proposed undertaking a massive public education campaign that includes information about available services so that people know where to turn when faced with a mental health issue. A few participants also called for clarity in the National Health Insurance Scheme (NHIS) coverage for mental health, noting that while there is a perception that services and medications are free for mental health, these services and medications are often nonexistent.

Asare said a major step was taken to address some of these issues when the Mental Health Act was passed. Several speakers cautioned that the law is not well understood, even by health authorities. Many challenges remain, and full implementation of the law has not yet been achieved. However, said Ohene, passage of the act, as well as the attention it has brought to mental health care, gives many people hope for a transformation of Ghana's mental health care system.

POTENTIAL DEMONSTRATION PROJECTS

Workshop participants discussed four challenges—lack of diagnosis and treatment, poor access to medicines, stigma, and inadequate mental health information systems—and identified opportunities for improvement in these areas. To facilitate these discussions, Julian Eaton, mental health advisor at CBM International, and Ohene developed a draft comprehensive demonstration project (see Box 3-1 for an overview; a full draft of the proposal can be found in Appendix F). Participants were encouraged to use the draft as a starting point for considering potential solutions to the challenges discussed at the workshop.

BOX 3-1
Sustainable Mental Health Care in Ghana:
A Potential Demonstration Project

The demonstration project proposed by Julian Eaton, mental health advisor at CBM International, and Sammy Ohene, senior lecturer and head of the department of psychiatry at the University of Ghana Medical School, is based on a task-sharing model, in which greater clinical responsibility is given to less senior personnel, with appropriate training, supervision, and support. The project is a minimum 3-year effort, to be implemented in two districts in which district authorities and local partners are willing to support the effort, there is a track record of success in other projects, and adequate human resources are available. The project is based on six sequential outcomes, each with associated activities and engagement of key stakeholders:

- **Buy-in is established and project management structure is developed:** To accomplish this outcome, authority figures in each district will be engaged from the start to get their input and support for the project. A steering committee will be put together, including provider and patient representation, and a project management team will be assembled with experts in health care, finance, evaluation, and other sectors.
- **Situation is analyzed and plan is made:** All key stakeholders will be engaged in the process, and a comprehensive analysis of the needs and available resources within each demonstration district will be conducted. This baseline information will be used to develop a project model, as well as a plan for monitoring and evaluation.

- **Community mental health services are integrated into health system:** Care for priority conditions (as identified in the needs analysis) will be integrated into the primary care system in the districts. Staff at each level will be trained on clearly defined tasks, and supervision and support will be provided. Existing guidelines and treatment protocols such as the mhGAP Intervention Guides will be used so that interventions are evidence based.
- **Intersectoral collaboration to address challenges:** A system-wide perspective will be taken to link multiple sectors (including families, NGOs, social services, and traditional and faith-based healers) to address historical challenges such as lack of psychological care, ineffective referrals, and low availability of medication. By linking these sectors, patients not only will have their medical needs addressed but also will be able to access services such as social services, employment, education, or housing.
- **A change in attitudes and behaviors:** To destigmatize mental health, the proposed project will employ the help of people with a history of MNS disorders. Exposing community members to people who have struggled with MNS has been shown to reduce stigma and increase awareness. In addition, a basic mental health module will be included in school curricula to change attitudes among young people and to help them maintain their own mental health. People in the community who are key influences on public opinion—such as faith leaders, journalists, and tribal chiefs—will engage in public discussions to allow a frank exchange of ideas about mental health.
- **Impact is measured and project is scaled up:** Based on the monitoring and evaluation plan that was developed in the first phase of the project, the impact of the project will be evaluated. This evaluation will be shared with stakeholders, and discussions will be held about whether and how to roll out the project in other areas of Ghana.

SOURCE: Julian Eaton and Sammy Ohene presentation, April 29, 2015.

The following sections outline the goals and strategies that many participants identified as potential components of demonstration projects.

CHALLENGES AND OPPORTUNITIES TO SUSTAINABLE MENTAL HEALTH CARE

Lack of Diagnosis and Treatment

Health care in Ghana is provided primarily by the government and administered by the MoH and the Ghana Health Service. The government health system is divided into 10 regions, each with a director and a regional hospital, and 216 districts, each with a director, a health management team, and a hospital and health centers. In addition, the government collaborates with the Christian Health Association of Ghana (CHAG), which provides services in 61 hospitals, 113 health centers, and 9 health training institutions across the country (CHAG, 2012). Private clinics and alternative medicine practitioners also provide care. About 10 million Ghanaians are covered by NHIS, which provides basic coverage for an affordable fee.[3]

The country has three psychiatric hospitals (Accra, Ankaful, and Pantang), as well as several regional psychiatric units and small private psychiatric facilities. Ohene noted that fewer than 20 psychiatrists are currently practicing in Ghana, and Asare said that out of the 1,887 staff working in mental health as of 2011, 38 percent are not trained to work in mental health care. Ohene said that community psychiatric nurses provide the bulk of psychiatric care in most of the country. The ratio of mental health workers to population is extremely low: there is one mental health staff person per 13,407 people, and one psychiatrist for every 1.5 million people. In comparison, European countries have one psychiatrist for every 12,000 people (WHO, 2011).

Ghanaians also seek mental health care from primary providers and traditional healers in addition to the psychiatric hospitals and the few mental health specialists. However, fewer than 20 percent of physician-based primary health care clinics have assessments and treatment protocols for mental health conditions, said Asare. In addition, primary care physicians in Ghana receive little training in mental health—only about 3 percent of their training, according to Akpalu. Traditional or faith healers are a common first option for those suffering from MNS disorders because the origin of mental health issues is generally seen as spiritual, said

[3]This section draws on a commissioned paper, "Providing Sustainable Mental Health Care in Ghana: A Demonstration Project," by Julian Eaton and Sammy Ohene (see Appendix F).

Eaton. These healers often practice in "prayer camps" where patients are sometimes subjected to shackling, beating, sexual abuse, and forced fasting.

Goals and Potential Strategies Forward

Several workshop participants identified a number of goals in the areas of diagnosis and treatment, and they developed specific strategies to address each of these goals as part of a mental health demonstration project. The suggestions ranged from garnering support and assistance both from the top levels of government and from local community and faith leaders, to improving treatment through enhanced training and use of protocols.

Political and leadership involvement

Gaining active commitment from leadership in Ghana: It would be important to get Ghanaian leadership to commit to mental health improvement in the country, according to several participants. Specifically, they noted that the government should commit to providing leadership on the issue, supervising the transformation of the mental health system, and performing monitoring and evaluation activities. Eaton noted that the MHAP was signed by every Minister of Health from the 194 member states; therefore, he urged participants to hold the leadership accountable to this commitment. A few participants suggested using a leadership opinion survey to measure success and noted that key stakeholders would be the MoH, Parliament, NGOs and civil society, and health care service providers.

Disseminating information to targeted groups: To involve leadership in mental health transformation, several participants said it was critical to give both governmental and nongovernmental organizations accurate, targeted information about the burden of mental health and how it can be treated. This effort would require resources such as technical expertise, graphic materials, and documents, and the media could be a key partner in disseminating information, several participants noted.

Addressing specific government concerns: Many participants noted that the government manages competing priorities and may have specific concerns about some of the changes proposed in the health care system. They suggested performing a survey of government officials or depart-

ments in order to determine what these concerns are and to begin to address them. One participant suggested that aligning the Ghanaian mental health system with international norms and approaches could be persuasive; one example would be aligning system goals with the MDGs.

Improving protocols and guidelines, training and supervision

Refining and simplifying the mhGAP protocols to align with the Ghana health system: In order to address the lack of treatment protocols, Eaton suggested adapting WHO's mhGAP guidelines, which are designed for non-specialist health settings and provide protocols for clinical decision making, including psychosocial treatment. He emphasized that the mhGAP protocols required government buy-in to implement. Several participants suggested the protocols be adapted for specific levels of the health workforce so that the appropriate amount and scope of information was being shared with providers at each level, with monitoring and supervision. A few participants said that aligning these guidelines with the Ghanaian system would require technical advisors, a team of Ghanaian clinicians for validation, and the assistance of the MoH, the Mental Health Authority, and health providers at all levels.

Identifying core competencies and train existing staff to build workforce capacity: Although many participants generally agreed that having more mental health specialists would be optimal, several participants suggested that existing staff could be used more effectively if they received ongoing training in key skills. First, a list of core competencies should be developed, as well as a comprehensive list of current providers and their skills. Next, expert local trainers and supervisors should be identified and health workers at every level should receive training and ongoing supervision to ensure that they are competent in key skills of mental health care. Several participants noted that this program would require the assistance of the ministry, the Mental Health Authority, and health providers at all levels. Many participants recognized a need to improve training in medical schools and to support mental health care education through increased time spent in neurology and psychiatry rotations. In some programs, Akpalu noted, only 1 week is spent in the neurology rotation and approximately 2 hours are spent in psychiatry. According to several participants, engaging institutional leadership will be important to ensure a more comprehensive mental health education.

Engaging traditional healers, community, and family to aid diagnosis and treatment

Creating an alliance between the Ghana health system and traditional and faith healers: Several participants suggested a number of ways that the Ghana health system could engage with traditional and faith healers, such as undertaking trainings of nonorthodox health providers, creating official affiliations between mental health facilities and faith-based facilities, and creating a system for referrals from faith-based healers to mental health providers. The resources needed to facilitate this alliance would include a pictorial diagnostic manual, personnel to provide training, and facilitators to assist with aligning the two groups, a few participants said.

Recognizing, upgrading, and capitalizing on the existing skills of traditional and faith healers: Several participants recognized that traditional and faith healers have skills that could be built on to improve mental health care. They suggested holding focus groups to identify these skills and then building on these skills with training sessions. Progress could be measured by developing metrics based on tracking trends on the number of faith healers who adhere to protocols; the amount of increased, accurate referrals to health care facilities; the overall number of functioning nonorthodox health care facilities; and observing the proportion of traditional and faith healers to mental health care workers, according to a few participants.

Supporting families at home to look after affected relatives once discharged from service: Integrating patients back into their homes is a critical part of recovery, said many participants, and families need support to do this successfully. They suggested having nurses perform home visits, providing information and education to families, and starting mental health support groups in the community. Ohene discussed the lackluster availability of the workforce in this field, noting that the MoH only employed one occupational therapist, and there were no trained psychiatric social workers. He explained that of the limited cadre of social workers who worked in Ghana, very few want to be involved in working with psychiatric patients. Eaton likewise advocated the need for comprehensive psychological services and proven social interventions that were important in recovery for both patients and their families throughout the entire treatment cycle.

Poor Access to Medicines

More than a third of the world's population lacks access to essential medicines, including psychotropic medicines, and the majority of the people who lack access live in the poorest parts of Africa and Asia, said Gyansa-Lutterodt of the Ghana MoH (Medecins Sans Frontieres, 2015). Asare reported on the availability of psychotropic medicines in Ghanaian facilities in 2011. He said at least one psychotropic of each therapeutic class (antipsychotic, antidepressant, mood stabilizer, anxiolytic, and antiepileptic) was available all year long in 40 percent of outpatient facilities, 57 percent of hospital inpatient units, and 100 percent of mental hospitals, and more than 80 percent of physician-based primary clinics had access to at least one medicine of each category. However, he noted that since 2014 there has been an erratic psychotropic drug supply.

The Ghana National Drugs Programme (GNDP) was established by the MoH to develop, manage, and coordinate the national drug policy, said Gyansa-Lutterodt. GNDP has developed an essential medicines list[4] and standard treatment guidelines (STGs) to assist providers in deciding on appropriate treatments for clinical problems (Republic of Ghana, 2010). The essential medicines list and STG are evidence-based and are reviewed regularly by GNDP to ensure continued accuracy. The most recent STG, from 2010, includes, among other conditions, epilepsy, attention deficit hyperactivity disorder, depression, schizophrenia, bipolar disorders, and anxiety disorders (Republic of Ghana, 2010). The 31 psychotropic medicines on the essential medicines list (which is aligned with STG) are covered by NHIS, said Gyansa-Lutterodt.

Although Ghana has taken some steps to control the price of essential medicines, such as exempting some pharmaceuticals from the value-added tax, Gyansa-Lutterodt said the absence of a drug pricing policy is a barrier to access. Other barriers she discussed included

- Weak supply system for psychotropics and limited capacity for local production of medicines;
- High cost of newer medications;

[4]See http://www.moh-ghana.org/UploadFiles/Publications/eml2010140204051145.pdf (accessed October 29, 2015).

- Inadequate funding to support cost of medicines, and no dedicated budget for psychotropic medicines; and
- Lack of a Logistics Management and Information System (LMIS) to forecast needs and prevent stock-outs.

Goals and Potential Strategies Forward

Several workshop participants identified a number of goals in the area of access to medications, and they developed specific strategies to address each of these goals as part of a mental health demonstration project. The discussion focused on improving funding and the procurement process, and on ensuring the safety and quality of drugs once they are on the market.

Improving funding for essential medicines

Clarifying reimbursement policies: Several participants noted that there is a perception in Ghana that mental health medications are free. Unfortunately, this perception results in reduced access to the medications because pharmacies are reluctant to stock products that are not likely to be profitable for them. Participants said these medications are, in fact, reimbursable under NHIS, but this is widely unknown. They suggested that the reimbursement policy needs to be clarified to improve access.

Mobilizing resources internally and externally: One major barrier to access, a few participants said, is simply that funds are not always readily available to purchase medications. Several participants suggested numerous ways to address this: a dedicated budget for MNS medications; a revolving drug fund (in which the drug supply is replenished using money from the sales of drugs); and removing barriers that prevent private pharmacies from purchasing psychotropic medications.

Shortening the procurement cycle

Performing a needs assessment of drug usage: To procure the appropriate drugs in a timely manner, the community's drug needs must be understood, several participants noted. They suggested performing a comprehensive needs assessment so that planners, pharmacists, and health care providers can be better prepared.

Using an LMIS to improve procurement: A few participants discussed how an LMIS could increase the efficiency of procurement by forecasting drug needs and preventing stock-outs. They suggested that the software be integrated into a more robust general MHIS and that workers be trained in order for the system to operate to its potential.

Ensuring drug quality

Performing postsupply monitoring of drug quality: Several participants stated that in addition to making drugs more accessible, ensuring the quality and safety of the drug supply is important. One participant gave an example of a drug that was tested and found to contain only a small percentage of the claimed active ingredients. Many participants suggested several ways to ensure postmarket quality, including: enabling users to report quality concerns; requiring the Food and Drug Authority to perform postmarket surveillance; encouraging providers to report side effects; and empowering drug and therapeutic committees in the health facilities to monitor drug quality and adverse events.

Stigma

Stigma is a major barrier to care and treatment of MNS disorders in Ghana, stated many participants. Asare said that stigma affects not just the patients themselves but also the family and friends of affected persons. Stigma is a barrier to training and recruiting mental health personnel, Asare said, adding that mental health services may receive less funding because of stigma. Several participants noted that stigma and a lack of understanding of MNS disorders prevents people from seeking care, and it may cause friends or family to turn away from people diagnosed with a disorder. Many participants also observed that there is significant stigma against health care workers who treat mental health: primary providers are reluctant to take on psychiatric patients, and providers who specialize in mental health are considered "among the least valuable" providers in the profession. One participant brought up the role that traditional and faith healers play, noting that labeling patients as "witches" or ostracizing them in prayer camps can exacerbate the stigma that already exists,

Goals and Potential Strategies Forward

Several workshop participants identified a number of goals to reduce stigma, and they developed specific strategies to address each of these goals as part of a mental health demonstration project. Several participants discussed reducing stigma through dissemination of information, integration of patients back into the community, and improving mental health facilities.

Improving information and education surrounding mental health disorders

Strengthening professional development training for health care workers and staff: Several participants observed that providers receive little education about mental health, and that some of the most acute stigma against people with mental health disorders is within the health profession. To this end, many participants suggested a comprehensive professional development program for providers that is designed to increase knowledge, improve skills, and boost compassion among health care workers. To assess the efficacy of such a program, surveys could be conducted that measure providers' knowledge and attitudes, and client satisfaction with their care could be a proxy for measuring provider skills and compassion.

Implementing mental health education in primary and secondary schools: Some participants suggested implementing mental health education in schools, in the hope that early education would prevent stigmatizing attitudes and that the knowledge and compassion gained would "trickle up" to the community.

Incorporating effective rehabilitation and reintegration in treatment plans

Integrating people with MNS disorders into community-based vocational and educational training: One participant said that employment and education are a crucial component of patients' recovery and can contribute to "getting their dignity back." Several participants suggested implementing vocational and educational training that supports mental health patients and gives them the skills necessary to become employed. It was noted that such a program would require buy-in and cooperation from

multiple sectors, including the government and health care providers, families, schools and vocational centers, NGOs, and employers. Reintegration of patients into the workforce can lessen stigmatization by showing that recovery is possible and that patients can lead productive lives, as reported by Stephanie Smith, Abundance Fellow in Global Mental Health at Harvard Medical School and health and policy advisor for mental health for Partners In Health.

Improving psychiatric facilities

Renovating or building mental health facilities that are safe and hygienic to facilitate effective care and recovery: Many participants observed that the physical condition of current mental health facilities is less than ideal; this can contribute to stigma, they said, because patients are often treated as "less than human," and friends and family are reluctant to visit. Participants had many suggestions for improvement of facilities, including beds for every client, pleasant outdoor areas for recreation, recreational opportunities, functioning toilets, and safety features such as alarm bells by each bed. To accomplish this goal, several participants said, necessary steps would include organizing stakeholders and securing resource commitments, documenting the baseline conditions, and establishing a facilities monitoring system to ensure continuous improvement. Funds would be needed for building and maintenance, and stakeholders from the MoH to community leaders would need to be involved, according to several participants. Kwadwo Obeng, psychiatry resident at Accra Psychiatric Hospital, noted that perhaps this suggestion was duplicative, as the government has already pledged to improve psychiatric facilities, but Pringle answered that a fast-moving demonstration project could provide a model for renovation that the government could use.

Inadequate Mental Health Information Systems

Lily Kpobi, assistant lecturer in the department of psychiatry at the University of Ghana School of Medicine and Dentistry, said that data on mental health needs in Ghana are often inconsistent and sometimes inaccurate, and she noted that this was partly due to outdated and inadequate record keeping and patient management systems. She said that in 2012, a new MHIS was developed for the three psychiatric hospitals in Ghana. This system is partially computer based and uses the uniform diagnostic system of WHO's *International Classification of Diseases* (ICD). Kpobi

noted that the information that a robust MHIS can provide has multiple benefits, including improving the care of patients and the management of the hospital and increasing the availability of information for policy makers and advocates. She also noted that accurate information about the prevalence and treatment of MNS disorders can help educate communities and reduce stigma.

Kpobi said barriers to implementing an effective MHIS exist on many levels. First, the data must be properly collected, processed, and analyzed; these steps require training of all of the users of a system. Second, sufficient resources—both human and technological—must be available for the system to operate to its full potential. Finally, the data must be disseminated and used in an appropriate way. Kpobi stated that barriers specific to Ghana include a lack of privacy policies and security of data, poor Internet connectivity or electricity, lack of resources allocated to MHIS, and data that are entered inaccurately, late, or not at all.

Goals and Potential Strategies Forward

Several workshop participants identified a number of goals to develop and strengthen MHISs, and they developed specific strategies to address each of these goals as part of a mental health demonstration project. Participants focused their discussions on improving the data collection process and creating a system that is flexible and helpful for users.

Improving and standardizing data collection process

Training data managers to enter data correctly: Many participants noted that a major challenge in the implementation of a robust MHIS is accurate and timely entry of standardized data. They said that anyone who enters data—from nurses to administrative staff—should be trained in both the technical aspects of inputting data as well as WHO's ICD in order to ensure that data entered are standard and correct. Several participants suggested that data should be entered on a daily basis and forwarded to the district on a monthly basis, with a maximum 1-week backlog, ensuring that the necessary data is accessible at most 1 week after the end of each month. Resources necessary for this strategy include funds for sufficient computers and technical experts and facilitators to carry out the trainings.

Training clinicians, providers, and institutions in ICD: For data to accurately describe the burden of disease or the efficacy of treatment, provid-

ers must use a standardized system to diagnose patients that is incorporated into their training. Several participants suggested that providers be trained in the most recent version of WHO's ICD, and they suggested that a goal should be for at least 70 percent of cases to be diagnosed accurately under this system. This number, a few participants emphasized, should increase as clinicians and training institutions become better-versed in using the most recent version of ICD.

Provider awareness and support of MHIS: Many participants observed that if providers are not "on board" with the MHIS system, it will not be successful. Several participants suggested that a survey be performed to assess provider knowledge of and attitudes toward MHIS and that knowledge and attitudes could be improved through training, continuing medical education, and involvement of providers in the system development.

Developing a system that meets the needs of patients and providers

Identifying and using appropriate indicators for mental health planning, monitoring, and evaluation: The indicators included for mental health issues must be appropriate not just for clinical use but also for community- or nationwide planning, monitoring, and evaluation, said several participants. They suggested using experts to develop and continually review the set of indicators and noted that the indicators must be easily computable through the District Health Information Software that Ghana currently uses. Several participants stated that engaging all involved parties in the implementation process ensures a widely used, interoperable system.

Developing a flexible, electronic system: The current health information system is only partially electronic, and does not allow for certain functions that providers and patients need, said several participants. They suggested developing a system that is fully electronic and that is flexible, allowing for functions such as collection and usage of comorbidity data, patient tracking, and the use of unique patient identification numbers. Several participants said that data access should be easy, yet secure, and user-friendly for all providers and all purposes. They stressed that a privacy and security policy is necessary to regulate access and usage of data, and they suggested using an independent information technology firm to manage the system.

4

Case Studies

Throughout the workshop, case studies were presented of some of the successful mental health projects in Ghana, Kenya, and around the world. Although each case study was multifaceted and addressed many challenges, the workshop participants focused on distilling lessons learned from each project that could be applied to potential mental health demonstration projects.

AFRICA MENTAL HEALTH FOUNDATION[1]: COMMUNITY PARTNERSHIPS

Founded in 2004, AMHF has stated the vision of being "the center of excellence in Africa for research, training, knowledge translation, and advocacy in mental health."[1] AMHF uses a multidisciplinary, multisectoral approach to improve mental health through programs at all levels, from physician specialist training to community-based stigma reduction, including school-based programs. According to David Ndetei, AMHF's greatest successes have been in creating community partnerships and joint ownership of programs. One partnership in particular that has been successful is the relationship AMHF has built with traditional and faith healers. AMHF works with them to build awareness of mental health disorders, to develop skills to screen for and refer cases of mental illness, and to deliver evidence-based, mhGAP-adapted psychosocial interventions. Other partnerships critical to the success of their programs, noted

[1]See http://www.africamentalhealthfoundation.org (accessed July 14, 2015).

Ndetei, include those with county government where health services have been devolved and with the government of Kenya.

BASICNEEDS[2]

BasicNeeds was founded in 2000 with the goal of improving the lives of people around the world diagnosed with a mental illness or epilepsy, by ensuring that their basic needs are met and their rights are recognized and respected.

Ghana[3]: Building Capacity of NGOs

BasicNeeds' Mid-Ghana Project is focused on the Ashanti and Brong Ahafo regions. It is a community-based model that seeks to ensure that people with mental illness or epilepsy can access their human rights. Specifically, BasicNeeds' activities can be categorized into four main areas: identifying and supporting people who have treatment needs; training community health workers; creating awareness; and supporting service delivery through psychiatric outreach to communities. Since 2000, BasicNeeds Ghana has provided 7,800 women, men, and children with mental illness or epilepsy and caregivers access to mental health and development services through community-based mental health, and it has developed 130 self-help user groups as a mechanism for patients and caregivers to express their needs and claim their rights to inclusion and development. Peter Yaro, executive director of BasicNeeds Ghana, said that a key component of their work is training local partners such as NGOs. BasicNeeds trains and supports key local partners on their Mental Health and Development model to enable the organizations to gain accreditation as a BasicNeeds franchise partner. The components of the model include capacity building, community mental health, sustainable livelihoods (e.g., promoting social reintegration), research, advocacy, policy, and collaboration. The NGOs they work with are not necessarily mental health organizations: for the Mid-Ghana project, for instance, the organizations were focused on child labor, reproductive health care, education, and women's issues. Yaro said that this type of collaboration among NGOs is a great way to align mental health activities with what

[2]See http://www.basicneeds.org (accessed July 14, 2015).
[3]See http://www.basicneeds.org/where-we-work/ghana (accessed July 14, 2015).

the NGOs are already doing. He cautioned, however, that even though many NGOs are interested in working in mental health, they "sometimes do not know how." He said that if given the proper support and training, these NGOs can be valuable partners in improving community mental health. As a result, BasicNeeds Ghana established two regional mental health alliances that bring together more than 45 community-based organizations/NGOs and decentralized government ministries, departments, and agencies to foster these collaborations and implement work in mental health.

Kenya[4]: Patients as Ambassadors

BasicNeeds works at the community level to build the capacity of people with MNS disorders to participate in their own treatment and recovery, as well as to reduce stigma and prepare the rest of the community to help people with MNS disorders. Joyce Kingori reported that the critical partners of BasicNeeds are the adults and children with MNS disorders "who have taken the courage to come and get treatment, to share their stories, to provide their insights." BasicNeeds uses mental health "ambassadors": young people who have been treated and now work to create awareness among their peers, and to reach out to provide support to those in need. Kingori noted that in addition to the critical partnership with patients, BasicNeeds also has important partnerships with organizations such as KAWE and AMHF, as well as the MoH and local government and health officials.

DIRECT RELIEF[5] AND BREAST CARE INTERNATIONAL[6]: COLLABORATION

Founded in 1948, Direct Relief provides medical resources to areas affected by poverty or emergency situations. It focuses primarily on maternal and child health, disease prevention and treatment, emergency preparedness and response, and strengthening health systems.[5] In partnership with Breast Care International (BCI), a Ghanaian-based organization dedicated to breast cancer awareness, the two organizations conducted a mental

[4]See http://www.basicneeds.org/where-we-work/kenya (accessed July 14, 2015).
[5]See http://www.directrelief.org/about (accessed July 14, 2015).
[6]See http://www.breastcareghana.com/about (accessed July 14, 2015).

health research project in the Ashanti region of Ghana. They are currently collecting data on the burden of mental health and examining what types of mental health services are available, with the purpose of using the data to recommend measures to address the challenges in the region. Andrew Schroeder, director of research and analytics for Direct Relief, and Samuel Kwasi Agyei, of BCI, stressed the importance of collaboration in their work. Schroeder noted that the collaboration with BCI was critical to the success of the project because they are a community-based organization that is trusted in the area in which they work. In addition, because of BCI's interest in broad-based health care, the project is working to embed mental health care services in the general health care system, rather than operating as a stand-alone mental health program, thus making improvements that are systematic and sustainable.

EMERGING MENTAL HEALTH SYSTEMS IN LOW- AND MIDDLE-INCOME COUNTRIES (EMERALD)[7]: STRENGTHENING HEALTH SYSTEMS

EMERALD, or Emerging Mental Health Systems in Low- and Middle-Income Countries, is a 5-year program (2012–2017) that works in six countries (Ethiopia, India, Nepal, Nigeria, South Africa, and Uganda) to improve mental health outcomes by improving health system performance, said Jibril Abdulmalik, Co-Investigator of EMERALD at the University of Ibadan in Nigeria. The program consists of six work packages: (1) project management and coordination; (2) capacity building in mental health systems research; (3) adequate, fair, and sustainable resourcing for mental health (health systems inputs); (4) integrated provision of mental health services (mental health system processes); (5) improved coverage and goal attainment in mental health (health system outputs); and (6) dissemination. EMERALD seeks to strengthen the system itself through activities such as holding trainings for policy makers, researchers, and service users; providing scholarships for students seeking advanced degrees in mental health; developing curricula for master's training in public mental health; helping countries with cost projections; facilitating the integration of mental health into primary care; and improving health information systems. Abdulmalik added that having cultivated

[7]See http://www.emerald-project.eu (accessed July 14, 2015).

relationships with policy makers and key stakeholders was useful to understanding health care systems hierarchy, as well as leveraging existing platforms. He acknowledged that some of these individual efforts are "droplets" in a bucket, but he hoped that the EMERALD project, as a whole, would result in a comprehensive template for strengthening mental health systems in low- and middle-income countries.

FIGHT AGAINST EPILEPSY[8]: STAKEHOLDER ENGAGEMENT

WHO and the Ghana MoH, with support from Sanofi Espoir Foundation, have teamed up for a 4-year project (2012–2015) to reduce the epilepsy treatment gap, using a variety of strategies: promoting training of all health care providers, improving community awareness to reduce stigma and increase demand for care, and integrating epilepsy care within the primary health care system. Since the initiation of the project:

- A national/district coordinating committee was established;
- A situation analysis report was developed at the national, regional, and district levels;
- 330 volunteers and 404 primary health care providers were trained in epilepsy management;
- Gradual scale up occurred, with coverage now in 10 districts in 5 regions;
- A monitoring and evaluation strategy was developed; and
- A draft model of epilepsy care was developed.

Cynthia Sottie, national coordinator of the Fight Against Epilepsy project at the Ghana Health Service, said that engaging with stakeholders at all levels, at all stages of the project, has been critical to the project's success. She noted that they have involved the Minister of Health, representatives from the teaching hospitals, national and international NGOs, the Mental Health Society of Ghana, regional health directors, faith healers, and community members. By involving so many stakeholders from the beginning of the project, "everybody was involved [and] everybody knows what is going on at each time." Sottie said that everyone's in-

[8]See http://fondation-sanofi-espoir.com/download/2012-10-22_CP_Ghana_EN.pdf (accessed July 14, 2015).

volvement was vital to getting the support and participation necessary to carry out the project.

KENYA ASSOCIATION FOR THE WELFARE OF PEOPLE WITH EPILEPSY[9]: PUBLIC EDUCATION

KAWE was founded in 1982 and seeks to improve the lives of those with epilepsy through a variety of efforts, including the training of primary health workers, awareness creation and stigma reduction through community projects, medical provision and support (e.g., epilepsy clinics, patient groups), and policy advocacy at the MoH in Kenya. Between 2000 and 2014, KAWE trained 1,814 clinical officers and nurses and 3,095 CHWs, and the organization's awareness programs reached an estimated 254,000 people directly and more than 3 million through mass media, said Osman Miyanji. In addition, more than 25,000 patients have been registered throughout clinics in Nairobi, Kenya, as a result of KAWE's community programs, and from a training perspective, the organization helped launch national epilepsy guidelines and developed a more comprehensive curriculum for medical training institutions. Miyanji reported that KAWE has demonstrated that they can close the treatment gap, and he noted that in 30 years of experience, public education to address social stigma and reduce ignorance has been a key element of their success.

THE KINTAMPO PROJECT[10]: FOCUS ON COMMUNITY-BASED CARE

The Kintampo Project, a collaboration between Ghana and the United Kingdom, is "training a new generation of mental health workers," said Joseph B. Asare. The project trains clinical psychiatry officers (CPOs) and community mental health officers (CMHOs). CPOs can diagnose mental illness and prescribe medication, while CMHOs focus on detection of mental illness in the community, education of local people, and reducing stigma and discrimination. CMHOs work in part by developing relationships with local families, schools, prayer camps, and tradi-

[9]See http://www.kawe-kenya.org (accessed July 14, 2015).
[10]See http://www.thekintampoproject.org (accessed July 14, 2015).

tional healers. The organization's objective is to have one CPO and two to three CMHOs in each of Ghana's 216 districts by 2017. Through the Kintampo Project, workers have been trained and deployed all over Ghana, helping thousands of the most needy people. The project is on track to boost the mental health workforce by 60 percent and the number of patients treated per year by 500 percent. By focusing on community-based care, Kintampo is shifting the focus of mental health care away from large hospitals and into the community where it is most needed, Asare said.

PROGRAM FOR IMPROVING MENTAL HEALTH CARE (PRIME)[11]: BUY-IN, BUY-IN, BUY-IN

Tedla Wolde-Giorgis provided an overview of PRIME's efforts to integrate mental health into the existing health delivery system in five countries (Ethiopia, India, Nepal, South Africa, and Uganda). The purpose of the 6-year study, launched in 2011, is to research the magnitude, impact, and tractability of mental disorders in low- and middle-income countries. Using Ethiopia as an example, Wolde-Giorgis reported that integration was an incredibly complex process (beyond the instructions in the mhGAP intervention guide [IG]) that required buy-in from decision makers at all levels—national, regional, and community—as well as support from health care facilities and NGOs. Wolde-Giorgis said that, regardless of the level of support at the top, a top-down approach will not work; ultimately, the day-to-day work is done in the community and facilities, so it must be led at this level. He also noted that stigma reduction is a critical part of getting buy-in at the community level. For an effort to be sustainable, the buy-in must be continuous—it is not a one-time effort. Leadership must be continuously reminded of the importance of mental health and how it aligns with national priorities because there are so many other competing health concerns and health initiatives (e.g., MDGs).

[11]See http://www.prime.uct.ac.za (accessed July 14, 2015).

PROJECT FIVES ALIVE![12]: SCALING UP

The goal of Project Fives Alive! is to reduce mortality rates among children below age 5. Sodzi Sodzi-Tettey said the project uses a quality improvement approach, which requires forming quality improvement teams, having the teams develop initiatives on how to change mortality rates, implementing these initiatives, and then using data to assess if there was a positive effect. The project started in 9 hospitals but has since been scaled up to 200 hospitals. Sodzi-Tettey said that the initial 9 hospitals were chosen because they were high-burden hospitals with high rates of mortality for children below age 5. By the end of the first 18 months of operation, 6 of the 9 hospitals showed significant improvement in mortality reduction. By learning what worked in these high-burden hospitals, the project created a "change package," which consisted of data-driven initiatives that had led to improvement related to improving delay in seeking and providing care and to reliable use of protocols. Sodzi-Tettey said that of the 134 hospitals in which the project currently operates, nearly 70 percent have adopted ideas from the change package, while also developing their own initiatives (e.g., targeted health education on early care-seeking using interactive platforms, triage systems for screening and emergency treatment of critically ill children, and training staff on protocols, followed by regular coaching and mentoring) (Twum-Danso et al., 2012). In these 134 hospitals, there has been a 31 percent reduction in facility-based mortality in children younger than age 5. Sodzi-Tettey reported on three lessons learned from the project. First, initiatives should be tested promptly and on a small scale; this creates data that management can use to decide whether or not to implement a change. Second, teams should be empowered to know and use their own data. Sodzi-Tettey said that many workers were used to reporting data to the top but had not been aware of their own performance. Once they had the ability to track their own progress, they became even more invested in improvement. Finally, Sodzi-Tettey said that sustainability is only possible if a project understands and works within the existing health system, rather than with its own schedule and priorities.

[12]See http://www.ihi.org/engage/initiatives/ghana/pages/default.aspx (accessed July 14, 2015).

PARTNERS IN HEALTH IN RWANDA[13]: INTEGRATION OF MENTAL HEALTH INTO THE GENERAL CARE SYSTEM THROUGH PUBLIC-SECTOR COLLABORATION AND LEVERAGE OF EXISTING HEALTH PLATFORMS

Partners In Health strives "to bring the benefits of modern medical science to those most in need of them and to serve as an antidote to despair."[13] The Partners In Health program in Rwanda focused on close collaboration within the public sector to integrate mental health care into the general community-based care system within the district. At each level (hospital, health centers, and community), health workers were trained in mental health care. Partners In Health's primary mental health endeavor in Rwanda was the integration of mental health care into health centers using existing structure of intensive supported supervision and quality improvement following training. One challenge that the program faced was resistance from the staff to admitting and treating psychiatric patients in the general ward. Smith offered several reasons for the resistance, including stigma and discrimination. She said the most successful strategy for reducing stigma among the health care workers was effective treatment of patients. When staff saw people come in with very acute psychiatric conditions, receive treatment, and get better, the workers' perspective on mental health was significantly changed. Smith recalled the story of a district hospital manager who unknowingly hired a former patient to work on the grounds of the hospital. When he learned that she had been admitted to his hospital as a psychiatric patient only 2 months earlier, and was now capable of holding a job, he "became a big advocate for the work." Smith said, "It was the witnessing of people getting better that was the most destigmatizing." In addition to reducing stigma, Smith said that another key element of successful integration was leveraging the existing system structures and human resources. Rather than restructuring or bringing in new people, they worked within the existing system by mapping skill sets and matching them to the skills needed for mental health care. Smith said that by using what was already available, a much more rapid and efficient integration into primary care was possible.

[13]See http://www.pih.org (accessed July 14, 2015).

MENTAL HEALTH CARE IN TURKEY: POLICY DEVELOPMENT

Oğuz Karamustafalioğlu, professor of psychiatry at Üsküdar University, provided an overview of mental health care in Turkey. He noted the high treatment gap for schizophrenia, depression, and substance use problems, and the lack of human and material (i.e., psychiatric beds) resources needed to adequately meet the demands of patients. In 2006, the MoH in Turkey released a National Mental Health Policy (NMHP)[14] aimed at mobilizing resources to ensure that mental health care services are accessible and balanced. Karamustafalioğlu stated that the NMHP encouraged preventative methods to decrease the burden of mental disorders, to increase attainable mental health care and services at both primary and secondary care levels, to encourage the respect of human rights for those with a mental illness, and to support the necessary legislation to protect their rights. Although there have been some successes since the NMHP was released—including an increase in the outpatient mental health care units at the general hospitals, the number of adult and child psychiatrists, and public education and awareness programs about mental health to reduce stigma—he emphasized that there is still more to be done to provide care and treatment to all patients.

WORLD ASSOCIATION FOR SOCIAL PSYCHIATRY AND SANOFI: COUNTRY-SPECIFIC APPROACHES

Sanofi's Access to Medicines department works in some of the world's poorest countries, disseminating information about MNS disorders, improving diagnosis, and making treatment affordable and accessible to patients, said Francois Bompart. Programs are specifically tailored to each country in which they work, an approach that is critical to success. For example, Sanofi works in Comoros, a small group of islands off the coast of Mozambique. Bompart said that several issues complicate mental health care in Comoros: transportation is difficult and expensive, and there is only one psychiatrist in the country. In order to work within these confines, Sanofi is working to train primary health care providers to use telemedicine to connect to the one psychiatrist—a tailored ap-

[14]See https://www.mindbank.info/item/69 (accessed August 13, 2015).

proach that works for the specific context of Comoros but might be wholly inappropriate elsewhere. Similarly, in Guatemala, Sanofi tailored its approach by choosing to partner with a local NGO instead of the MoH because of instability in the government. With regards to cultural and societal sensitivities, Bompart noted that in some areas in countries such as Morocco, traditional and faith healers were not involved in the awareness programs given the local contexts.

686 PROJECT IN CHINA: FOCUS ON GENERAL PRACTITIONERS

The 686 project was a 2004 initiative that launched mental health reform in China after the severe acute respiratory syndrome (SARS) epidemic. Prior to the reform, mental health institutions (565 hospitals) were worn and outdated, there were no community-based mental health care services, and medical insurance was provided only to employed people. Ma Hong, deputy director of mental health programs at the China MoH, stated that initially, the government granted 6.86 million Yuan (860,000 USD) to train providers in mental health, and as the program continued, it covered free hospital treatment for patients and out-of-pocket medical costs for impoverished patients. Hong noted that it was critical to learn how to express the need for funding and the overall burden of mental health in the language of the government. The project consisted of 60 demonstration projects reaching a population of 42.9 million people, in which providers were trained; hospital services were expanded to communities; and, when universal medical insurance was implemented in China, the project covered out-of-pocket costs for impoverished patients. One significant challenge was that while there was adequate funding for services, the human resources necessary to actually provide care lagged behind. Hong said, "Money does not equal service—human resources development is much slower than simply building a new hospital." She proposed that too much reliance on specialists in rural areas is misguided, and that when building a mental health program, the focus should be on expanding general practitioners' knowledge of mental health and building their capacity to diagnose and treat MNS disorders. Hong noted that a hospital–community continuous care system has since been established and 4.29 million patients have been registered in the health information system, including 3.41 million patients who have received community health care, 61.7 percent of whom are farmers.

5

Perspectives on Potential Next Steps

Participants at each workshop developed ideas for demonstration projects that were specific to either Kenya or Ghana, taking into consideration the unique health care systems, mental health burdens, traditional belief systems, and policies and laws in each country. However, a number of themes persisted throughout both workshops and seemed to have broad support from many stakeholders in attendance. Many participants identified similar challenges in both countries and developed similar overarching concepts that should be part of any demonstration project designed to improve mental health in Ghana or Kenya. In addition, practical sequential steps for carrying out such a project were identified, based on participant discussion and the draft demonstration projects included in Appendixes E and F.

OVERARCHING CONCEPTS IDENTIFIED BY INDIVIDUAL PARTICIPANTS

Integrating Mental Health Care into the Primary Care System

Many participants repeatedly cautioned that any mental health project must not create a "parallel system," but be integrated into the general health system. They added that this would efficiently capitalize on available resources, improve patient access to care and treatment, and reduce stigma, both among the community and among health workers. There are few mental health specialists in either Kenya or Ghana, and this is a major barrier to care in both countries, according to many participants. By

providing the training and support necessary for mental health to be integrated into primary care—so that "every provider thinks of himself as a mental health provider" [Sodzi-Tettey]—patients will be able to access care in their communities and do so without the stigma associated with seeking care from a psychiatric hospital. Patient care will be improved, said several participants, because patients often have both physical and mental ailments. With an integrated system, providers will be able to offer holistic and coordinated care. They added that the overall readiness of the primary and general health care system to handle this demand will be important. In addition, a few participants said that treating patients with MNS disorders in primary care facilities will allow health care workers to see that treatment and recovery are possible, which has been shown to reduce stigma. One participant at the Kenya workshop stated, "Mental health is part of health" and should be treated in that manner.

Aligning Mental Health Care Efforts with Existing Priorities

Governments, NGOs, and funders manage competing priorities, limited resources, and pressing health needs. To get mental health the attention and funding it deserves, several participants said, mental health advocates must align efforts with the issues that these stakeholders already prioritize. For example, if maternal and child health is important to the MoH, Tedla Wolde-Giorgis said, mental health care must be presented as a way to decrease maternal mortality or increase children's quality of life. Wolde-Giorgis said that ministers and NGOs are now heavily focused on international efforts such as the MDGs. The MDGs do not explicitly mention mental health, and several participants stressed that mental health advocates must demonstrate the links between mental health and a specific MDG such as poverty, HIV/AIDS, and gender equality. While the MDGs will end in 2015, several participants noted the importance of making mental health a priority for the newly developed Sustainable Development Goals (SDGs).[1] In addition, there are already a number of international efforts to improve mental health care, such as WHO's mhGAP. One participant said there is no need to "reinvent the wheel" by deviating from such efforts. Although demonstration projects must be tailored for each country, they should be aligned with existing priorities and efforts in order to make efficient use of resources and to be sustainable.

[1]See https://sustainabledevelopment.un.org/?menu=1300 (accessed September 3, 2015).

Community Buy-in and Involvement

If the community is not involved in setting priorities and deciding on strategies, a project has little chance of success, several participants asserted. One participant in Kenya told the story of a donor who decided to build toilets in a community in order to combat cholera, and after 8 months returned to find that no one had used the toilets**.** Another participant emphasized the importance of involving opinion makers, such as faith leaders and tribal chiefs, in community discussions from the start. He cautioned that if these people do not support a project, for whatever reason, the project will not achieve its goals. Finally, schools, prisons, social workers, NGOs, and other community organizations can be valuable partners in carrying out a mental health project by providing referrals, resources, or education. Several participants stressed that these organizations must be involved from the beginning to gain their support and maximize their potential to contribute.

Considering the Mental Health Care System in Its Entirety, Rather Than as Separate Components

Although discussions at the workshops were divided into four distinct topics—diagnosis and treatment, access to medicines, stigma, and health information systems—it became clear to many participants that no one part of the system could be addressed without simultaneous efforts directed at the other parts. François Bompart, while discussing how to improve access to essential medicines, stated, "Access to medicines only makes sense if there is first access to diagnosis." Relatedly, if a project greatly improved the availability of diagnosis and treatment, but did not address stigma, participants noted that patients might not be willing or able to access the care that has been made available. A robust MHIS is ineffective if providers are not consistent in patient diagnosis and treatment. Each part of the health care system cannot be improved in isolation from the others; many participants emphasized that any demonstration project must account for these intersections and make an effort to address multiple challenges simultaneously.

The Importance of Affordability and Insurance Coverage of Mental Health Services

Many participants stressed that even the best efforts to improve mental health care would fail if mental health care continues to fail to be covered by insurance and remain unaffordable to most people in Ghana and Kenya. While the insurance schemes and financing of care in each country differ, several participants said neither system is adequate. In Kenya, mental health services are excluded from the insurance fund, leaving people to pay costs out of pocket. In Ghana, there is conflict between what the law says—that mental health care is free—and the reality on the ground, which is that because no funding is coming from the government for this care, treatment and medicines are either not available or must be paid for out of pocket. Several participants from both countries appealed to their governments for sustainable, clear financing systems for mental health care, and they called for universal health coverage for all people and all conditions.

POTENTIAL NEXT STEPS

The workshops in Ghana and Kenya generated an enormous number of suggestions for how to improve mental health care in these countries, including detailed strategies that could be employed. The draft demonstration projects, as well as participant discussion, provided a framework of the general sequential steps necessary to turn these ideas into on-the-ground demonstration projects.[2]

1. **Collect baseline data.** In both Ghana and Kenya, there is a lack of available data about mental health care demand and services. Before undertaking an effort to improve the system, many participants stated that baseline data must be collected to have a better understanding of, for example, the burden of MNS disorders; resources currently available; how existing partnerships and key stakeholders engage; and the priorities of community members, stakeholders, and the government. This can be done through data collection methods such as surveys, focus groups, resource map-

[2]This section draws on a commissioned paper, "Providing Sustainable Mental Health Care in Ghana: A Demonstration Project," by Julian Eaton and Sammy Ohene (see Appendix F).

ping, and meetings with community and government leaders. According to several participants, the data collected can be used to help determine how a project will proceed: on which conditions it will focus, the areas of the country in which it will operate, and the initial goals and strategies of the project.

2. **Obtain buy-in.** Buy-in from the government, communities, health care managers, and industry must be procured before a project begins, according to many participants. As previously discussed, buy-in is critical to ensure that a project is efficient, successful, and sustainable. The baseline data that have been collected might help these leaders see the importance of a project, while the leaders can provide valuable input into how a project should be structured. This is also an opportunity to form partnerships that can greatly strengthen a project by adding local wisdom, additional resources, and capacity to provide services.

3. **Develop a strategic plan.** Although several ideas were discussed to provide sustainable mental health care in Ghana and Kenya, many participants stressed that it will be important to further extrapolate from these opportunities goals, strategies, objectives, and tactics in order to be implemented and evaluated. In addition, several participants said key stakeholders and partners should be identified for each step. For example, for the goal of reducing stigma in the community, a strategic plan might look like this:

   Goal: Reduce stigma in the community in the Ashanti region of Ghana.

   Strategy: Small targeted meetings with peer educators.

   Objective: Hold 10 community meetings in Adansi North district, reaching at least 100 community members.

   Tactics:
   - Partner with health care workers, chiefs, traditional healers, and other community members to identify and invite at least 10 at-risk individuals or families in each community.

- Find a private space to hold a meeting—partner with a local NGO or a school.
- Identify an MNS-affected peer educator who is willing to lead the meetings.
- Train the peer educator.
- Identify and assemble resources (e.g., handouts, refreshments) for the meetings.
- Hold the meetings.

4. **Monitor and evaluate.** Many participants noted that the success of a project must be monitored and evaluated in order to determine if it should be altered, replicated, or discarded. Evaluation metrics should be determined before a project begins so that baseline data can be collected. Evaluation metrics might include process measures (e.g., the number of people reached, the number of meetings held, or the number of guidelines distributed), use of services (the number of people seeking and receiving care before and after the start of the project), retention rate (patient adherence to treatment and services), or scales that measure knowledge, attitudes, beliefs, behaviors, or stigma. Several participants stated that timely and accurate evaluation of a project can save resources, improve patient care, and facilitate expansion of a successful project.

5. **Scale up.** Finally, if evaluation shows that a demonstration project has been successful, it can be scaled up and implemented in other areas of the country. A project may have to be adjusted to local context: the strategies and tactics may differ significantly depending on local priorities and resources available. However, a well-evaluated, well-planned demonstration project should be successful when appropriately replicated and scaled up, several participants said.

CLOSING COMMENTS

In the final sessions of the workshops, participants expressed hope that "a new era [for mental health] is dawning," as Akwasi Osei, acting chief executive officer of the Ghana Mental Health Authority, put it. Osei urged participants to move forward with optimism, rather than "the

pessimism of the old times." He said the ideas generated by these workshops could create a blueprint for governments, NGOs, and funders who wish to make significant changes to the mental health system. Leshner noted that in addition to the blueprint, resources and political will are necessary to move forward. For political will and resources to materialize, Leshner added, mental health advocates must "continuously remind" policy makers and the public that "we know what we are doing … we do have treatments that work." Bompart concluded: "There is an opportunity now, today, to bring mental health … to the attention of political decision makers. The window of opportunity may be fairly narrow, so let's seize it."

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B

Workshop Agendas

Providing Sustainable Mental Health Care in Kenya:
A Workshop

Villa Rosa Kempinski
Chiromo Road, Nairobi, Kenya
January 13–14, 2015

Background:
The global burden for mental, neurological, and substance use (MNS) disorders is significant, and the treatment gap is particularly high in sub-Saharan Africa (SSA). Less than 1 percent of national health budgets are spent on MNS disorders, which is disproportionately low compared to the burden of the disease. Competing public health priorities, financial constraints, and poverty are all factors that can negatively affect access to mental health care. Challenges associated with the delivery of care include inadequate health system infrastructure to support mental health care (e.g., beds and medicines), the lack of national policy frameworks for mental health, and deficient information health systems to monitor and evaluate services. The lack of community awareness and stigma around MNS disorders can also negatively affect demand for care and treatment. In addition, there is a need for increasing the number of trained health care providers to deliver evidence-based treatment in both the hospital and community settings. Recognizing the importance of sustainable mental health care, this workshop will bring together key stakeholders to examine country-specific opportunities to improve the health system infrastructure in Kenya in order to improve and develop sustaina-

ble access to mental health to ensure that the right patients get the right care and treatment at the right time, in the right setting.

Meeting Objectives:
Participants will be invited to focus discussions on the following four topic areas:

- The elements of a mental health care system
  - Consider the components of a mental health care system that would be needed to provide access to mental health care (diagnosis, treatment, access to medicines, and continuing care) in both rural and urban environments.
  - Explore how existing health care infrastructure and available resources can be leveraged to enable sustainable access to mental health care.
    - Consider mechanisms for how mental health care could be integrated or coordinated with care for co- and multiple morbidities.
  - Discuss opportunities to strengthen the health information system infrastructure to ensure adequate tracking of patient- and health facility–level data.
  - Articulate the core elements of near- and long-term plans that would be necessary to develop sustainable mental health services, including what could be included in a demonstration project.
- Engagement of key stakeholders
  - Consider the role of governments, nongovernmental organizations, the private sector, home health care, faith-based organizations, and traditional medicine in the establishment of an integrated mental health care model.
  - Examine current policy, funding, and payment practices for each type of stakeholder, including identifying barriers to the development of a sustainable mental health care system.
  - Consider how non-health sectors, such as telecommunications, energy, and others, could strengthen the health care infrastructure.
- Access to medicines
  - Identify critical barriers to the delivery, selection, and prescription of medicines.
  - Examine successful activities that could be implemented to increase access to medicines, including characteristics of

medicines that may improve patient adherence (e.g., modes of delivery).

- Stigma
  - Consider the impact of stigma on the seeking and provision of care and on mental health outcomes, and discuss how the mental health care system could be designed with concerns about stigma in mind.
  - Examine components of previous or existing antistigma campaigns that could be applied in Kenya.

DAY ONE

8:30 a.m. Welcome

HON. JAMES MACHARIA (INVITED)
Cabinet Secretary
Ministry of Health, Kenya

8:35 a.m. Opening Remarks: Workshop Objectives and Deliverables

VIKRAM PATEL, *Workshop Co-Chair*
Professor of International Mental Health
London School of Hygiene and Tropical Medicine

SOLOMON MPOKE, *Workshop Co-Chair*
Director
Kenya Medical Research Institute

8:40 a.m. Review of Related Institute of Medicine (IOM) Sub-Saharan Africa Workshops

ALAN LESHNER
Chief Executive Officer Emeritus
American Association for the Advancement of Science
Former Executive Publisher, *Science*

8:55 a.m. Responding to the Burden of Mental Disorders: Overview of the World Health Organization's (WHO's) Mental Health Action Plan

JOYCE NATO
Mental Health Advisor
WHO Country Office, Kenya

SESSION I: CHALLENGES AND OPPORTUNITIES TO PROVIDING SUSTAINABLE MENTAL HEALTH CARE IN KENYA

Session Objectives: Explore feasible opportunities to improve mental health care for individuals in Kenya. Discuss special considerations for the provision of care to children. Identify barriers to diagnosis, treatment, and access to medicines for rural and urban environments. Consider the impact of stigma on the seeking and provision of care.

9:10 a.m. Overview and Session Objectives

LUKOYE ATWOLI, *Session Chair*
Dean, Moi University School of Medicine

9:15 a.m. Overall Health Care System in Kenya

- Discuss the effectiveness of the decentralization scheme.
- What are the major challenges in the current health care system?
- What is the referral process from hospital to community setting?
- Discuss elements of successful communicable disease programs (e.g., HIV/AIDS and tuberculosis), and the indicators that were used.

RICHARD OTIENO MUGA
Deputy Vice Chancellor and Associate Professor
Great Lakes University of Kisumu

9:35 a.m. Mental Health Care System in Kenya

- How is mental health care incorporated into the overall health care system?

- Consider the indicators listed in the WHO's Mental Health Action Plan and data from the Mental Health Atlas.
- Discuss Kenya's new Mental Health Act and policies.
- What is the level of funding that is allocated to mental health care and how is this distributed to regional and district facilities?
  - How is the allocation of funding affected by stigma?
- Who are the key stakeholders involved?

DAVID KIIMA
Director of Mental Health
Ministry of Medical Services, Kenya

9:55 a.m. National Epilepsy Treatment Guidelines

PAUL G. KIOY
Chairman
Kenya Society for Epilepsy
National Epilepsy Coordination Committee

10:15 a.m. Panel Discussion with Session Speakers and Participants

11:00 a.m. BREAK

11:15 a.m. Diagnosis and Treatment

- Who provides the care and what is their level of training for MNS disorders?
  - Compare and contrast care of MNS disorders.
- What is the impact of stigma on the seeking and provision of care?

Hospital-Based Services

CATHERINE SYENGO MUTISYA
Deputy Medical Superintendent
Mathari Hospital

Traditional and Faith-Based Services

VICTORIA MUTISO
Senior Researcher
Africa Mental Health Foundation

11:55 a.m. Access to Essential Medicines

- What are the critical barriers to the delivery, selection, and prescription of medicines?
  - What are the out-of-pocket costs to patients?
- Describe the effectiveness of the current supply chain.
- Discuss the availability of the medicines listed on the country's essential medicines list to patients.
- What are the unique challenges for poor, vulnerable, and secluded populations?

JOHN M. MUNYU
Chief Executive Officer
Kenya Medical Supplies Authority

12:15 p.m. Panel Discussion with Session Speakers and Participants

LUKOYE ATWOLI, *Session Chair*
Dean, Moi University School of Medicine

1:00 p.m. LUNCH

SESSION II: OPPORTUNITIES TO STRENGTHEN AND INTEGRATE THE MENTAL HEALTH SYSTEM IN KENYA

Session Objectives: Consider lessons learned from successful programs that have increased mental health services and access to medicines. Identify critical components that might be incorporated into a small-scale demonstration project, including the role of health information systems.

2:00 p.m. Overview and Session Objectives

FRANK NJENGA, *Session Chair*
Founder and President
Association of Psychiatrists and Allied Professionals

2:05 p.m. Case Studies in Kenya

Africa Mental Health Foundation
DAVID NDETEI
Founding Director
Africa Mental Health Foundation

Kenya Association for the Welfare of People with Epilepsy
OSMAN MIYANJI
Founding Director and Chair
Kenya Association for the Welfare of People with Epilepsy

BasicNeeds
JOYCE KINGORI
Kenya Country Program Manager
BasicNeeds

3:05 p.m. Lessons Learned: Panel Discussion with Speakers and Participants

- What were the challenges in developing and executing the project?
- What partnerships were critical to the success of the project?
- Were specific lessons learned that could be applied to efforts around sustainable mental health care?

FRANK NJENGA, *Session Chair*
Founder President
Association of Psychiatrists and Allied Professionals

3:45 p.m. BREAK

4:00 p.m. Case Studies: International Efforts

Ethiopia — PRIME
TEDLA WOLDE-GIORGIS
Advisor, Officer of the Minister
Ministry of Health, Ethiopia

World Association of Social Psychiatry/Sanofi Approach — Guatemala, Comoros, and Morocco
FRANÇOIS BOMPART
Vice President, Deputy Head, and Medical Director
Access to Medicines
Sanofi

China — 686 Project
MA HONG
Professor of Institute of Mental Health, Peking University
Executive Director, National Center for Mental Health, China-Center for Disease Control and Prevention
Deputy Director, Office of National Mental Health Programs
Ministry of Health, China

Turkey — New Mental Health Plan
OĞUZ KARAMUSTAFALIOĞLU
Professor of Psychiatry
Üsküdar University

5:00 p.m. Lessons Learned: Panel Discussion with Speakers and Participants

- What were the challenges in developing and executing the project?
- What partnerships were critical to the success of the project?
- Were specific lessons learned that could be applied to efforts around sustainable mental health care?

5:30 p.m. WRAP-UP AND ADJOURN

DAY TWO

8:00 a.m. Day Two Welcome

VIKRAM PATEL, *Workshop Co-Chair*
Professor of International Mental Health
London School of Hygiene and Tropical Medicine

SOLOMON MPOKE, *Workshop Co-Chair*
Director
Kenya Medical Research Institute

8:05 a.m. Day One Overview: Defining the Challenges, Identifying the Opportunities

LUKOYE ATWOLI, *Session I Chair*
Dean, Moi University School of Medicine

FRANK NJENGA, *Session II Chair*
Founder President
Association of Psychiatrists and Allied Professionals

SESSION III: A ROADMAP FORWARD: COMPONENTS OF A DEMONSTRATION PROJECT

Session/Breakout Objectives: Identify a roadmap forward to implement a demonstration project to improve and develop sustainable access to mental health care in Kenya. Consider resources (financial, material, etc.) and key stakeholders needed to establish an integrated care model.

8:15 a.m. Elements of a Demonstration Project

- Discuss an implementation plan describing the steps for a small-scale demonstration project that would enable the development and integration of sustainable mental health services.

ANA-CLAIRE MEYER
Assistant Professor of Neurology
Yale School of Medicine

DAVID NDETEI
Founding Director
African Mental Health Foundation

8:50 a.m. Mental Health Information Systems

- Discuss steps to design a mental health information system to capture, store, manage, and transmit information about patients to help inform decisions for improving access to quality care.

PETER WAIGANJO WAGACHA
Associate Professor, School of Computing and Informatics
University of Nairobi

9:10 a.m. Discussion

9:40 a.m. BREAK

9:50 a.m. Breakout Objectives and Goals

VIKRAM PATEL, *Workshop Co-Chair*
Professor of International Mental Health
London School of Hygiene and Tropical Medicine

10:00 a.m. **BREAKOUT SESSIONS**

Breakout Objective: Conduct an in-depth analysis of the following four topic areas in relation to the implementation of a small-scale demonstration project in Kenya: (1) diagnosis and treatment; (2) access to medicines; (3) stigma; and (4) mental health information systems. Specifically, each breakout group will discuss opportunities to improve current practices while considering lessons learned from the previously discussed case studies. In addition, participants will consider how current infrastructure could be leveraged to improve sustainable mental health care. Lastly, each breakout will outline the resources, key stakeholders, and metrics of success needed for each area.

MENTAL HEALTH CARE INFRASTRUCTURE: DIAGNOSIS AND TREATMENT

FACILITATORS

BEVERLY PRINGLE, U.S. National Institute of Mental Health

SYLVIA KAAYA, Muhimbili University of Health and Allied Sciences–Tanzania

SPEAKER

CHRIS NATT
HELIX Centre
Royal College of Art
Imperial College London

IMPROVING ACCESS TO MEDICINES

FACILITATORS

FIONA DUNBAR, Janssen Pharmaceuticals, Inc.

IMRAN MANJI, U.S. Agency for International Development-Academic Model for Providing Access to Healthcare

SPEAKER

FRED SIYOI
Deputy Registrar
Pharmacy and Poisons Board, Kenya

REDUCING STIGMA

FACILITATORS

ALAN LESHNER, American Association for the Advancement of Science

GRAHAM THORNICROFT, Kings College, London

SPEAKER
IVAYLO VLAEV
Professor of Behavioural Science
Warwick Business School
University of Warwick

DEVELOPING MENTAL HEALTH INFORMATION SYSTEMS

FACILITATORS
FRANÇOIS BOMPART, Sanofi
JOYCE NATO, World Health Organization

SPEAKER
AHMED HESHMAT
Mental Health Advisor
Technical Cooperation Programme
Ministry of Public Health–Afghanistan

12:00 p.m. LUNCH

1:00 p.m. Report Out from the Breakout Session

BEVERLY PRINGLE
Chief, Global Mental Health Research Program
Office for Research on Disparities and Global Mental Health
U.S. National Institute of Mental Health

FIONA DUNBAR
Vice President, Global Medical Affairs
Janssen Pharmaceuticals, Inc.

ALAN LESHNER
Chief Executive Officer Emeritus
American Association for the Advancement of Science
Former Executive Publisher, *Science*

FRANÇOIS BOMPART
Vice President, Deputy Head, and Medical Director
Access to Medicines
Sanofi

2:00 p.m. Discussion with Participants

2:30 p.m. BREAK

SESSION IV: NEXT STEPS: IMPLEMENTING THE ROADMAP FORWARD

Session Objective: Identify tangible next steps for launching a demonstration project in Kenya.

2:45 p.m. Overview

VIKRAM PATEL, *Workshop Co-Chair*
Professor of International Mental Health
London School of Hygiene and Tropical Medicine

SOLOMON MPOKE, *Workshop Co-Chair*
Director
Kenya Medical Research Institute

3:00 p.m. Discussion with Workshop Session Chairs, Facilitators, and Participants

- Identify potential next steps for launching the demonstration project

3:45 p.m. Closing Remarks

4:00 p.m. ADJOURN

Providing Sustainable Mental Health Care in Ghana: A Workshop

La-Palm Royal Beach Hotel
No. 1 Bypass, Accra, Ghana
April 28–29, 2015

Background:
The global burden for MNS is significant, and the treatment gap is particularly high in SSA. Less than 1 percent of national health budgets are spent on MNS disorders, which is disproportionately low compared to the burden of the disease. Competing public health priorities, financial constraints, and poverty are all factors that can negatively affect access to mental health care. Challenges associated with the delivery of care include inadequate health system infrastructure to support mental health care (e.g., beds and medicines), the lack of national policy frameworks for mental health, and deficient information health systems to monitor and evaluate services. The lack of community awareness and stigma around MNS disorders can also negatively affect demand for care and treatment. In addition, there is a need for increasing the number of trained health care providers to deliver evidence-based treatment in both the hospital and community settings. Recognizing the importance of sustainable mental health care, this workshop will bring together key stakeholders to examine country-specific opportunities to improve the health system infrastructure in Ghana in order to improve and develop sustainable access to mental health to ensure that the right patients get the right care and treatment at the right time, in the right setting.

Meeting Objectives:
Participants will be invited to focus discussions on the following four topic areas:

- The elements of a mental health care system
  - Consider the components of a mental health care system that would be needed to provide access to mental health care (diagnosis, treatment, access to medicines, and continuing care) in both rural and urban environments.
  - Explore how existing health care infrastructure and available resources can be leveraged to enable sustainable access to mental health care.

        - Consider mechanisms for how mental health care could be integrated or coordinated with care for co- and multiple morbidities.
    - Discuss opportunities to strengthen the health information system infrastructure to ensure adequate tracking of patient- and health facility–level data.
    - Articulate the core elements of near- and long-term plans that would be necessary to develop sustainable mental health services, including what could be included in a demonstration project.
- Engagement of key stakeholders
    - Consider the role of governments, nongovernmental organizations, the private sector, home health care, faith-based organizations, and traditional medicine in the establishment of an integrated mental health care model.
    - Examine current policy, funding, and payment practices for each type of stakeholder, including identifying barriers to the development of a sustainable mental health care system.
    - Consider how non-health sectors, such as telecommunications, energy, and others, could serve to strengthen the health care infrastructure.
- Access to medicines
    - Identify critical barriers to the delivery, selection, and prescription of medicines.
    - Examine successful activities that could be implemented to increase access to medicines, including characteristics of medicines that may improve patient adherence (e.g., modes of delivery).
- Stigma
    - Consider the impact of stigma on the seeking and provision of care on mental health outcomes and discuss how the mental health care system could be designed with concerns about stigma in mind.
    - Examine components of previous or existing antistigma campaigns that could be applied in Ghana.

DAY ONE

8:00 a.m. Welcome: Workshop Objectives and Deliverables

AKWASI OSEI, *Workshop Co-Chair*
Acting Chief Executive Officer
Ghana Mental Health Authority

8:05 a.m. Opening Remarks

EBENEZER APPIAH-DENKYIRA
Director General
Ghana Health Service

8:10 a.m. Review of Related IOM Sub-Saharan Africa Workshops

ALAN LESHNER, *Workshop Co-Chair*
Chief Executive Officer Emeritus
American Association for the Advancement of Science
Former Executive Publisher, *Science*

SESSION I: OVERVIEW OF THE CURRENT MENTAL HEALTH INFRASTRUCTURE IN GHANA

Session Objectives: Examine current policies and legislation designed to improve mental health care in Ghana. Explore feasible opportunities to improve mental health care for individuals in Ghana. Discuss special considerations for the provision of care to children. Identify barriers to diagnosis, treatment, and access to medicines for rural and urban environments. Consider the impact of stigma on the seeking and provision of care.

8:25 a.m. Overview and Session Objectives

SAMMY OHENE, *Session Chair*
Senior Lecturer
Head, Department of Psychiatry
University of Ghana Medical School

8:30 a.m. Mental Health Care System in Ghana

- How is mental health care incorporated into the overall health care system?
  - Consider the indicators listed in the WHO's Mental Health Action Plan and data from the Mental Health Atlas.
  - Discuss Ghana's Mental Health Act and its key achievements.
  - How does the National Health Insurance Scheme provide coverage for mental health services and treatment?
- What is the level of funding that is allocated to mental health care and how is this distributed to regional and district facilities?
- Who provides the care and what is their level of training for MNS disorders?
  - What is the impact of stigma on the seeking and provision of care?
- What are the critical barriers to the delivery, selection, and prescription of medicines?

J. B. ASARE
Chairman
Mental Health Authority Board

8:50 a.m. Panel Discussion: The Need for Sustainable Mental Health Care in Ghana

- Using the Mental Health Act as a foundation, discuss the near- and long-term plans that would be necessary to develop sustainable mental health care in Ghana (diagnosis, treatment, and access to medicines).
  - Who are the key stakeholders involved?
  - How can organizations work with the Mental Health Authority?
- Discuss special considerations for vulnerable populations (e.g., children).

FRANCIS ACQUAH
President of the Board of Directors
Mental Health Foundation of Ghana

AKOSUA BONSU
Community Psychiatric Nurse
Koforidua Regional Hospital

HUMPHREY KOFIE
Director
Mental Health Society of Ghana

LINDA VANOTOO
Regional Director of Health Service
Greater Accra Region

KOKU AWONOOR WILLIAMS
Regional Director of Health Service
Upper East Region

9:45 a.m. Discussion with Panelists and Workshop Participants

10:15 a.m. BREAK

SESSION II: LESSONS LEARNED: OPPORTUNITIES TO STRENGTHEN AND INTEGRATE THE MENTAL HEALTH SYSTEM IN GHANA

Session Objectives: Consider lessons learned from successful programs that have increased mental health services and access to medicines. Identify critical components that might be incorporated into a small-scale demonstration project, including the role of health information systems.

10:30 a.m. Overview and Session Objectives

CAROL BERNSTEIN, *Session Chair*
Associate Professor of Psychiatry
Vice Chair for Education and Director of Residency Programs
New York University School of Medicine

10:35 a.m. Case Studies in Ghana

Direct Relief — Ghanaian Mental Health Pilot Program
ANDREW SCHROEDER
Director of Research and Analytics
Direct Relief

Sanofi/World Health Organization — Fight Against Epilepsy
CYNTHIA SOTTIE
National Coordinator
Ghana Health Service

The Kintampo Project
E. T. ADJASE
Project Lead, Ghana
The Kintampo Project

BasicNeeds
PETER YARO
Executive Director
BasicNeeds Ghana

Institute for Healthcare Improvement — Project Fives Alive!
SODZI SODZI-TETTEY
Director, Project Fives Alive!
Institute for Healthcare Improvement

11:50 a.m. Lessons Learned: Panel Discussion with Speakers and Workshop Participants

- What were the challenges in developing and executing the project?
- What partnerships were critical to the success of the project?
- Were specific lessons learned that could be applied to efforts around sustainable mental health care?

CAROL BERNSTEIN, *Session Chair*
Associate Professor of Psychiatry
Vice Chair for Education and Director of Residency Programs
New York University School of Medicine

12:30 p.m. LUNCH

1:15 p.m. Case Studies: International Efforts

Rwanda — Partners In Health
STEPHANIE SMITH
Abundance Fellow in Global Mental Health
Department of Global Health & Social Medicine
Harvard Medical School

Nigeria — EMERALD Project
JIBRIL ABDULMALIK
Lecturer
Department of Psychiatry
University of Ibadan

World Association of Social Psychiatry/Sanofi Approach — Guatemala, Comoros, and Morocco
FRANÇOIS BOMPART
Vice President, Deputy Head, and Medical Director
Access to Medicines
Sanofi

China — 686 Project
HONG MA
Professor of Institute of Mental Health, Peking University
Executive Director, National Center for Mental Health, China-Centers for Disease Control and Prevention
Deputy Director, Office of National Mental Health Programs
Ministry of Health, China

2:15 p.m. Lessons Learned: Panel Discussion with Speakers and Workshop Participants

- What were the challenges in developing and executing the project?
- What partnerships were critical to the success of the project?
- Were specific lessons learned that could be applied to efforts around sustainable mental health care?

CAROL BERNSTEIN, *Session Chair*
Associate Professor of Psychiatry
Vice Chair for Education and Director of Residency Programs
New York University School of Medicine

SESSION III: IDENTIFYING THE CHALLENGES IN THE MENTAL HEALTH SYSTEM IN GHANA

Session Objective: Identify the current challenges in the mental health care system in regard to diagnosis and treatment, access to medicines, stigma, and health information systems.

3:00 p.m. Breakout I Objectives and Goals

ALAN LESHNER, *Workshop Co-Chair*
Chief Executive Officer Emeritus
American Association for the Advancement of Science
Former Executive Publisher, *Science*

3:10 p.m. BREAK

3:25 p.m. **BREAKOUT SESSIONS**

Breakout I Objective: Brainstorm the key priority areas/challenges for the following four topic areas: (1) diagnosis and treatment; (2) access to medicines; (3) stigma; and (4) mental health information systems.

MENTAL HEALTH CARE INFRASTRUCTURE: DIAGNOSIS AND TREATMENT
FACILITATOR: **JULIAN EATON,** CBM
RAPPORTEUR: **KWADWO OBENG,** Accra Psychiatric Hospital
SPEAKER: **ALBERT AKPALU,** Korle Bu Teaching Hospital

IMPROVING ACCESS TO MEDICINES
FACILITATOR: **FIONA DUNBAR,** Janssen Pharmaceuticals, Inc.
RAPPORTEUR: **SALLY ANN OHENE,** World Health Organization, Ghana Country Office
SPEAKER: **MARTHA GYANSA-LUTTERODT,** Ministry of Health, Ghana

REDUCING STIGMA
FACILITATOR: **BEVERLY PRINGLE,** U.S. National Institute of Mental Health
RAPPORTEUR: **SHANTHA RAU BARRIGA,** Human Rights Watch
SPEAKER: **GRÉGOIRE AHONGBONON,** Saint Camille de Lellis Association

DEVELOPING MENTAL HEALTH INFORMATION SYSTEMS
FACILITATOR: **ANGELA OFORI-ATTA,** University of Ghana Medical School
RAPPORTEUR: **BENEDICT WEOBONG,** London School of Hygiene and Tropical Medicine
SPEAKER: **LILY KPOBI,** University of Ghana

5:00 p.m. Report Out from Each Breakout Group

5:30 p.m. Discussion with Facilitators and Workshop Participants

6:00 p.m. WRAP-UP AND ADJOURN

DAY TWO

8:30 a.m. Day Two Welcome

ALAN LESHNER, *Workshop Co-Chair*
Chief Executive Officer Emeritus
American Association for the Advancement of Science
Former Executive Publisher, *Science*

AKWASI OSEI, *Workshop Co-Chair*
Acting Chief Executive Officer
Ghana Mental Health Authority

8:40 a.m. Day One Overview: Defining the Challenges, Identifying the Opportunities

SAMMY OHENE, *Session I Chair*
Senior Lecturer
Head, Department of Psychiatry
University of Ghana Medical School

CAROL BERNSTEIN, *Session II Chair*
Associate Professor of Psychiatry
Vice Chair for Education and Director of Residency Programs
New York University School of Medicine

SESSION IV: A ROADMAP FORWARD: COMPONENTS OF A DEMONSTRATION PROJECT

Session/Breakout Objectives: Identify a roadmap forward to implement a demonstration project to improve and develop sustainable access to men-

tal health care in Ghana. Consider resources (financial, material, etc.) and key stakeholders needed to establish an integrated care model.

9:00 a.m. Elements of a Demonstration Project

- Discuss an implementation plan describing the steps for a small-scale demonstration project that would enable the development and integration of sustainable mental health services.

JULIAN EATON
Mental Health Advisor
CBM International

SAMMY OHENE
Senior Lecturer
Head, Department of Psychiatry
University of Ghana Medical School

9:30 a.m. Panel Discussion with Speakers and Workshop Participants

10:00 a.m. Breakout II and III Objectives and Goals

ALAN LESHNER, *Workshop Co-Chair*
Chief Executive Officer Emeritus
American Association for the Advancement of Science
Former Executive Publisher, *Science*

10:15 a.m. BREAK

10:30 a.m. **BREAKOUT SESSIONS**

10:30–11:45 a.m. Breakout II Objective: Each breakout group will discuss opportunities to improve current practices while considering lessons learned from the previously discussed case studies. Opportunities noted should be *actionable* in relation to the implementation of a small-scale demonstration project. Participants will consider how current infrastructure could be leveraged to improve sustainable mental health care.

11:45 a.m.–1:30 p.m. Breakout III Objective: Each breakout will outline the resources, metrics of success, and key stakeholders (including the lead implementers) needed for each opportunity.

MENTAL HEALTH CARE INFRASTRUCTURE: DIAGNOSIS AND TREATMENT
FACILITATOR: **JULIAN EATON,** CBM
RAPPORTEUR: **KWADWO OBENG,** Accra Psychiatric Hospital

IMPROVING ACCESS TO MEDICINES
FACILITATOR: **FIONA DUNBAR,** Janssen Pharmaceuticals, Inc.
RAPPORTEUR: **SALLY ANN OHENE,** World Health Organization, Ghana Country Office

REDUCING STIGMA
FACILITATOR: **BEVERLY PRINGLE,** U.S. National Institute of Mental Health
RAPPORTEUR: **SHANTHA RAU BARRIGA,** Human Rights Watch

DEVELOPING MENTAL HEALTH INFORMATION SYSTEMS
FACILITATOR: **ANGELA OFORI-ATTA,** University of Ghana Medical School
RAPPORTEUR: **BENEDICT WEOBONG,** London School of Hygiene and Tropical Medicine

1:30 p.m. LUNCH

2:30 p.m. Report Out from Each Breakout Group

3:30 p.m. Discussion with Facilitators and Participants

AKWASI OSEI, *Workshop Co-Chair*
Acting Chief Executive Officer
Ghana Mental Health Authority

4:15 p.m. Closing Remarks

ALAN LESHNER, *Workshop Co-Chair*
Chief Executive Officer Emeritus
American Association for the Advancement of Science
Former Executive Publisher, *Science*

AKWASI OSEI, *Workshop Co-Chair*
Acting Chief Executive Officer
Ghana Mental Health Authority

4:30 p.m. WRAP-UP AND ADJOURN

C

Registered Attendees

Prince Ababio
University of Health and Allied Sciences

Ebenezer Kojo Abakah
Akosombo International School

Jibril Abdulmalik
University of Ibadan

James Fosu-Mensah Aborampah
Mental Hospital of Ghana

Francis Acquah
Mental Health Foundation Ghana

Yvonne Adih
Alzheimer's Ghana

Emmanuel Teye Adjase
College of Health & Well-Being, Kintampo

Richmond Adusa-Poku
Janssen Pharmaceuticals, Inc.

Kenneth Ae-Ngibise
Kintampo Health Research Center

Mike R. Aggrey
Vital Assurance Health Centre

Naana Agyeman
King's College London

Kwaku Agyemang-Mensah
Unaffiliated

Grégoire Ahongbonon
Saint Camille de Lellis Association

Christopher Akanchi
Ghana Health Service

Michelle Akande
Janssen Pharmaceuticals, Inc.

Maxwell Akandem
Presbyterian Community-Based Rehabilitation

Albert Akpalu
Korle Bu Teaching Hospital

Elvis Akuamoah
Pantang Hospital

Winfred Ametefe
University of Health and Allied Sciences

Robert Akoto Amoafo
Human Rights Advocacy Centre

Philomina Amofah
National Catholic Health Secretariat

Daniel Ankrah
Korle Bu Teaching Hospital

Edith Andrews Annan
World Health Organization

Adote Anum
University of Ghana

Cynthia Anyormi
University of Health and Allied Sciences

Samuel Appiah
Mental Health Foundation

Seth Asafo
University of Ghana Medical School

Joseph Bediako Asare
Mental Health Authority

Nancy Asare-Konadu
Ghana Registered Nurses Association

Francis Asong
Voice Ghana

Osei Assibey Okyere
London School of Hygiene and Tropical Medicine

Bright Asunda
Pantang Hospital

Prince Darlington Atorkey
University of Ghana

Philip Atta, Jr.
Pantang Hospital

Lukoye Atwoli
Moi University School of Medicine

Karijn Aussems
National Epilepsy Coordination Committee

Julius Awakame
University of Leeds

Koku Awoonor-Williams
Ghana Health Service

Fiifi Ayetey
National Catholic Health Service

Titus Azagisiya
University of Health and Allied Sciences

Frank Baning
Pantang Hospital

Shantha Rau Barriga
Human Rights Watch

Carol Bernstein
New York University School of Medicine

Edwin Boachie-Yiadom
University of Ghana Medical School

Ansumana Bockarie
University of Cape Coast

François Bompart
Sanofi

Akosua Bonsu
Eastern Regional Hospital

Dennis Bortey
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Helious Dablu
Martha Educational Foundation

Courage Mawufemor Danku
Komfo Anokye Teaching Hospital

Benoit Des Roches
Centre Medical de Varennes

Venance Dey
Alzheimer's Ghana

Gordon Donnir
SmartHealth Consult Ghana

Eugene Dordoye
Ankaful Psychiatric Hospital

Andy Dowuona
MindFreedom Ghana

Fiona Dunbar
Janssen Pharmaceuticals, Inc.

Julian Eaton
CBM International

Ama Edwin
Korle Bu Teaching Hospital

Deborah Frimpong
Ghana Academy of Arts and Sciences

Joseline Fugar
Juniper Tree Counseling Center

Nazila Ganatra
Mathari National Teaching and Referral Hospital

Rosemary Gathara
Kenya Association for the Welfare of People with Epilepsy

Philip Gichana
International Institute for Legislative Affairs

Monica Gitui
Mathari Mental Hospital

Martha Gyansa-Lutterodt
Ghana Ministry of Health

Leveana Gyimah
Accra Psychiatric Hospital

Gladys Hasford
Ghana Registered Nurses Association

Ahmed Heshmat
EPOS Health Management

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Kenyatta University

Juzar Hooker
Aga Khan University Hospital

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Makueni County Department of Health

Oğuz Karamustafalioğlu
Üsküdar University

Anita Karikari
Student

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Kenya Association for the Welfare of People with Epilepsy

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Janssen Pharmaceuticals, Inc.

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University of Ghana Medical School

Francis Keya
Emerging Leadership Initiatives for Health

David Kiima
Kenya Ministry of Health

James Kingora
Kenya Medical Training College

Joyce Kingori
BasicNeeds Kenya

Paul Kioy
Kenya Society for Epilepsy

Peter Kiriba
Kenya Alcohol Policy and Control Alliance

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University of Health and Allied Sciences

Humphrey Kofie
Mental Health Society of Ghana

Donald Kokonya
Masinde Muliro University of Science & Technology

Lily Kpobi
University of Ghana Medical School

Divine Kporha
University of Health and Allied Sciences

Mary-Theodora Kukah
Komfo Anokye Teaching Hospital

David Kukluku
Makueni County Department of Health

Manasi Kumar
University College London

Mary Kuria
University of Nairobi

Edward Kusewa
Integrating Diversities for Development

Judith Kwasa
University of Nairobi

George Kweifio-Okai
Mental Health Foundation Ghana

Edith Kwobah
Moi Teaching and Referral Hospital

Isabel Laas
Janssen Pharmaceuticals, Inc.

Fabio Lawson
Janssen Pharmaceuticals, Inc.

Agnes Leshner
Montgomery County, Maryland

Alan Leshner
American Association for the Advancement of Science (Emeritus)

Hong Ma
Peking University Sixth Hospital

Sungbawiera Joshua Maana
University of Health and Allied Sciences

Fred Wambuga Maina
inThync Kenya

Hadi Manji
Aga Khan Hospital

Imran Manji
Academic Model Providing Access to Healthcare

Tina Wakukha Masai
F.G. Njenga and Nguithi Associates

Muthoni Mathai
University of Nairobi

Antony Mathulu
Makueni County Department of Health

Lydia Matoke
Herbalists Society of Kenya

Rob May
Janssen Pharmaceuticals, Inc.

Richard Mbithi
Neema Healthcare

Sylvia Mbugua
Aga Khan University Hospital

Ana-Claire Meyer
Yale University

Jennifer Micere
United States International University

Osman Miyanji
Aga Khan University Hospital
Kenya Association for the Welfare of People with Epilepsy

Japheth M. M'Ndegwa
Defense Forces Memorial Hospital

Yasmin Mohammed
Partnerships for Mental Health Development in Sub-Saharan Africa

Ellen Morgan
Grand Challenges Canada

Solomon Mpoke
Kenya Medical Research Institute

Richard Muga
Great Lakes University Kisumu

Njeri Muigai
Unaffiliated

Margaret Mungherera
World Medical Association

Ngugi Munyiri
Deutsche Stiftung
Weltbevoelkerung Kenya

John Munyu
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Abednego Musau
Africa Mental Health
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Christine Musyimi
Africa Mental Health
Foundation

Victoria Mutiso
Africa Mental Health
Foundation

Rhodah Mwangi
Africa Mental Health
Foundation

Tim Mwaura
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Joe Mwenda
Kaizora

Matiko Mwita
Mathari Mental Hospital

Joyce Nato
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F. G. Njenga and Nguithi
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Kenyatta National Hospital

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Emeka Nwefoh
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Tiberry Nyakwana
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Sammy Ohene
University of Ghana Medical School

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Kenyatta National Hospital

Linnet Ongeri
Kenya Medical Research Institute

Akwasi Osei
Ghana Mental Health Authority

Caleb Othieno
University of Nairobi

Rose Sally Owusu
Komfo Anokye Teaching Hospital

Ruth Owusu-Antwi
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Selina Owusu Boadu
University of Ghana

Priscilla Owusu-Sekyere
Janssen Pharmaceuticals, Inc.

Fatma Pole
Kenya Television Network

Beverly Pringle
National Institute of Mental Health

Augustine Sagoe
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Andrew Schroeder
Direct Relief

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Stephen Sevalie
University of Nairobi

Rakhee Shah
Janssen Pharmaceuticals, Inc.

Fred Siyoi
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Stephanie Smith
Partners In Health
Harvard Medical School

Sodzi Sodzi-Tettey
Institute for Healthcare Improvement

Dilraj Singh Sokhi
International Livestock Research Institute

Mohammed Soori
Tamale Central Hospital

Cynthia Sottie
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Catherine Syengo-Mutisya
Mathari National Teaching & Referral Hospital

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Graham Thornicroft
King's College London

Joe Turkson
Korle Bu Teaching Hospital

Patrick Twumasi
Ministry of Education

M. Providence Umuziga
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Linda Vanotoo
Regional Director of Health Service

Jairus Vincent
Faith-based organization

Ivaylo Vlaev
Warwick Business School

Sitawa Wafula
My Mind, My Funk

Peter Waiganjo Wagacha
University of Nairobi

Nandy Ntiamoah Walker
International Central Gospel Church Compassion Rehab Center

Joyce Wangari
Kenya National Association of the Deaf

Helen Wangui
Archdiocese of Nyeri Caritas

Benedict Weobong
London School of Hygiene and Tropical Medicine

Beatrice Dwumfour Williams
University of Ghana Medical School

Tedla Wolde-Giorgis
Ministry of Health, Ethiopia

Steve Wooding
Janssen Pharmaceuticals, Inc.

Nana Yaa
Mental Health Foundation Ghana

Sheik Abdul-Kareem Yakubu
Gub-Katimali Society

Peter Yaro
BasicNeeds Ghana

D

Participant Biographies

Jibril Abdulmalik, H.P.M., M.S., MBBS, is a lecturer in psychiatry with the College of Medicine, University of Ibadan, Nigeria, and a consultant psychiatrist with the University College Hospital, Ibadan. His research interest is in public mental health, especially mental health services research, with emphases on the successful integration of mental health into primary care, and the provision of services to vulnerable populations such as street children, young children, adolescents, and prisoners. Dr. Abdulmalik has a master's degree in Health Management and Planning, as well as in Child and Adolescent Mental Health. He is currently working on an International Master's in Mental Health Policy and Services with the University of Lisbon, Portugal. He has been actively involved in piloting the implementation of the World Health Organization's Mental Health Gap Action Program in Nigeria. He is also a Co-Investigator (Nigeria) on the EMERALD (Emerging Mental Health Systems in Low- and Middle-Income Countries) Project.

Francis Acquah, R.N., is president of the Mental Health Foundation of Ghana, and has more than 25 years of experience as a psychiatric nurse across public and private health care settings. He is a credentialed mental health nurse accredited by the Australian College of Mental Health Nurses. He has undertaken numerous roles, including triage/intake nurse, community psychiatric nurse, clinical nurse educator, and community educator. He has also worked in a range of settings, including acute mental health services, crisis assessment and treatment teams, Orygen Youth Health and The Melbourne Clinic, and as a specialist pharmaceutical advisor to medical personnel on psychotropic drugs with a leading pharmaceutical company. He has explored transcultural psychiatry and provided

psychocultural counseling, and has been a strong advocate for refugees and immigrants, especially within the African community. He is a mental health First Aid instructor and has used his mental health nursing experience to educate the community about mental health and the reduction of stigma. Mr. Acquah is the clinical director of Positive Mental Health Program, which provides mental health support, counseling, psychosocial rehabilitation, and reintegration into society. He organized the first community and professionals' forum to educate African and mental health professionals about mental illness in Australia. In 1994, he wrote his thesis on "Mental Health of Immigrants and Refugees to Multicultural Australia: A Clinician's Perceptive." He is a Mental Health First Aid instructor and has used his experiences to educate the community about mental health and reduction of stigma. He is a community trainer and was involved in the delivery of "Stepping out of the Shadows: Reducing Stigma in Multicultural Communities." Mr. Acquah has won multiple awards and honors, including the Living Legend Award from Celebration of African Australian National Awards in 2013; Meritorious Service Award for Excellence in Multicultural Affairs in 2013; Fellow of the Australian College of Mental Health Nurses; Community Leader Award from African Media Awards in 2014; and Australia Day Award in 2015. He is also president of the Rotary Club of Greensborough and president of the Mental Health Foundation of Ghana, a charity organization based in Australia and Ghana.

Emmanuel Teye Adjase, M.D., M.P.H., is a Distinguished Fellow of the Ghana Medical Association and has worked as both a doctor and a public health physician specialist. He has extensive experience across statutory, national, international, independent, voluntary, and community sectors. Dr. Adjase, with expertise in health professionals education and training, holds an M.D., an M.P.H., and an Honorary Doctorate of Science Degree from the University of Winchester, England. He is the immediate past president of the International Academy of Physician Associate Educators, member of The West African Health Organization Regional Council for Health Professions Education in the Economic Community of West African States (ECOWAS) Region, and a member of the World Health Organization Technical Working Group on Health Workforce Education Assessment Tools. Currently, Dr. Teye Adjase is the Ghana Lead for the Kintampo Project, which focuses on improving mental health services throughout Ghana.

Grégoire Ahongbonon was born in Bénin in 1952, in a village north of Porto Novo, the country's capital. He and his wife set up a prayer group after a period of great personal distress. They called the group "Association St.-Camille-de-Lellis," named after the patron saint of caretakers. The group visited the sick at the nearby University Hospital. They catered to persons living with AIDS, lepers, and prison inmates for years. In 1990, he shifted his focus to assisting the mentally ill. Twenty-five years later, fueled by an unrelenting faith, a formidable energy, and the unique qualities of both an entrepreneur and as a therapist, he has developed an expansive mental health system, spanning Côte d'Ivoire, Bénin, Togo, and Burkina Faso. More than 60,000 patients have returned to a family life under the care of his organization, which has seven in-patient centers with 200 patients per unit. Most of the caretakers in these centers are remitted, previous patients who receive training from visiting psychiatrists at one of seven St.-Camille Rehabilitation Centers. There are additionally two ambulatory general St.-Camille hospitals, which service both the mentally ill and the local population, for free or for a minimal fee. More than 45 St.-Camille Relay Centers have piggy-backed onto Catholic dispensaries across Côte d'Ivoire, Bénin, and now, Togo, which serve as dispensaries for patients to receive medication and treatment centers, where new cases are brought in from surrounding villages. Association St.-Camille-de-Lellis is a nongovernmental organization (NGO) that relies on charity from small NGOs across Europe and Canada, several embassies, and the Quebec government. Ahongbonon and the St.-Camille have received many international awards for their efforts, including awards from the World Health Organization and the Vatican as well as the Franco Basaglia Award. He and his team continue to work toward reducing the stigma of mental illness and expanding St.-Camille's mission to provide mental health and general medical community care to additional African countries.

Albert Akpalu, M.D., is a senior physician specialist, head of the Neurology and Stroke Units at Korle Bu Teaching Hospital, and a lecturer at the University of Ghana Medical School. He is currently Principal Investigator for the H3 Africa SIREN Stroke Investigative Research and Education Network Phenomics arm of the Stroke in Blacks study, the Wessex Ghana Stroke project, and Ghana Fights Against Epilepsy Initiative. He is a member of the Movement Disorders Society, International League Against Epilepsy/Epilepsy Society of Ghana, International Brain

Research Organization, West African College of Physicians, and the Ghana College of Physicians and Surgeons.

Joseph Bediako Asare, M.D., is an associate adjunct professor at the School of Medical Health Sciences, University of Development Studies, in Tamale, Ghana. He also serves as chair of the Mental Health Board of Ghana and chair of the faculty of psychiatry with the Ghana College of Physicians. He is a Fellow of the Royal College of Psychiatrists in the United Kingdom and a Fellow of the West African College of Physicians, for which he served as vice president and guest lecturer in 1999. He is a Foundation Fellow of the Ghana College of Physicians and Surgeons, and was awarded the Grand Medal of the Republic of Ghana Civil Division in 1997 for meritorious service. He completed his postgraduate training in Psychiatry in both Australia and the United Kingdom, and served as chief psychiatrist in Ghana for more than 21 years, until retiring in 2004. During this period, he was an advisor to the Government of Ghana and was an advisor to the World Health Organization. He was appointed as an advisor to the Eritrean Government for 1 month and he presented many publications on mental health on an international platform. He initiated the development of the current mental health law in Ghana, and helped develop community mental health and the establishment of the Narcotics Control Board. He was appointed to the International Narcotic Control Board in Vienna for 5 years. He also offered humanitarian services, including working as a mental health trainer/consultant, through the International Medical Corps, in disaster areas such as Indonesia, Pakistan, and Sierra Leone. He has written many scientific publications and has peer-reviewed dozens of articles.

Lukoye Atwoli, MBCh.B., M.Med., Ph.D., graduated from Moi University with a Bachelor of Medicine and Bachelor of Surgery degree in 2001, and later studied Psychiatry at the University of Nairobi, graduating in 2006. He was further trained in Disaster Mental Health at the Hyogo Institute of Traumatic Stress in 2006, after which he worked for 1 year in northeastern Kenya near the Somali border. He was also involved in designing and coordinating the mental health and psychosocial intervention for survivors of Kenya's postelection violence in 2008. He is currently the dean of Moi University's School of Medicine and teaches in the Department of Mental Health. He has been involved in a number of research projects in Kenya, South Africa, and Europe through the World Mental Health Surveys initiative. His current research focuses on

trauma and posttraumatic stress disorder. Apart from research and teaching, he provides clinical care to patients at the Moi Teaching and Referral Hospital and several other hospitals in Eldoret, Kenya.

Koku Awoonor-Williams, M.D., M.P.P., M.P.H., is regional director of health service for the Upper East Region of Ghana and a consultant in public health with interests in health systems development, childhood survival, reproductive health, and health program assessments and evaluation. He has made major contributions to the health sector and public health community, both in Ghana and internationally. He was at one time the national coordinator of the Ghana Community-based Health Planning and Services Program, and is currently chair of the Navrongo Health Research Centre Institutional Ethics Review Board. He was a Co–Principal Investigator of the Mobile Technology for Community Health and Ghana Essential Health Intervention Projects, as well as a contributor to several other health projects. He serves on the Board of Global Doctors for Choice, and he is a collaborating scientist of the Averting Maternal Death and Disability Project of Columbia University.

Shantha Rau Barriga, MALD, is director of the disability rights program at Human Rights Watch. She is responsible for overseeing research and advocacy on discrimination and human rights violations against people with disabilities worldwide. She has carried out research and advocacy on a range of issues, including abuses against people with mental disabilities in Ghana, barriers to education for children with disabilities in Nepal, violence against women with disabilities in northern Uganda and India, and barriers to political participation in Peru. She has also worked closely with researchers across thematic and regional divisions to produce reports that address disability issues in Argentina, China, Croatia, Indonesia, Iraq, Japan, Kenya, South Sudan, Turkey, and the United States. She was a member of the UNICEF Advisory Board for the 2013 State of the World's Children report and serves on the World Health Organization expert group on violence against children with disabilities in institutional settings. She is also a member of the International Network of Women with Disabilities. Before joining Human Rights Watch, she participated in the negotiations toward the United Nations Convention on the Rights of Persons with Disabilities. She has worked on a range of issues in the disability field, including legal capacity, accessibility, women and children with disabilities, sexual and gender-based violence, rehabilitation, and access to justice. She received degrees from the Fletcher

School of Law and Diplomacy at Tufts University and the University of Michigan, and she was a Fulbright Scholar to Austria. She speaks German and Kannada, an Indian language.

Carol Bernstein, M.D., is associate professor of psychiatry, vice chair for education in psychiatry, and director of residency training in psychiatry at the New York University (NYU) School of Medicine. From 2001–2011, Dr. Bernstein also served as the associate dean for graduate medical education and the designated institutional official for Accreditation Council for Graduate Medical Education–accredited training programs at NYU. She is a past president of the American Psychiatric Association (APA), and has served the Association as Vice-President, Treasurer and Trustee-at-Large and as the chair of multiple committees. She has served as a spokesperson for the APA on many occasions and received the 1997 exemplary psychiatrist award from the National Alliance for the Mentally Ill. She was the recipient of the APA/National Institute of Mental Health Vestermark Award in Psychiatric Education and the APA Alexandra Symonds Award for contributions in the advancement of women in leadership and in women's health. Dr. Bernstein has devoted her entire career in medicine to the education and training of the next generation of psychiatrists. She completed medical school at the Columbia University College of Physicians and Surgeons. Following an internship in Internal Medicine at St. Luke's/Roosevelt Medical Center in New York, she completed her psychiatric residency training at Columbia University and the New York State Psychiatric Institute. Dr. Bernstein is active in many national psychiatric associations in addition to the APA. These include the American College of Psychiatrists (she was elected to the Board of Regents in 2012), the Group for the Advancement of Psychiatry, and the American Board of Psychiatry and Neurology, among others. In 2003, Dr. Bernstein was selected as a Fellow in ELAM (Executive Leadership in Academic Medicine), a national program designed to promote leadership for women in medicine. In 2005, she completed the Physician Leadership Development Program at NYU as well as the Graduate Medical Education Leadership Program of the Accreditation Council for Graduate Medical Education (ACGME). In 2010, Dr. Bernstein was appointed to the Board of Directors of the ACGME—the body that accredits the more than 8,000 residency and fellowship training programs in the United States. Dr. Bernstein has written numerous articles and chapters on psychiatric education and has served as a peer reviewer for the *American Journal of Psychiatry* and *Academic Psychiatry*. She has served on the

editorial boards of *Academic Psychiatry*, the *Journal of Psychiatric Services*, and *Focus*, has presented at more than 70 conferences and meetings, and has been the recipient of a number of visiting professorships. Dr. Bernstein hosts a weekly call-in show for consumers on Sirius Radio's Doctor Radio Channel, which is sponsored by the NYU Langone Medical Center.

François Bompart, M.D., is vice president, deputy head, and medical director of the Sanofi Access to Medicines Department. This department brings together the Sanofi Group's areas of expertise to address the challenge of access to health care in developing and emerging countries for specific diseases: malaria, tuberculosis, sleeping sickness, leishmaniasis, as well as mental illnesses and epilepsy. Since 2012 he has served as the chairperson of the Global Health Initiative (GHI) of the European Federation of Pharmaceutical Industries and Associations. The GHI gathers the research-based European pharmaceutical companies, which are actively engaged in initiatives to improve access to health care around the world.

Akosua Bonsu, R.N., is a mental health nurse who is currently serving as the Eastern Regional Hospital mental health coordinator. She completed her bachelor's degree in Psychology from the University of Ghana.

Fiona Dunbar, MBCh.B., MFPM, is the vice president of Global Medical Affairs in Janssen's Global Commercial Strategy Organization. She joined Janssen in 1988 and has held various positions in clinical research, pharmacovigilance, and medical affairs in Canada and South Africa. She was appointed to her global position and established the Global Medical Affairs function in 2007. Prior to joining Janssen, she was a medical officer at the South African Institute of Medical Research. She holds an MBCh.B. from the University of the Witwatersrand, South Africa, and an MFPM from the Royal College of Physicians of the United Kingdom.

Julian Eaton, M.Sc., MBBS, MRC Psych., is a British psychiatrist and senior mental health advisor for CBM, based in Lomé, Togo. His work involves engaging with governments and other service providers to strengthen mental health systems, a process that is strongly linked to the World Health Organization's Mental Health Gap Action Program, of which CBM has been a key supporter since its inception. He also focuses on promoting CBM's broader priority of working for an inclusive society where service users are empowered to participate in processes of policy

and legislation development as well as their implementation. CBM aims to promote meaningful application of evidence-based practice. He has published on issues relating to scaling up mental health services in low-income countries and empowerment of service users. In 2015 he started a role as a lecturer and a Ph.D. candidate at the Centre for Global Mental Health at the London School of Hygiene and Tropical Medicine alongside his global mental health work.

Tedla Giorgis, Ph.D., is a clinical psychologist with more than 35 years of experience. Dr. Giorgis has consulted in the areas of clinical psychology, mental health services strategies, and organizational development with several organizations, including the World Bank, Center for Population and Development Activities, UNICEF, Ethiopia–Federal Ministry of Health (FMOH), and more. He has extensive international work experience, including in 15 African countries, India, and the Caribbean. Dr. Giorgis has several refereed publications, and directed the International Mental Health Division in the Washington, DC, Department of Mental Health for 28 years. Currently he is an international and mental health advisor to Ethiopia–FMOH. He is involved in the Mental Health Gap Action Program and Program for Improving Mental Health Care projects supported by the World Health Organization and Department for International Development, respectively.

Martha Gyansa-Lutterodt, M.Sc., B.Pharm., is the director of pharmaceutical services and also the chief pharmacist of Ghana. She attended Kwame Nkrumah University of Science and Technology, Ghana, Leeds University, United Kingdom, and Ghana Institute of Management and Public Administration's School of Governance and Leadership. She serves on several national and international boards, including National Institute for Clinical Excellence International U.K. and is an expert member of the World Health Organization (WHO) Expert Committee on Medicines Policies and Management in Geneva. She has served on several WHO and World Trade Organization, West African Health Organization consultations on Trade Related International Property Rights (TRIPS) as well as medicine policies. She has several publications on various topics such as TRIPS, DOHA Declaration, access to medicines, and policy options for Ghana. She has also published an article titled "Antibiotic Resistance in Ghana" through the *Lancet Infectious Diseases Journal*, among others. She is also the chair for the Ghana chapter of the International Society for Pharmacoeconomics and Outcomes Research.

She has coordinated several assessments of the pharmaceutical sector in Ghana with meaningful contributions to the health sector dialogue. As one of the drafters of Ghana's Health Policy 2007, she believes in evidence-based policy decision making. She is constantly exploring ways of improving the processes that allow health policies to move into practice that provides sustainable outcomes, especially for the most vulnerable. Ms. Gyansa-Lutterodt is a Fellow of the West African College of Pharmacists and a Foundation Fellow of the Ghana College of Pharmacists. She is the current chair for Ghana's Antimicrobial Resistance Working Group. She was recognized and awarded for her contribution to pharmacy development and practice in Ghana by the 2012 Ghana Women of Excellence Awards.

Ahmed Heshmat, M.B.A., M.S., has more than 25 years of experience working in postconflict and fragile countries, including Afghanistan, Egypt, Saudi Arabia, Yemen, and West Bank/Gaza. He has held long-term senior management and team leader positions in difficult and complex situations, including Afghanistan , Egypt, Saudi Arabia and Yemen; his responsibilities included networking and liaison with multiple stakeholders and drafting feasible and possible scenarios. He is familiar with the U.S. Agency for International Development, European Union, and World Health Organization principles, methods, and guidelines for project delivery, operations, management, monitoring, evaluation, and financial affairs. He has an M.B.A. from the Business School of the University of Gloucestershire, Cheltenham, UK, and a master's degree in Psychiatry & Neurology from Cairo University, Egypt. He has more than 25 years of comprehensive experience in the public health care system, with emphases on mental health and psychosocial support, decentralized management systems, health reform, monitoring and evaluation, maternal and child health care, reproductive health, organizational and individual capacity building as well as in Total Quality Management in health services. Also, he has experience in the fields of health system research, health education, quality client service, and human resource development.

Sylvia Kaaya, M.D., Ph.D., is an associate professor in the Psychiatry and Mental Health Department of the Muhimbili University of Health and Allied Sciences located in Dar es Salaam, Tanzania. She is the current dean of the School of Medicine and is involved in the training of medical undergraduates and postgraduates. During her period as chair of the Department of Psychiatry, she worked with colleagues to initiate the

postgraduate Master of Medicine Psychiatry program. Her clinical commitments include mental health service provision within a mental health team for a catchment area where residents with the lowest socioeconomic status in the Dar es Salaam region reside. Her research interests have focused on interventions to reduce risky sexual and drug use behaviors in adolescents, and recognition and prevention of depression in perinatal women living with HIV. She also served as the Co-Investigator for a technical support subgrant for the President's Emergency Plan for AIDS Relief-supported HIV care and treatment program in Dar es Salaam.

K. Oğuz Karamustafalioğlu, M.D., is a professor of psychiatry in Üsküdar University in Istanbul, Turkey. Most of his publications relate to depression and anxiety. He participated in the Ministerial Mental Health Conference of Europe as a Turkish Delegate. He has been advising in the mental health systems since 1999, including post-disaster work. He is currently the Ambassador to Turkey of the European College of Neuropsychopharmacology.

David Kiima, MBCh.B., MRC Psych., is the director of mental health in the Ministry of Medical Services in Kenya. He obtained his MBCh.B. and Master of Medicine at the University of Nairobi. He has a Diploma in Child and Adolescent Psychiatry from the Institute of Psychiatry London. He has worked for the Kenyan government as a medical officer since 1981; a consultant psychiatrist (1987–1992); the deputy director of mental health (1992–1997); and the director of mental health (since 1998). He participated in the development of the *World Health Organization (WHO) Resource Book on Mental Health, Human Rights and Legislation 2005* as well as the *WHO Mental Health Policy and Service Guidance Package 2003*.

Joyce Kingori, M.Sc., M.S., has worked at BasicNeeds UK since 2005 as the country program manager responsible for Kenya and South Sudan. She has focused on the topics of Kenya and South Sudan strategy development, resource mobilization, donor liaison, partner development, monitoring, shared learning, gender- and public health–related policy engagement, representation, and new business development. She directly reports to the director of corporate services at BasicNeeds UK. Prior to this position, she worked for 5 years at the Africa Medical Research Foundation (AMREF) in Kenya as the community-based health unit manager. She was responsible for the strategy, fundraising, and capacity

building of the health workforce in the region as well as monitoring and evaluation. She participated in several evaluation missions. She also designed the community tuberculosis program in both urban slums and hard-to-reach districts in Kenya. She had previously worked at AMREF in the capacity of a gender support program officer in Kenya, where she spearheaded the mainstreaming of gender in all programs, monitoring, and evaluations.

Paul G. Kioy, MBCh.B., M.Sc., is a neurologist and neurophysiologist, associate professor, and former chairman of the Medical Physiology Department at the University of Nairobi. He also serves as chairman of the National Epilepsy Coordination Committee, which was founded in 2010; chairman of the Kenya Society for Epilepsy; and founder chairman of Society of Neuroscientists of Africa. He is a former associate dean of preclinical sciences former chairman Medical Physiology Department and former chairman of the Kenya Physiology Society.

Humphrey Kofie, M.Phil., is executive secretary for the Mental Health Society of Ghana. Previously, he served as a subproject officer for the Ghana Poverty Reduction Project and the Social Investment Fund, and assisted in the initiation of socioeconomic projects to reduce poverty by providing program and advisory support. He also worked as a project officer with the Health Foundation of Ghana, where he assisted in the development of health programs in several regions throughout Ghana. He served as the member of a delegation through the Ghana Government in the Sixth Session of the Conference of States Parties to the Convention on the Rights of Persons with Disabilities, and has served as a facilitator in various capacities involving community mental health care delivery. He obtained his bachelor's degree in Sociology at the University of Ghana, and a Master of Philosophy degree in Social Work with an emphasis on the development and strategic planning for social welfare and social issues in contemporary Ghana.

Lily Kpobi, M.S., M.P.H., is as an assistant lecturer with the Department of Psychiatry at the University of Ghana School of Medicine & Dentistry, and practices as a clinical psychologist in the leading teaching hospital in Ghana. She recently completed a second master's degree in Public Mental Health, where her research explored the barriers and facilitators for the use of the new mental health information system at the Accra Psychiatric Hospital. She also has been a key player in recent at-

tempts at task shifting in mental health care through the placement of psychology graduates within various communities as part of their National Service. Her role has been to facilitate the placement, training, and supervision of these community mental health workers. Her dream is to see mental health care elevated into a position of importance in Ghanaian health discourse as well as in creating awareness about mental illness and the experience of living with it.

Alan Leshner, Ph.D., M.S., is chief executive officer, emeritus, of the American Association for the Advancement of Science (AAAS) and former executive publisher of the journal *Science*. Before this position, Dr. Leshner was director of the National Institute on Drug Abuse at the National Institutes of Health. He also served as deputy director and acting director of the National Institute of Mental Health, and in several roles at the National Science Foundation. Before joining the government, Dr. Leshner was professor of psychology at Bucknell University. Dr. Leshner is an elected Fellow of AAAS, the American Academy of Arts and Sciences, the National Academy of Public Administration, and many other professional societies. He is a member and served on the Governing Council of the Institute of Medicine of the National Academies of Sciences, Engineering, and Medicine. He was appointed by President George W. Bush to the National Science Board in 2004, and then reappointed by President Obama in 2011. Dr. Leshner received Ph.D. and M.S. degrees in Physiological Psychology from Rutgers University and an A.B. in Psychology from Franklin and Marshall College. He has been awarded seven honorary Doctor of Science degrees.

Hong Ma, M.D., holds the titles of senior psychiatric doctor of Peking University Institute of Mental Health; executive director of the National Center for Mental Health, China-Centers for Disease Control and Prevention; and deputy director, Office of National Mental Health Programs, Ministry of Health. Dr. Ma has worked as a clinical psychiatrist since the 1980s, specializing in crisis intervention and prevention. Dr. Ma performed many crisis interventions for survivors of natural disasters and man-made events. She is also interested in the development and improvement of the mental health care system and the integration of psychiatric hospital and community resources as a program officer of the Department of Disease Control of China's Ministry of Health (MoH). Since 2004, Dr. Ma has managed and led the greatest project regarding mental health, entitled "government-supplemented treatment for local

severe mental disorders" (the "686 Project") funded by the MoH, which built the database of psychotic patients and provided free treatment and follow-up for poor patients in demonstration sites. The project has become the routine work of the MoH. Dr. Ma also worked closely with the Chinese government in terms of public health, health promotion and disease prevention, and development of mental health legislation and policy making. She also led or participated in many international programs. The experience she gained from all the national and international projects was abundant, including projects administration and collaboration with other researchers and organizations/agencies.

Imran Manji, B.Pharm., is a senior pharmacist at the Academic Model Providing Access to Healthcare (AMPATH) and an adjunct assistant professor at the Purdue University College of Pharmacy. Based in Eldoret, Kenya, he graduated with a Bachelor of Pharmacy from the University of Nairobi and joined the Moi Teaching and Referral Hospital, one of the partner institutions of AMPATH. He oversees the pharmacy activities of AMPATH's Primary Health Care and Chronic Disease Management Programs, where his main areas of focus are in exploring innovative ways of sustainably improving the access to quality medicines in rural health facilities within western Kenya. He has led the development of the Revolving Fund Pharmacy model, an innovative model for which he is the lead implementer and manager. This is just one of the models he has developed, implemented, and managed. He also manages one of the first pharmacist-run Anticoagulation Clinics in sub-Saharan Africa at the Moi Teaching and Referral Hospital, Eldoret. In addition, he precepts advanced clerkship rotation students from the Purdue University College of Pharmacy, clinical pharmacy interns from the University of Nairobi, and pharmacy residents in the Global Health Pharmacy Residency Exchange Program. He is pursuing an M.S. in Global Health: Non-Communicable Diseases at the University of Edinburgh.

Ana-Claire Meyer, M.D., MSHS, is an assistant professor of neurology at the Yale School of Medicine and visiting scientist at the Kenya Medical Research Institute. Dr. Meyer leads research with the primary goal of expanding access to neurological care to underserved populations domestically and to underserved regions globally. Her research focuses on epilepsy treatment and infectious diseases of the nervous system. She has active projects focused on the global burden of disease due to epilepsy, preventive strategies for cryptococcal meningitis, and evaluation of

health and economic outcomes of Kenyans with HIV-associated cognitive impairment. She also works to improve access to neurology training for physicians from underserved regions.

Osman Miyanji, M.D., is a senior consultant in pediatrics and pediatric neurology at the Aga Khan University Hospital in Nairobi & Gertrude's Children Hospital. Also, he is an Honorary Lecturer at Aga Khan University Hospital, Nairobi. He is founder/director (1982) and current chair of the Board of Directors (since 1997) of the Kenya Association for the Welfare of People with Epilepsy. He is an affiliate of the International Bureau for Epilepsy, and one of the founders of Kenya Society of Epilepsy, an affiliate of the International League Against Epilepsy.

Solomon Mpoke, Ph.D., E.M.B.A., is the director and chief research officer, Centre for Biotechnology Research and Development, at the Kenya Medical Research Institute (KEMRI). Previously he was the head of the KEMRI Graduate School of Health Sciences and chief research officer (training). He was the graduate program coordinator at the Institute of Tropical Medicine and Infectious Diseases, and coordinator of the Infectious Diseases Program at KEMRI/Japan International Cooperation Agency project. Dr. Mpoke has an Executive Master of Business Administration from Jomo Kenyatta University of Agriculture and Technology; was a Postdoctoral Research Fellow at the Department of Pharmaceutical Chemistry, School of Pharmacy, University of California, San Francisco; completed his Doctorate in the Department of Biology at Wesleyan University, Middletown, Connecticut; and completed his B.S. at the University of Nairobi. He is a member of the Medical Sciences Advisory Research Committee, Ministry of Health; member of the task force to review and evaluate scientific information on safety of genetically-modified foods on human health, 2012/2014; member of the National Tobacco Control Board; and an executive member of the African Field Epidemiology Network.

Richard Otieno Muga, M.D., is currently a full-time associate professor at the Great Lakes University of Kisumu and deputy vice chancellor. He is responsible for teaching Health Policy, District Health Systems Development, and Child Health at the Master's level to students of Community Health and Development. He has 12 years of teaching experience. He has published a number of papers in peer-reviewed journals and supervised a number of master's theses, and conducts innovative research on health

systems strengthening. He was appointed chair of the National Hospital Insurance Fund in 2010 by the President of Kenya. He holds an M.D. with specialist training in Child Health and Public Health. In addition, he has postgraduate training in Health Systems Management (Israel) and Tropical Diseases (Nairobi). His strengths include leadership, teaching, health systems management, planning of health services, and strategic public-sector negotiations. Previously, he served as chief executive officer of the National Coordination Agency for Population and Development in the Ministry of Planning and National Development. During this time he led the agency's work on public-private partnerships, especially the output-based Aid on Reproductive Health. Part of his mandate was high-level advocacy for policy change for universal coverage for health care. His public service experience involved leadership and health systems management, and hospital management at different levels in the health sector. For 5 years he was director of medical services for Kenya (director general in Ministry of Health). For another 5 years he was regional director of health services. He served as chair of the Pharmacy and Poison Board of Kenya as well as the registrar for the Medical Practitioner and Dentist Board of Kenya. He served as a member of the Nursing Council of Kenya for 5 years, during which he introduced capacity-building programs for nurses. He chaired the National Taskforce on Kenya Medical Supplies Agency, responsible for procurement of drugs and supply chain management. Currently, he is on the advisor's team for the Minister for Medical Services on Policy Reform in Health. He has had the opportunity to interact in different local and international forums, including World Health Organization conferences in Geneva and short courses on strategic public-sector negotiations at Harvard University. During his career in public service, he received Head of State awards for dedicated service to the public, including Moran of the Burning Spear, 2001, and Order of the Grand Warrior, 1994.

John Munyu is the chief executive officer of the Kenya Medical Supplies Authority, the governmental organization in charge of promoting health care for Kenyans through the procurement and distribution of quality medical commodities.

Victoria Mutiso, Ph.D., has gained extensive experience in community mental health over the past 7 years. She has just concluded a study as Principal Investigator on task shifting in community mental health, where she spearheaded the integration of mental health services in prima-

ry health care facilities in a rural district in Kenya, bringing together traditional faith healers and nurses and clinical officers. She was instrumental in starting mental health literacy days at the rural facilities; this model has been emulated by other community health facilities in neighboring districts. She has been a point of contact with a network of community health workers that she established in these districts, and worked with the network on community mobilization. She also worked with nurses and clinical officers in the health facilities in those same districts. She has coordinated and co-led focus groups in various communities, including adapting instruments for local context for use with target populations.

Joyce Nato, M.D., is a psychiatrist who has been working with the World Health Organization (WHO) since 2003. Prior to this, she worked with Ministry of Health at all levels since 1986 (district, provincial, and national levels), rising through ranks to the head of noncommunicable disease (NCD) prevention and control at the Ministry national level. She used that experience when she joined WHO as the program officer for prevention and control of NCDs, mental health problems, and tobacco use.

Chris Natt, M.Sc., M.A., is a designer and strategist currently working with the HELIX Centre, a studio of designers and clinical researchers based at St. Mary's Hospital in London. He is a graduate of the Innovation Design Engineering Masters at the Royal College of Art. His recent work includes the development of a waterless toilet system in Madagascar and a collection of innovations to help in the safe removal of landmines from land that have been devastated by war.

David Ndetei, MBCh.B., D.P.M., MRC Psych., M.D., FRCPsych., is a professor of psychiatry at the University of Nairobi, Kenya, and the founding director of the Africa Mental Health Foundation, a nongovernmental organization dedicated to research for evidence-based policy and practice in mental health, and promotion of neurological health and healthy behavior. His passion is research to generate evidence for policy and best practice in the provision of affordable, appropriate, available, and accessible mental health services for all. He is the current chair of the Africa Division of the Royal College of Psychiatrists (UK) and Zone 14 representative of the World Psychiatric Association. He has served as the Principal Investigator for nearly all Kenyan published clinical and community epidemiological studies on mental health. He has authored 6

books and 21 monographs, and more than 250 publications in peer-reviewed journals.

Frank Njenga, M.D., is former chair of National Agency for the Campaign Against Drug Abuse, the founding president of the African Association of Psychiatrists & Allied Professions, the former chair of the Kenya Psychiatric Association, and a consultant psychiatrist in Kenya with a special interest in youth and drug addiction. He was trained in both Kenya and the United Kingdom. He has an M.D. and is a Fellow of the Royal College of Psychiatrists (UK). Besides his work in the medical field, he has, for the past 25 years, been involved in the expansion of Democratic space, as founder chair of the Institute of Education in Democracy. As a scientist he has lectured extensively throughout the world and is a much sought-after expert who has appeared in many local and global media outlets, BBC, and CNN. He also works as a teacher, author, and social commentator. For many years, he was the host of the popular television program Frankly Speaking. The program focused on many social issues, including mental health and addiction. He is extensively published in many peer-reviewed journals and writes books for children.

Kwadwo Obeng, M.D., is a resident in Psychiatry at the Ghana College of Physicians. He currently practices at the Accra Psychiatric Hospital, Pantang Hospital, and the University of Ghana. He is involved in psychiatric awareness creation via mass media communication. He is also involved in clinical training and the examination of medical students from the University of Ghana Medical School, as well as for student medical assistants from Central University.

Sally-Ann Ohene, M.D., graduated from the University of Ghana Medical School. She is a pediatrician by training, and now serves as a public health physician currently working at the World Health Organization Country Office in Ghana. She is the disease prevention and control officer and is responsible for the oversight of programs involving non-communicable diseases, including mental health.

Sammy Ohene, MBCh.B., is head of psychiatry at the University of Ghana Medical School and Korle Bu Teaching Hospital in Accra, Ghana. After completing his basic medical course in the University of Ghana, he went on to train in Psychiatry at the University of Benin Teaching Hospital, Nigeria, before returning to take up a teaching position in his old

medical school. He also studied Substance Abuse in Cleveland, Ohio. He is also a consultant psychiatrist for the Korle Bu Teaching Hospital and the Accra Psychiatric Hospital, teaching undergraduates and training residents. Dr. Ohene has been engaged in delivery of and research into various aspects of mental health in West Africa for more than 25 years. A member of the technical committee of the Mental Health Authority of Ghana, he has written and made presentations on mental health in Ghana at many international meetings. Dr. Ohene holds Fellowships in Psychiatry from the Ghana College of Physicians and Surgeons as well as the West African College of Physicians, where he has been chief examiner in Psychiatry. He is a member of the American Psychiatric Association and the Commission on African Affaires of the International League Against Epilepsy. He also chairs the board of the Mental Health Society of Ghana.

Akwasi Osei, MBCh.B., FWACP, FGCP, is the chief psychiatrist of Ghana Health Service and a part-time lecturer in various medical institutions in Ghana. He was one of the key technical drafters and the main advocate for the passage of the Mental Health Bill for Ghana.

Vikram Patel, MRC Psych., Ph.D., F.Med.Sci., is affiliated with the Centre for Global Mental Health at the London School of Hygiene and Tropical Medicine. He is also the co-director of the Centre for Chronic Conditions and Injuries for the Public Health Foundation of India. He is a psychiatrist with a primary interest in global mental health. He is supported by a Wellcome Trust Senior Research Fellowship in Clinical Science. He is also the co-founder of Sangath, an Indian nongovernmental organization that has pioneered task-sharing experiments in the areas of child development, adolescent health, and mental health. In 2011, he was appointed to two Government of India health committees, the Mental Health Policy Group (which drafted India's first national mental health policy, launched in October 2014) and the National Rural Health Mission Accredited Social Health Activist Mentoring Group. He also serves on three World Health Organization committees. He was co-chair of the Scientific Advisory Board of the Grand Challenges in Global Mental Health, and lead editor of the Disease Control Priorities Network volume on mental, neurological, and substance use disorders, as well as the lead editor of the *Lancet* series on global mental health (2007 and 2011), the PLoS Medicine series on packages of care for mental disorders (2009) and the series on Global Mental Health Practice (2012 onward), and co-editor of the International Journal of Epidemiology series on psychiatric

epidemiology and global mental health (2014). He is editor of two new Oxford University Press textbooks on global mental health (*Global Mental Health: Principles and Practice*, 2013, and *Global Mental Health Trials*, 2014).

Beverly Pringle, Ph.D., is chief of the Global Mental Health Research Program at the National Institute of Mental Health (NIMH), where she provides scientific leadership for global research activities, monitors NIMH's international grants and activities, and provides technical consultation to the global mental health research community. She completed a fellowship with the Centers for Disease Control and Prevention in 2012, providing technical assistance to the Mozambique Ministry of Health. Dr. Pringle has also served as chief of the Services Research Branch at the National Institute on Drug Abuse. Before joining the National Institutes of Health, Dr. Pringle was senior research associate and managing director at Policy Studies Associates, where she directed analysis, policy studies, and research in education. She also has served as supervisor of Virginia's statewide Migrant Education Program and as assistant director of State & Federal Programs for Adrian Public Schools, Michigan. Dr. Pringle received her Ph.D. in Clinical Psychology from the University of Maryland, Baltimore County, and completed an internship at the Kennedy Krieger Institute. Her clinical training included pediatric psychology; affective and anxiety disorders in children; traumatic brain injury; individual, group, and family therapy; domestic violence; and psychodiagnostic and behavioral assessment. Dr. Pringle's research has covered a variety of topics, including pathways to diagnosis and services for children with autism; intervention services for adolescent drug abuse; pain, memory, and distress management in pediatric cancer patients; parent behaviors in pediatric settings; and education policy for underserved and disadvantaged populations.

Andrew Schroeder, Ph.D., M.P.P., is director of research and analysis for Direct Relief. He is a specialist in data analysis and geographic information systems (GISs) for humanitarian assistance. In 2013 Dr. Schroeder and Direct Relief were awarded the President's award from Esri for outstanding applications of GIS to humanitarian operations. In 2014 Direct Relief's work in humanitarian analytics was recognized by *Fast Company*, which named Direct Relief 1 of the world's 10 most innovative nonprofits. He is a member of the global advisory board for the 1 Million Community Health Workers Campaign and architect of the Cam-

paign's Operations Room mapping applications. He founded the working group in humanitarian unmanned aerial vehicles for Nethope, and is a member of the advisory board of UAViators, where he is helping to pioneer innovation in the use of geospatial technologies for community resilience and disaster response. He received his Ph.D. in Social and Cultural Analysis from New York University and his Master's in Public Policy from the Gerald R. Ford School of Public Policy at the University of Michigan.

Fred Siyoi, B.Pharm., is the deputy registrar at the Pharmacy and Poisons Board in Kenya. He has more than 26 years of work experience in different settings. He has worked in hospital pharmacies, supply chain management, and policy making at the Ministry level. He currently holds a position as a health products regulator in Kenya. Since 2005, he has been involved in various regional and global harmonization initiatives.

Stephanie Smith, M.D., is a psychiatrist and incoming faculty member in the Division of Psychosomatic Medicine at the Brigham and Women's Hospital in Boston. She graduated Phi Beta Kappa from Cornell University with a degree in Philosophy. She completed medical school at the University of Minnesota and a General Psychiatry residency at Boston Medical Center. In 2011, Dr. Smith was the inaugural Pagenel Fellow in Global Mental Health Delivery with Partners In Health (Inshuti Mu Buzima [IMB]) in Rwanda and became the director of the IMB mental health program. In collaboration with the Rwandan Ministry of Health, she developed and implemented a community-based model of mental health care focused on integrating mental health into primary care. This model has recently received a proof-of-concept grant from Grand Challenges Canada, and Dr. Smith is currently leading a mixed methods evaluation of the model with the Department of Global Health and Social Medicine at Harvard Medical School.

Sodzi Sodzi-Tettey, MBCh.B., M.P.H., is the Institute for Healthcare Improvement's (IHI's) senior technical director, Africa Region, and director of Project Fives Alive! (PFA!). Currently operating at a national scale after starting in three districts in 2008, PFA! is a partnership among the IHI, the United States, and the National Catholic Health Service, Ghana working in collaboration with the Ghana Health Service to accelerate the reduction of under-5 mortality in Ghana through the application of quality improvement methods. In this role, Dr. Sodzi-Tettey provides

strategic, technical, and operational leadership in support of the IHI's growing work in Africa in addition to working to improve the processes of maternal and child health services at a national scale in Ghana. Dr. Sodzi-Tettey is a public health physician, has years of experience in district medical practice, is the immediate past vice president of the Ghana Medical Association, and writes a weekly column online and in Ghana's *Daily Graphic* titled "Affirmatively Disruptive." He serves on the governing boards of Ghana's National Health Insurance Authority, the African Media and Malaria Research Network, and the Council of the University of Health and Allied Sciences.

Cynthia Sottie, M.D., M.P.H., is a public health physician. She is currently the focal person for mental health at the Ghana Health Service Headquarters. Her work involves planning and coordinating mental health activities within the Ghana Health Service. She is the national coordinator of the World Health Organization/Ministry of Health 4-year project, "Fight Against Epilepsy," which aims to improve access to epilepsy services in Ghana. She was the medical superintendent of Achimota Hospital for 8 years. Her work as medical superintendent involved providing strategic oversight for the hospital. During her tenure in office, the hospital won the best facility (district hospital category) for the year in the Greater Accra Region for 3 consecutive years. She was the national coordinator for the 2-year Neonatal Quality Improvement Initiative in Ghana in 2009. Dr. Sottie is a member of the Ghana College of Physicians and Surgeons. She obtained her M.D. from the Vinnitsa Medical Institute, Ukraine; has a postgraduate diploma in Psychiatry from the University of Benin Teaching Hospital; an M.P.H. from the University of Ghana; and a certificate in Health Administration and Management from Ghana Institute of Management and Public Administration.

Catherine Syengo-Mutisya, MBCh.B., M.Med., is a consultant psychiatrist who holds a Bachelor of Medicine and a Bachelor of Surgery (MBCh.B.) and a Master's degree in Medicine (M.Med.) in Psychiatry from the University of Nairobi. She is the deputy medical superintendent at Mathari National Teaching and Referral Hospital. She is among Kenya's "Top 40 Under 40 Women 2014" who were nominated by the public for having made significant achievements in the society and economy, chosen by a panel of judges and published in the *Business Daily* on June 20, 2014. She is a director and a consultant at the Nairobi Mental Health Services Medical Centre and the Nairobi Parenting Clinic compa-

ny limited. She is a senior assistant director of medical services for the Ministry of Health, a member of the National Social Security Fund Medical Board, and a member of the National Medical Board Ministry of Health. She is greatly known for her health talks on family media (television and radio), N.T.V., K24, Citizen T.V., K.T.N. T.V., G.B.S. T.V., Family TV, Kiss T.V. Kass TV, Transworld Radio, Classic radio, Kiss radio, *Nation Newspaper*, *Standard Newspaper*, and *The Star Newspaper*.

Graham Thornicroft, M.D., Ph.D., M.Sc., is professor of community psychiatry at the Institute of Psychiatry, King's College London (KCL), and is a member of the Health Service and Population Research Department at KCL, and the Centre for Global Mental Health, a joint center between King's Health Partners and the London School of Hygiene and Tropical Medicine. He also works as a consultant psychiatrist at South London & Maudsley National Health Service Foundation Trust in a local community mental health early intervention team in Lambeth. He is a Fellow of the Academy of Medical Sciences and is a National Institute of Health Research Senior Investigator. Dr. Thornicroft received his undergraduate degree in Social and Political Science at Cambridge University, studied Medicine at Guy's Hospital, and trained in Psychiatry at the Maudsley and Johns Hopkins Hospitals. He earned an M.Sc. in Epidemiology at the London School of Hygiene and Tropical Medicine, and a Ph.D. at the University of London. Dr. Thornicroft has made significant contributions to the development of mental health policy in England, including chairing the External Reference Group for the National Service Framework for Mental Health, the national mental health plan for England for 1999 to 2009. He is also active in global mental health; for example, he chaired the World Health Organization Guideline Development Group for the Mental Health Gap Action Program Intervention Guide, a practical support for primary care staff to treat people with mental, neurological, and substance use disorders in low- and lower-middle incomes. His areas of research expertise include stigma and discrimination, mental health needs assessment, cost-effectiveness evaluations of mental health treatments, service user-led research, implementation science, and global mental health. Dr. Thornicroft has authored or edited 29 books and 365 peer-reviewed papers in PubMed.

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ations of BasicNeeds (a global mental health and development organization) in Ghana, actively promoting community-based mental health treatment services for persons with mental illness or epilepsy, supporting practical activities that improve incomes and livelihoods of mental health service users and their primary careers and families, influencing public policies and programs to include mental health, and strengthening service users and their primary careers to advocate for themselves. Mr. Yaro's research interests include practices of traditional healers and alternative/informal health care services for mental disorders, self-advocacy of mental health service users, and mental health in prisons. He also has interests in social anthropology.

E

Providing Sustainable Mental Health Care in Kenya: A Demonstration Project

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A commissioned paper prepared for the January 13–14, 2015, workshop on Providing Sustainable Mental Health Care in Kenya, hosted by the National Academies of Sciences, Engineering, and Medicine's Forum on Neuroscience and Nervous System Disorders and Board on Global Health. The authors are responsible for the content of this article, which does not necessarily represent the views of the National Academies of Sciences, Engineering, and Medicine.

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GOAL

To develop sustainable access to health care for mental, neurological, and substance use disorders in Kenya, and ensure that the right patients get the right care and treatment, at the right time, and in the right setting.

EXECUTIVE SUMMARY

Mental, neurological, and substance use (MNS) disorders are a leading cause of burden of disease as measured using disability-adjusted life years (DALYs) in Kenya. There is a dramatic shortage of human and other resources to effectively care for these disorders. Furthermore, stigma greatly limits access to care and decreases quality of life for individuals affected by MNS disorders. Traditional and faith healers play an important role in provision of care for MNS disorders as many patients attribute disease causality and the development of pathology to a spiritual dimension.

We chose three priority conditions for the purposes of this demonstration project: depression, epilepsy, and alcohol abuse. We focused initially on these disorders because they (1) result in a high burden of disease in Kenya, (2) are not currently being addressed through other initiatives, (3) have existing evidence-based algorithms for diagnosis, treatment, and care, and (4) synergies exist in developing community-based interventions using laypersons or non-specialist health workers for these disorders.

We propose several key components for this demonstration project (see Figure E-5) based on evidence-based principles:

1. A decentralized, patient-centered, collaborative, stepped-care approach to care that is evidence based and locally relevant
   a. Strengthening of referral networks, including community-based referral and partnerships with traditional and faith-based healers
   b. A supportive supervisory framework and referral pathways, including increased numbers of lay and health care providers at various levels trained in the diagnosis, care, and appropriate referral of individual MNS disorders
2. Promoting health literacy and community engagement through a model of social inclusion, self-help, and human rights for MNS

disorders
3. Strengthening of existing infrastructure for distribution of essential drugs
4. Strengthening and expansion of existing information systems infrastructure for MNS disorders

In collaboration with key stakeholders, such as the county governments, and in partnership with the Ministry of Health (MoH), Republic of Kenya, we propose a 4-year demonstration project that includes a planning phase and implementation phase and culminates with an evaluation phase in which ownership and management of the program is passed to the Ministry of Health or county government as appropriate.

In Year 1 we will focus on the planning phase. We will first work closely with key stakeholders to develop a learning curriculum and implementation plan. We will adapt existing training materials to a self-learning format that incorporates adult learning principles and ongoing supportive supervision. In Years 2 and 3, we will focus on the implementation phase and implement clinical services for mental, neurological, and substance use disorders in two counties. In Year 4, we will focus on evaluation of program objectives, dissemination of findings, and transfer of ownership to the county government, and copied to the MoH for information and support at the national level. Dissemination of the structure and results of this demonstration project to the remaining county governments will be a key activity of this final year, though we anticipate that the governor of the county supporting the demonstration project would provide ongoing reports to other county governors during the regular consultative meetings of governors and county Ministers of Health.

BACKGROUND

Global Overview of the Burden of Mental, Neurological, and Substance Use Disorders

Worldwide, mental, neurological, and substance use disorders are a leading cause of burden of disease as measured using DALYs and account for 7.4 percent of DALYs worldwide.[1] Neurological disorders result in 11.6 percent of DALYs lost worldwide.[2]

Using data from the *Global Burden of Disease 2010* study, in Kenya,

MNS disorders account for 16 percent of the burden of disease, more than HIV, which accounts for 15 percent (see Figure E-1).[3] Neurological disorders alone account for 11 percent of the burden of disease in Kenya. Among mental disorders, unipolar depression accounts for the highest burden of disease (see Figure E-2). The disorders causing the greatest burden of neurologic disease are neonatal encephalopathy and meningitis, which together account for nearly 50 percent of the burden due to neurological disorders (see Figure E-3). Low back and neck pain, while relatively low morbidity, because of their high prevalence also contribute a large proportion of the burden of disease due to neurological disorders. Finally, epilepsy and cerebrovascular disease each contribute about 11 percent of the burden of disease due to neurological disorders. Among substance use disorders, alcohol use disorders are common and account for 25 percent of the burden, and opioid use, though relatively low prevalence in Kenya,[4] accounts for a high burden of disease (see Figure E-4).

Despite the high burden of disease due to MNS disorders, there is a dramatic shortage of mental health specialists[5] and neurologists.[6,7] There are about 100 psychiatrists in Kenya. Most are based within Nairobi, the capital city.[8] Outside of Nairobi, there is one psychiatrist per million population.[9] There are 12 neurologists in Kenya and all practice primarily in the urban settings of Nairobi, Kisumu, and Mombasa and are primarily available in private settings.[10]

Furthermore, there is substantially lower usage of health services for mental health disorders[11] and epilepsy[12–15] in low- and middle- income countries as compared to high-income countries. For example, the treatment gap for mental health services ranged from 76–85 percent in less developed countries,[16] and was 23–100 percent for epilepsy in low-income countries.[12] Finally, people with MNS disorders experience stigma, discrimination, and human rights abuses worldwide.[17–21]

Prevalence of MNS Disorders in Kenya and Sub-Saharan Africa

Mental Disorders

Mental disorders are highly prevalent and a leading cause of the global burden of disease.[22] Mental disorders pose an increasing challenge to the global health care system.[1] According to the World Health Organization (WHO), the prevalence of lifetime mental disorder globally

ranges from 18.1 to 36.1 percent.[23] This means that more than one-third of the world's population has at one time or another suffered from mental disorders of varying severity.

According to a study on the global prevalence of mental disorders commissioned by the WHO, slightly more than three-quarters of severe cases in the low- and middle-income world went untreated.[16] Studies show that sub-Saharan Africa (SSA) has a huge burden of mental disorders. This picture takes a darker shade when one considers that increasingly more and more children and young people suffer from mental illness. A meta-analysis of studies on children's mental health in Africa showed that 14.3 percent is the rate of psychopathology in all children.[24] Furthermore, the study showed that 10 percent of children in the region have a specific psychiatric disorder. Add inadequate supply or limited access to effective treatment options[25] and a powder keg of problems for an already overwhelmed health system is created.

Neurological Disorders

Neurological disorders are important and underrecognized causes of morbidity in SSA.[26] As described previously, neonatal encephalopathies and meningitis/encephalitis have the highest burden in Kenya (see Figure E-3). Stroke is likewise an important contributor to the burden of disease. The prevalence and incidence of stroke are increasing across Africa yet still less than in high-income countries.[27] This may be due to differences in risk factors for stroke, higher mortality rates in the acute setting leading to lower prevalence rates, and incomplete stroke registries. The overall prevalence of dementia among those over age 50 was about 2.4 percent, with Alzheimer's disease the most prevalent (57.1 percent), followed by vascular dementia (26.9 percent).[28] Nonetheless, dementia has a relatively low burden in resource-limited countries as the proportion of the population over 50 is much lower than in high-income countries. Low back and neck pain lead to a large burden of disease despite their relative low morbidity because these conditions are so common.

Epilepsy is also a significant contributor to the burden of neurological disease in Kenya (see Figure E-4).[29] In a recent multisite study in Africa, the prevalence of epilepsy ranged from 0.7 to 1.5 percent;[29] in one systematic review, the age-specific prevalence ranged from 0.3 to 1.1 percent with a bimodal distribution with peaks at ages 20 to 29 and 40 to 49.[30] The treatment gap for epilepsy, the proportion of

individuals who require treatment, but do not receive it, approaches 100 percent in many low-income countries.[12] Untreated epilepsy results in devastating social consequences and poor health outcomes. For example, children with epilepsy who have a seizure at school may be dismissed or ostracized, while adults may be barred from marriage or employment.[18–21] In addition, persons with epilepsy have greater psychological distress, more physical injuries such as fractures and burns, and increased mortality.[18,31–35]

Substance Use

In recent years, there has been a marked increase in the prevalence of substance use disorders around the world. The 20 years between 1990 and 2010 saw an increase of nearly 40 percent in the global burden of substance use disorders.[1] SSA is not left behind, and in some respects, the region is one of the leading contributors of the current upward trend seen in substance use.[22] Considering the sky-rocketing rates of early-onset alcohol and substance use in the region, there is a serious cause for concern.[36]

Studies done in Kenya indicate high substance use rates.[4] The most recent rapid assessment carried out by the National Authority for the Campaign against Alcohol and Drug Abuse (NACADA) shows that while tobacco use rates are on the decline, the age of onset for any substance use has fallen to 10 years of age and the prevalence of alcohol use is now at 13.3 percent. Increasingly, younger and younger individuals are using hard drugs at an increased rate.

Currently available treatments for substance use in Kenya have been unable to stem the problem. Whereas the government and private organizations have put in place rehabilitation centers and programs, these have not had great success in reducing the burden of substance use in the country, as shown by the increasing substance use rates. Most programs are generic, but substance use patterns vary by sex and age[37] and may therefore suggest the need for cadre-specific interventions to combat this problem in Kenya.

Challenges for the Care and Treatment of MNS Disorders in Kenya and Sub-Saharan Africa

Stigma

People suffering from MNS disorders are often victims of stigma.[38] Stigma associated with mental illness has been shown to have devastating effects on the lives of people with psychiatric disorders, their families, and those who care for them.[39] Three kinds of stigma may be associated with mentally ill people: public stigma, self-stigma, and label avoidance.[40] Public stigma is the phenomenon of large social groups endorsing stereotypes about, and subsequently acting against, a stigmatized group: in this case, people with mental illness.[41] In addition, supernatural, religious, and magical approaches play an important role in creating stigma against the mentally ill. This is prevailing in developing countries like Kenya, where people still believe mental illness is a doing of evil forces.[42] Stigma experienced from family members is equally pervasive. Often the family members contribute to stigma because they feel blamed and responsible for having brought on the mental disorder either through negligence or inadequate care. Self-stigma is the loss of self-esteem and self-efficacy that occurs when people internalize public stigma**.** The vast majority of Kenyans believe that mental health disorders are caused by supernatural powers like evil spirits. Many believe that those who develop mental disorders do so to atone for sins committed against ancestors or as a result of being bewitched.[43] Such stigma pervades society and hinders health-seeking behavior among mentally ill patients. Anecdotal evidence and data obtained from the Africa Mental Health Foundation (AMHF) indicates that stigma is widespread, increasing the barriers to seeking health care. This may contribute to the poorer outcomes in mentally ill patients. Between 12 and 18 percent of the population agree that mental illness is a form of punishment for bad deeds. Moreover, to avoid curses, which are more often than not heritable, society members, especially women, are taught to avoid individuals afflicted by mental illness.

Challenging stigma related to MNS disorders is essential in helping individuals accomplish recovery-related goals.[44] Specific strategies to target certain types of stigma include protest, education, and contact. Stigma change for label avoidance, though scarcely tackled in literature, may also include the education and contact approaches used for public stigma. Moreover, increased penetrability of mental health care services

and public awareness in rural areas may be useful in reducing stigma. These actions can be achieved by identifying partners in the media to facilitate media campaigns to educate the public on the stigma against MNS. This has been successfully applied in the fight against stigma associated with HIV/AIDS. Furthermore, availability of a ready information channel for individuals suffering from MNS would provide an opportunity for these individuals to learn about their conditions and alleviate possible feelings of self-blame and guilt.

Collaboration with Traditional and Faith Healers

Traditional and faith healers (TFHs) play an important role in the provision of health care, especially mental health, in resource-depleted settings like Kenya. Many patients understand disease causality and the development of pathology in a spiritual dimension. Moreover in Kenya, as in many other sub-Saharan countries, TFHs are a cheaper alternative to conventional health care services.[45] In contrast to health facilities, TFHs do not fail to treat a patient even without money and hence the poor are able to consult them and pay later. TFHs fear repudiation by the ancestors, spirits, or God, who bequeathed the skill on them.[46] This is especially true for mental illness; traditional healers are the first to be contacted for mental illness in many parts of Africa.[47,48] This is because they are not only available and accessible in the community, but they form part of the community's cultural belief system, making them an integral part of the community.[45] This makes them acceptable to the community.[45] Indeed, though modern medicine may exist side by side with such traditional and/or spiritual practice, many patients in SSA still prefer traditional and spiritual therapies.[49,50] Moreover, the deficiency of doctors, clinical officers, and nurses in Kenya, together with the urban clustering of these practitioners[51] and the need to seek holistic treatment results in a significant proportion of patients consulting TFHs. However, the larger scientific community and modern medicine have remained critical and skeptical of the efficacy of such spiritual and traditional practices.[52,53] Despite this, it is imperative to appreciate the critical role that TFHs can play in the health care system.

Increasing efforts have been made regionally and internationally, with success, to include TFHs in primary health care.[53] Especially in SSA, positive returns have been demonstrated in inclusion of TFHs in provision of health care in the face of such challenges as HIV/AIDS, malaria, tuberculosis, and cancer.[45] Among these challenges, cooperation

between TFHs and research scientists has been especially noteworthy in curbing the HIV/AIDs epidemic.[54,55] This has also been demonstrated in several conditions like hearing impairment,[56] tuberculosis, and malaria.[57] The results of these studies suggest that TFHs are willing to collaborate with western medicine practitioners and report referring patients if they are not responding to treatment. An example of the use of TFHs in mental health has been seen with success in South Africa.[58]

However, challenges exist in incorporating TFHs into the health care system. These include lack of motivation to collaborate and communicate with modern health service workers[49] as well as the absence of channels of referral and communication between them. In addition, although TFHs may be willing to cooperate with health care practitioners, this may not necessarily equate to referral of patients. For example, an intervention focused on HIV/AIDS and tuberculosis and collaboration reported that 99 percent of participants reported a "willingness" to collaborate, but only 43 percent were actually referring.[54] Identifying factors associated with traditional healer referral practices of their mentally ill patients is central for developing and designing interventions to ensure that traditional healers refer more frequently and appropriately. Educating traditional healers on the fundamentals of mental disorders, including mood and anxiety disorders, is therefore important in this regard.[58]

Target MNS Disorders for Kenya

We chose three priority conditions for the purposes of this demonstration project: depression, epilepsy, and alcohol abuse. We based our decision on the following criteria:

- The disorder is prevalent or has a high burden of disease in Kenya
- The disorder is not currently being addressed through other initiatives
- Evidence-based algorithms for diagnosis, treatment, and care have been developed for resource-limited settings
- Synergies exist in developing community-based interventions using laypersons or non-specialist health workers for these disorders

Although it is impossible to completely separate these three conditions

from other MNS disorders, an initial focus on these disorders will enable us to build a foundation from which to expand treatment to other disorders such as anxiety, schizophrenia, primary and secondary stroke prevention, acute stroke care, Parkinson's disease, and opiate and other drug abuse. While the three conditions discussed below are the priority conditions, all training and service provisions will use a psychosocial, patient-centered, collaborative care approach to enable gradual expansion to more comprehensive care programs for MNS disorders.

Depression

Depression is highly prevalent in Kenya and is the mental health disorder with the greatest burden. Evidence-based algorithms for treatment have been developed as part of the Mental Health Gap Action Program (mhGAP).[59] Antidepressants, individual psychoeducation, and group interpersonal therapy have demonstrated efficacy in low-income countries.[60] Community-based treatment approaches using laypersons and non-specialist health workers have demonstrated efficacy.

Epilepsy

Although the burden of disease due to neonatal encephalopathies and meningitis are higher than epilepsy, these disorders are already addressed as part of maternal–child health initiatives and communicable disorders. Stroke and epilepsy have a similar burden in Kenya, but we chose epilepsy because it is a stigmatized disease, much like mental and substance use disorders.[18–21] Evidence-based algorithms for treatment have been developed as part of the mhGAP.[59] Finally, epilepsy treatment is amenable to community-based approaches.[61]

Alcohol Abuse

Alcohol abuse is highly prevalent in Kenya although its overall burden is less than opiate abuse. Evidence-based algorithms for treatment have been developed as part of the mhGAP.[59] Pharmacologic interventions with acamprosate and naltrexone are associated with longer abstinence times and improved completion rates for individuals participating in outpatient treatment programs.[60] A brief physician-delivered intervention is associated with reduced intensity and amount of alcohol consumption, particularly in men.[60]

Existing Community-Based Initiatives and Models for Target Disorders

There are various community-based approaches for preventing, screening, treating, and managing the three targeted disorders, depression, epilepsy and alcohol abuse. These strategies and initiatives have had different levels of success.

Depression

A recent U.S. study shows that community-based initiatives that incorporate social focal points, such as houses of worship, schools, and even salons, in low-income communities are more effective in combating some of the worst risk factors or effects of depression than clinic-based approaches.[62] This model has been shown to increase an individual's capacity to cope with the day-to-day challenges of life and significantly reduce the tendency toward homelessness and a person's lack of employability.

A 2-year community-based intervention against depression carried out in Germany showed significantly decreased rates of suicide among patients with depression compared to the control site. The intervention consisted of "training of family doctors and support through different methods; a public relations campaign informing about depression; cooperation with community facilitators (teachers, priests, local media, etc.); and support for self-help activities as well as for high-risk groups."[63]

Epilepsy

Community-based treatment of epilepsy is cost-effective, does not require specialized equipment, and is effective.[61] The Global Campaign Against Epilepsy began in 1997 as a partnership among the International League Against Epilepsy, the International Bureau for Epilepsy (IBE), and the WHO.[64] This effort included developing regional conferences and reports, an atlas for "Epilepsy Care in the World."[6,65] Importantly, this initiative included several community-based demonstration projects in Brazil,[66] China,[67] Georgia,[68] Senegal,[69] and Zimbabwe.[70] Additional demonstration projects are being planned or initiated in Cameroon, Ghana, India, and Vietnam.[64]

Alcohol Use

Current trends in alcohol abuse research point to integration of preventive services and treatment interventions at the primary care level as the most cost-effective means of dealing with the problem.[71] Over the years, there have been many community-based models for alcohol abuse, ranging from community-reinforced counseling[72] to residence-based programs[73] to enforcement of alcohol and drug-free zones in schools and campuses.[74] A recent study comparing various community-based approaches for alcohol abuse showed that health care professionals believe that school-based programs and initiatives are the most effective alcohol interventions, followed closely by health promotion programs and other wider community initiatives.[74]

Overview of the Existing Health Care System and Providers in Kenya

Health services in Kenya are provided through a network of just over 4,700 health facilities countrywide. The government oversees 41 percent of health facilities, nongovernmental organizations (NGOs) run 15 percent, and the private sector operates 43 percent. According to the new Constitution, the government-funded health system is broadly structured into the following levels:

1. National referral hospital
2. County referral hospital
3. Subcounty hospital
4. Health center
5. Dispensary
6. Community health worker[75]

Basic primary care is provided at dispensaries and health centers. Dispensaries, which provide outpatient services for simple ailments such as the common cold, flu, uncomplicated malaria, and skin conditions, are run and managed by enrolled and registered nurses who are supervised by a nursing officer at the respective health center. Those patients who cannot be managed by the nurse are referred to the health centers, which have a clinical officer in charge as well as one or more nursing officers. These, similar to dispensaries, provide preventive as well as curative services for the common ailments. County and subcounty hospitals

provide secondary care, which is integrated curative and rehabilitative care. Subcounty hospitals are similar to health centers with the addition of surgical units for C-sections and other procedures. County referral hospitals have the resources to provide comprehensive medical and surgical services and increasingly specialized care, including intensive care, life support, and specialist consultations. Further tertiary, specialized care is provided at the two public national referral hospitals, Kenyatta National Hospital in Nairobi and Moi Teaching and Referral Hospital in Eldoret.[76] These two represent the apex of the health care system and provide diagnostic, therapeutic, and rehabilitative services. Gaps in the government-funded system are filled by private and church-run facilities. Most private clinics in the community are run by nurses. A smaller number of private clinics, mostly in the urban areas, are run by clinical officers and doctors. Tertiary care in the private sector is provided at equivalent private referral hospitals such as the Nairobi Hospital and the Aga Khan University Hospital, also in Nairobi.[76]

Kenya faces a significant shortage of physicians. According to the WHO, Kenya has just 1 doctor per 10,000 residents, a ratio that is below average for the Africa region. More than 50 percent of Kenyan physicians practice in Nairobi, which, with an estimated 3 million people, represents a small fraction of the approximately 44 million people that make up the country's population.[51,125]

In 2011 there were 65,000 nurses on the Nursing Council of Kenya register. Further traditional midwives, pharmacists, and community health workers supplement the provision of health care. The migration of trained health workers from the public sector to higher paying positions in the private sector, or away from Kenya altogether, has made retaining qualified health personnel a persistent challenge. Kenya has one of the highest net emigration rates for doctors in the world, with 51 percent leaving the country to work elsewhere.[77]

Overview of the Existing Health Information Systems in Kenya

Kenya has several key sources for health and demographic information. The first is the Health Management and Information System (HMIS) of the MoH, which collects information on vital statistics and health indicators at MoH facilities nationwide. This information is complemented by occasional population-based surveys. Finally, there are five Health and Demographic Surveillance Systems (HDSSs) in Kenya, which follow populations longitudinally in Kilifi, Kisumu, Kombewa,

Nairobi, and Suba.

The Ministry of Health in Kenya first established systems for collecting information on health and health services in 1975, and these systems ultimately became the Health Information System Department. This department had three sections: Computing, Statistical and Medical Records, and the District HMIS.[78] Data were collected at MoH facilities and then analyzed at a national level, but were not believed to be of high enough quality for planning and evaluation.[78] Since then, there have been efforts to strengthen these data collection systems for various internationally funded initiatives on HIV/AIDS, malaria, child survival, and others. However, these were typically vertical initiatives with separate reporting tools, which increased the burden on health care workers.[79] There have been several initiatives to streamline data collection and reporting and to improve the HMIS infrastructure via collaborative efforts with the MoH such as AIDS, Population, and Health Integrated Assistance; AfriAfya; the Community Based Health Information Management Project; and Afya Info.[79–81] However, both the demographic and health information systems for much of the country are still based on handwritten, paper records.[80] Continuing challenges include having too many indicators, with new indicators added by each international donor, a weak infrastructure for computing technologies, inadequate staffing and training, and little dissemination of existing information.[80]

Furthermore, over the past 15 years, several large population-based surveys have been conducted[80]:

- Kenya Population and Housing Census 1999
- Kenya Demographic and Health Survey (KDHS), 2003, 2008–2009[82]
- Kenya National Health Accounts Survey, 2001–2002
- Kenya Household Health Expenditure and Utilization Survey Report, 2003
- Multiple Indicator Cluster Survey, 2000
- Kenya Integrated Household Budget Survey, 2005–2006
- Kenya Service Provision Assessment Survey, 2004
- Service Availability Mapping for Health, 2004
- Human Resource Mapping in Health, 2004
- Needs Assessment Report for Health Management Information System, 2004
- Kenya AIDS Indicator Survey (KAIS), 2007, 2012[83]

Both KAIS and KDHS collect minimal information on alcohol and drug abuse, but do not collect data on other mental health disorders.

The HDSSs are complementary in that they observe populations with different environmental, epidemiological, and cultural back-grounds.[84] However, there is little collaboration among HDSSs due to differing research concepts, objectives, and management systems[84]:

- The *Kilifi HDSS* was established in 2000 by the Kenya Medical Research Institute (KEMRI), the Wellcome Trust, and the University of Oxford, and surveys a population of about 260,000.[85] Its original goal was to conduct research on infectious diseases of children, but it has also published extensively on epilepsy.[29,86]
- The *Kisumu HDSS* was established in 2001 by the U.S. Centers for Disease Control and Prevention and KEMRI and surveys a population of about 220,000.[87] It was originally created as part of a large insecticide-treated bed net trial, but has served as the infrastructure for numerous clinical and effectiveness trials for malaria, tuberculosis, and HIV interventions.
- The *Kombewa HDSS* was established in 2007 by the U.S. Army Medical Research Unit-Kenya and KEMRI and surveys a population of about 142,000.[88] This site was initially established to support malaria vaccine and treatment trials, but has participated in numerous studies, including polio/measles outbreaks, tuberculosis, pneumococcal vaccines, and arboviral infections.
- The *Nairobi HDSS* was established in 2002 by the African Population & Health Research Center and surveys a population of about 55,000.[89] This site was initially established to evaluate the health of individuals residing in informal settlements or slums.
- The *Mbita/Suba HDSS* was established in 2006 as a collaboration between the Nagasaki University Institute of Tropical Medicine and KEMRI and surveys a population of about 54,000.[84,90] Its original purpose was to support the study of tropical infectious diseases.

Existing Resources for Selected MNS Disorders

Mental and Substance Use Disorders

Health care provision in Kenya and especially psychiatric care and general mental health care remains limited in terms of infrastructure, staffing, and finances. Specialist psychiatric care is largely delivered at the district level by psychiatric nurses running outpatient clinics; by psychiatric nurses at provincial levels running inpatient units and outpatient clinics; and by national referral hospitals at Mathari, Kenyatta National Hospital/University of Nairobi, and recently, Moi University Teaching and Referral Hospital. The total number of mental health hospital beds for the whole population was 1,114 in 2009, a bed-to-population ratio of approximately 1:200,000.[91] In total, there are just under 100 Kenyan psychiatrists. However, most of these are sequestered in urban centers, with up to a quarter of them (21) teaching at university. An estimated 20 live and work outside the country. Effectively, outside Nairobi, the psychiatrist population ratio is 1 per 3 to 5 million. Of the 500 trained psychiatric nurses, 250 are currently deployed in psychiatry. Seventy are deployed to Mathari National Mental Hospital, leaving 180 to the districts and provinces. As a result, each district does not even have one full-time equivalent psychiatric nurse. Many of the rest have either retired, died, left the country, or work in NGOs.

In the private sector, specialized psychiatric care is available in the major urban centers in the referral private hospitals. Kenya does not maintain a roll of clinical psychologists. It is therefore difficult to determine the exact number of these specialists who are involved in the provision of care for individuals with MNS.

However, the situation is not all gloomy. Several key stakeholders are involved in the provision of care for MNS disorders. The NACADA is the government agency that spearheads the campaign against alcohol and substance abuse. This authority, which receives funding from the national budget, provides an opportune partner in the campaign against MNS disorders. The NACADA also provides research grants to researchers in the area of MNS disorders, with the resultant availability of data that could further indicate areas of greatest need for resource allocation. Other stakeholders that are available for leverage include faith-based organizations and NGOs with special interests in MNS disorders.

Epilepsy

Overview of health care provider resources Most individuals with epilepsy who desired to seek care through the allopathic health care system would present for care at a Ministry of Health county government facility and would see a nurse or clinical officer. The system of care is as described in the previous section. Training in neurology is limited and nurses and clinical officers posted to rural districts report significantly more discomfort with diagnosis, care, and treatment of neurological disorders as compared to medical disorders.[92] Kenya has eight adult neurologists and four child neurologists, and only two in public service at Kenyatta National Hospital. The remainder are only available in private settings.[10]

Availability of essential drugs The drugs listed on the essential medication list are

- Carbamazepine (tablet)
- Diazepam (injection)
- Magnesium sulfate (injection)
- Phenobarbital/phenobarbitone (injection, oral liquid, tablet)
- Phenytoin (injection, oral liquid, tablets)
- Sodium valproate (tablet)

The complementary list includes

- Carbamazepine (oral liquid)
- Ethosuximide (oral liquid or tablet)
- Sodium valproate (oral liquid)

Only two medications are recommended for the primary care level: magnesium sulfate (Level 3 and above: health center) and phenobarbitone (Level 2: dispensary). Nearly all the medications are listed as of vital importance and are on the core list.[93] All of the above medications have at least one formulation registered with the Kenya Pharmacy and Poisons Board.[94] However, only phenobarbitone tablets and injection, phenytoin tablets, carbamazepine tablets, diazepam injection, and magnesium sulfate injection are available for order by the Kenya Medical Supplies Authority (KEMSA), the primary supplier of MoH facilities.[95]

The recently released Kenya National Guidelines for the Management of

Epilepsy recommend that phenobarbitone, phenytoin, and sodium valproate (both tablet and syrup) be made available at the primary level. In addition, rectal diazepam and intravenous diazepam should be available for emergency care. The guidelines further call for the previously mentioned antiepileptic drugs plus clonazepam, clobazam, lorazepam, lamotrigine, gabapentin, ethosuximide, oxcarbazepine, topiramate, and levitiracetam to be available at the secondary and tertiary levels.[96] All of these medications except clobazam are registered with the Kenya Pharmacy and Poisons Board.[94] None are available through KEMSA.

Although these medications are listed, there are still significant challenges to making them available to patients. For example, stock-outs are common despite significant improvements in the KEMSA procedures. Furthermore, many institutions rely on user fees to finance the procurement of medications. Finally, rural settings continue to be significantly underserved.[97]

Financial resources allocated No specific funds are allocated for epilepsy.

Opportunities to leverage existing resources from ongoing projects There are several groups actively advocating for and improving services for people with epilepsy in Kenya. The organizations highlighted are not an exhaustive list:

- The Kenya Association for the Welfare of People with Epilepsy (KAWE) was established in 1982 and is a member of the IBE. KAWE has supported community-based education and stigma reduction through helping support the formation of 14 community-based organizations that support clinical activities by providing patient education and resource mobilization. KAWE also developed a feature film, "It's Not My Choice," which was awarded a gold medal at the International Audio-Visual Festival in New Delhi in 1989.[98] KAWE promotes awareness of epilepsy by distribution of educational materials.[99] In 2013, KAWE launched "FAFANUKA," a mobile health awareness project that provides epilepsy education and directions to epilepsy clinics.[99] Their primary focus has been on training health personnel. Since 1999 KAWE has trained over 1,428 medical personnel of various cadres and 2,894 community health workers.[99] KAWE also developed a training manual for clinical officers and nurses that

was recognized by the WHO. Finally, KAWE runs three epilepsy clinics in Nairobi with nearly 8,000 visits recorded in 2013. KAWE established and now provides technical support to 16 clinics across the country.[99]

- The National Epilepsy Coordination Committee (NECC) was founded in 2010 to coordinate epilepsy activities in Kenya, including international organizations; research and academic institutions; pharmacy, medical, and professional societies; nongovernmental and community-based organizations; and people with epilepsy. In November 2013, it supported numerous outreach activities, including a roadshow through Kisumu, Mombasa, and Nairobi during National Epilepsy Awareness Month[100] and supporting the Kenyan Purple Day for Epilepsy.[101] Furthermore, the NECC coordinated the development and approval for Kenya National Guidelines for the Management of Epilepsy.[96]
- The Kenya Society for Epilepsy was established in 1997 and is a group composed of health professionals. It is a member of the International League Against Epilepsy. The group has approximately monthly meetings and continuing medical education events.

Gaps in the Existing Resources for Selected MNS Disorders

There are few resources for the diagnosis, care, and treatment of MNS disorders in Kenya and little data about the prevalence and severity of these disorders. We would like to highlight some key gaps that could be addressed by a demonstration project.

1. Scarce human resources for MNS disorders at primary, secondary, or tertiary care levels
2. Poor coordination of care among communities, traditional healers, faith-based healers, and primary, secondary, and tertiary care medical practitioners
3. Stigma, misinformation, and discrimination against individuals living with MNS disorders
4. Poor availability of essential drugs for MNS disorders
5. Poor availability of epidemiological or health service data to enable planning for MNS disorders

DEMONSTRATION PROJECT AND IMPLEMENTATION PLAN

As described previously, MNS disorders have a high burden in Kenya, but few resources are available for care. Nonetheless, there have been several key initiatives, including the presentation of a Mental Health Bill for the Kenya National Assembly this year,[102] a mental health training initiative,[91] development of national guidelines for epilepsy care,[96] and the ongoing work of governmental and nongovernmental organizations such as the AMHF, the NECC, and NACADA.

We propose several key components for this demonstration project based on evidence-based principles as described in the prior sections of this document[103–105]:

1. A decentralized, stepped-care approach to care that is evidence based and locally relevant
   a. Strengthen referral networks, including community-based referral and partnerships with traditional and faith-based healers, and links with higher levels of care
   b. A supportive supervisory framework and referral pathways, including adequate numbers of community health workers, primary care health workers, and specialists in MNS disorders
2. Promote health literacy and community engagement through a model of social inclusion, self-help, and human rights for MNS disorders
3. Strengthen existing infrastructure for distribution of essential drugs
4. Strengthen and expand existing information systems infrastructure for MNS disorders

Study Site

We propose an intervention targeted at the county level, encompassing at least one county or subcounty hospital and its surrounding primary care sites and community. The selected county should demonstrate a commitment and ownership of the project by contributing matching funds for service provision as well as participating fully as a partner in the design and execution of the demonstration project. Building an effective partnership and involving the county

government from the early stages is a key factor in sustaining this effort after the demonstration period is complete. The primary goal of this demonstration project is to create a program that is replicable and scalable across the country and aligned to the WHO Mental Health Action Plan 2013–2020, to which the Government is a signatory. A secondary goal would be to establish the effectiveness of the demonstration project through a high-quality, community-based impact evaluation.

Project Components

1. A decentralized, patient-centered, collaborative, stepped-care approach to care that is evidence based and locally relevant
    a. Strengthen referral networks, including community-based referral, partnerships with traditional and faith-based healers, and links with higher levels of care

We propose a community-centered approach that builds on the Ministry of Health infrastructure and begins at the level of the community health worker (CHW) (Level 1 Services).[106] CHWs would provide some services such as counseling, social support, and referrals to primary care settings. We also propose engaging traditional and faith-based healers in the referral and treatment processes.

At primary care settings, services for MNS disorders would be integrated with primary care services, a model that has worked for other stigmatized disorders such as HIV.[107] Furthermore, services would be provided using a collaborative care approach, which has demonstrated efficacy for depression as well as other chronic illnesses. Ultimately, service provision will align with priorities outlined in the WHO Mental Health Action Plan 2013–2020, to which the Government of Kenya is a signatory. Additional support for primary staffing is critical to handle the increased workload by adding more services.[108] In primary care settings, first-line medical treatments would be provided using clinical algorithms.[109] Complex patients would be referred to Centres of Excellence at the county and subcounty levels for second-line medical treatments or more complex services such as inpatient hospitalization.

    b. Adequate training and a supportive supervisory framework, including adequate numbers of community health workers, primary care health workers, and specialists in MNS disorders

We propose training all the CHWs in identification and referral of individuals with MNS disorders. We propose training several CHWs as lay counselors so they can provide community-based counseling and support to peer-led groups. We will additionally engage traditional and faith-based healers and provide training in MNS disorders. Finally, we also propose training nurses and clinical officers to provide primary care for mental disorders at MoH facilities.

Furthermore, we will provide advanced training for a cadre of individuals to develop mental health expertise, a team of one clinical officer and three nurses per district, to provide ongoing supportive supervision to primary health care workers as well as on-call mobile phone consultation and support for referrals to secondary or tertiary care facilities. These individuals would also staff the referral clinics at the county hospitals. Individuals providing support to primary care facilities will generally be nurses and clinical officers who have responsibility over a district and can provide higher level services at the district hospital level.

Innovative training models Prior efforts to train health care workers in Kenya to provide comprehensive mental health care have had modest success in improving health outcomes, but have not clearly improved diagnosis and treatment of mental health disorders.[110,111] Diagnosis of mental and substance use disorders will have a foundation in a general psychosocial approach, and diagnosis of neurological disorders will be based on a comprehensive primary care approach. Approaches to care of MNS disorders will be grounded in a collaborative care approach.[112,113]

The training components on specific priority conditions will be delivered in a modular fashion, will be based on core competencies identified by the Institute of Medicine (IOM),[109] and will build on the foundation of the WHO mhGAP modules.[59,114] We will begin with the three priority conditions and hope to expand this training to include additional models for other key MNS disorders, such as anxiety, schizophrenia, primary and secondary prevention of stroke, acute stroke care, and opiate and other substance abuse. These modules will be locally adapted based on the prior experience and in partnership with bodies such as the Kenya Medical Training College and local NGOs.[91,99] This training method has demonstrated effectiveness in training non-specialist health care workers.[115,116] Furthermore, we will draw from innovative strategies developed by the University of Nairobi Partnership for Advanced Clinical Education for HIV Education, which incorporates distance and adult learning principles. Educational activities will involve

self-learning and mentored face-to-face sessions, which are accompanied by a log book with activities, cases, and a core set of clinical encounters.[117] These training activities are designed to occur primarily onsite, with support supervision, and are more cost-effective than traditional classroom training models.

Supportive supervision will be defined as a set of measures designed to ensure that personnel carry out their activities effectively through direct, personal contact on a regular basis in order to guide and assist staff and improve their competence.[118] Supportive supervision has been shown to be an effective technique for ongoing training and evaluation in primary care settings in developing countries.[118–122] Furthermore, it has been identified by health care workers as a critical component in providing ongoing mental health care in primary care settings.[108] Mobile phone helplines have been effective in providing decentralized HIV care and could be adapted to help support primary care workers providing mental health care.[123]

2. Promote health literacy and community engagement through a model of social inclusion, self-help, and human rights for MNS disorders

We will partner with local NGOs, many of whom have been conducting this work for some time, to develop locally relevant health literacy and community engagement campaigns to heighten awareness of and decrease stigma around MNS disorders using media campaigns, opinion leaders, and community mobilization strategies. In addition, we will build on existing organizations and facilitate the development of peer-led and health worker-supported community organizations for both social support and economic development.

3. Strengthen existing infrastructure for distribution of essential drugs

Our goal was to address several key challenges identified by the IOM, including inappropriate selection, ineffective supply chains, high pricing, and poor financing.[25] KEMSA, the national authority charged with procurement and distribution of medications to MoH facilities, provides medications to county governments when requested. We will work in partnership with county governments to continue to strengthen the supply chain from the requesting facility, to the county governments,

to KEMSA. We also propose an ongoing relationship with the Kenya Pharmacy and Poisons Board, the regulatory authority for Kenya, to improve the number of registered drugs and high-quality generics available for MNS disorders to decrease the costs of these medications. Finally, we will collaborate with government bodies and professional societies to improve the availability of medications and decrease medication-associated user fees for MNS disorders at the primary care level and to increase the number of medication options for providers.

4. Strengthen and expand existing information systems infrastructure for MNS disorders

The county governments and Department of Health Information Systems of the MoH will be key partners and stakeholders in this project. Together with the county government and Mental Health Directorate of the MoH and other stakeholders, we will identify a core set of mental health measures to include in the county HMIS. In addition, we will work closely with the MoH to ensure that key variables relevant to MNS disorders are included in national health surveys such as KDHS and KAIS. We will also partner with HDSS groups in Kenya to include mental health variables as part of their routinely captured data.

Oversight

The lead grantee institution, in collaboration with the sponsor and the county government, will provide overall leadership and technical and financial oversight of the project. The lead grantee will have sufficient administrative and financial infrastructure to support the management and reporting required by the sponsor and coordinate a complex set of activities. It is envisioned that subawards would potentially be made as appropriate to organizations with expertise in developing educational content, community engagement, or providing clinical care around MNS disorders. The achievements of this project would be monitored annually by a board composed of key stakeholders, partners, and subawardees. A county or subcounty team will be developed to oversee day-to-day activities and meet on a quarterly basis. This team will be composed of the County Health Management Team and Health Management Board of the selected site, key community leaders, NGOs, and other local stakeholders.

Time Line and Workplan

We propose four stages to this project: (1) Situation analysis; (2) Planning; (3) Implementation; and (4) Evaluation.[124] This document represents the first stages of the situation analysis and planning. We have gathered information about the needs for MNS disorders in Kenya, identified priority conditions, and identified available resources, including human resources, the strengths of the existing health system, potential funding streams, and relevant governmental, nongovernmental, and private-sector agencies. Furthermore, below we propose a method of service delivery that complements and builds upon the existing health system.

Thus, for this demonstration project we propose beginning at the end of the planning stage and moving rapidly into the implementation phase. Below we describe the general activities over an initial 4-year period:

- Year 1:
  - Select implementation site in consultation with county governments and key stakeholders
  - Develop training materials for health care providers aligned to the mhGAP-Intervention Guide (IG)
  - Evaluate and strengthen distribution of essential medications
  - Develop core set of variables for MNS disorders
  - Integrate training on mental health, using the mhGAP-IG, into existing training programs and with emphasis on existing service providers at county and subcounty health facilities
- Year 2:
  - Begin training existing primary health care providers and community health workers in the participating county, integrating training into existing training programs as much as possible
  - Expand services across the county, with the goal of complete coverage by the end of the year
  - Continue to develop additional training modules
- Year 3:
  - Provide services across the county
- Year 4: Evaluation
  - Transfer management to the county government
  - Final evaluation

Resources

The concerned county government will be required to provide matching funds supported by a written commitment and provided for in the official budget by the county. These matching funds will support the county's own involvement and own participation in the demonstration project as an equal partner at par with the implementing team. The demonstration project will not be involved in the expenditure of the matching funds, but will guide through the consultations on where the county government should spend on mental health. The demonstration projects will therefore not be involved in the accounting of those government expenditures. The details on give and take will be worked on with the willing county. The overriding condition is that they must make a commitment to put in some funds.

Key Stakeholders

The key stakeholders for this project are the county government partner and the MoH. The county governments are fiscally responsible for provision of health care services while the MoH provides technical guidance and coordination across the nation. These stakeholders should be engaged from the earliest phases of the project through to the monitoring and evaluation phase, and ultimately should extend beyond the life of the demonstration project and to scale up across the nation. The county government will also play a key role in national scale-up as a role model for other county governments.

At the community level, opinion leaders and community gatekeepers will be engaged through a series of meetings and discussions to secure their interest and buy-in, in support of the project. This will precede further community engagement activities not limited to public meetings (*barazas*), training seminars, and workshops to educate community members on mental health and reduce stigma.

Both formal and informal health service providers are vital to the success of the demonstration project. Formal health care providers such as nurses, doctors, clinical officers, and community health workers will be engaged both collectively, through their professional unions where applicable, and individually at the facility level. Traditional and faith healers will also play an important role in the success of this project. Training seminars and workshops will be held to educate them on the importance of integrating mental health into their routine services.

Informal health service providers, such as traditional and faith-based healers, shall also be included in individual and joint training sessions with actors from the formal sector to create the synergy that will be necessary to ensure that mental health services are truly integrated across the board of health service delivery in the country. The association of traditional and faith healers will be represented by the national and local leaders at the county level.

Nongovernmental and private partners will also be included in high-level discussions and in the monitoring of the project because their support will be crucial during the scale-up of the project. These partners include other organizations that provide health services routinely and have a huge stake in Kenya's health care system.

Our approach will require early engagement with and involvement of county governments and governors from the conceptualization of the demonstration through its implementation. We believe this will lead to local ownership of the process and a smooth transfer of ownership at the conclusion of the demonstration project—and ultimately to the sustainability and scalability of these services across the country.

The key stakeholders necessary to provide sustainable mental health care in Kenya include the following:

1. Government
    a. County government
    b. MoH
2. Government agencies/departments
    a. Department of Health Information Services, Ministry of Medical Services, Kenya
    b. The National Authority for the Campaign against Alcohol and Drug Abuse
    c. Kenya Medical Supplies Authority
    d. Kenya Pharmacy and Poisons Board
    e. Kenya Medical Research Institute
    f. The Kenya Nursing Council
    g. The Kenya Clinical Officers Council
    h. Kenya Medical Practitioners and Dentists Board
    i. The Kenya Human Rights Commissions
3. Other leading organization on mental and neurological disorders in Kenya
    a. The Society of Traditional and Herbalists in Kenya, which has authority over all traditional and herbalists in Kenya

   b. Africa Mental Health Foundation
   c. Kenya Society for Epilepsy
   d. Kenya Association for the Welfare of People with Epilepsy
   e. National Epilepsy Coordinating Committee
   f. BasicNeeds Kenya
   g. African Medical and Research Foundation
4. Professional bodies
   a. Kenya Association of Psychologists
   b. East African College of Neurology
   c. Kenya Psychiatric Association
   d. Kenya Association of Physicians
5. Other stakeholders
   a. Private and public universities
   b. Private health care organizations
   c. Local communities and community groups
   d. NGOs
6. International partners
   a. Institute of Medicine
   b. World Health Organization

Outcome Measures/Metrics of Success

To evaluate the outcome of this proposed project, we propose two methods of ascertaining outcome data. The first would rely on routinely collected health information through the county health facilities. The second would rely on community-based assessments, which would extend to other MNS disorders to enable us to expand this work to encompass a greater range of disorders.

Outputs and Outcomes

Health facility assessment

Health facility

1. Number of community health workers and health care workers trained to care for MNS disorders
2. Availability of essential drugs for MNS disorders
3. Stock-outs of essential drugs for MNS disorders

Health usage

1. Number of individuals receiving MNS interventions by community health workers
2. Number of individuals referred to primary care settings for treatment of MNS disorders
3. Number of individuals receiving MNS interventions by primary care staff
4. Number of individuals with MNS disorders receiving referrals to secondary or tertiary care
5. Number of individuals with completed referrals to secondary or tertiary care
6. Number of calls received by the hotline

Community-Based Assessment

Prevalence rates for MNS disorders

1. Prevalence of mental disorders
   a. Depression
   b. Schizophrenia
2. Prevalence of substance use disorders
   a. Alcohol
   b. Tobacco
   c. Other drugs
3. Prevalence of neurological disorders
   a. Epilepsy
   b. Stroke
   c. Dementia
   d. Parkinson's disease

Self-reported measures

1. Stigma
2. Perceived quality of care
3. Quality of life
4. Economic measures

Disease-specific outcome metrics

1. Depression
   a. Change in depressive symptoms
2. Epilepsy
   a. Number of individuals with active epilepsy
   b. Number of individuals with active epilepsy receiving adequate treatment
   c. Change in seizure frequency
3. Alcohol use
   a. Change in quantity of alcohol use
   b. Change in severity of alcohol use

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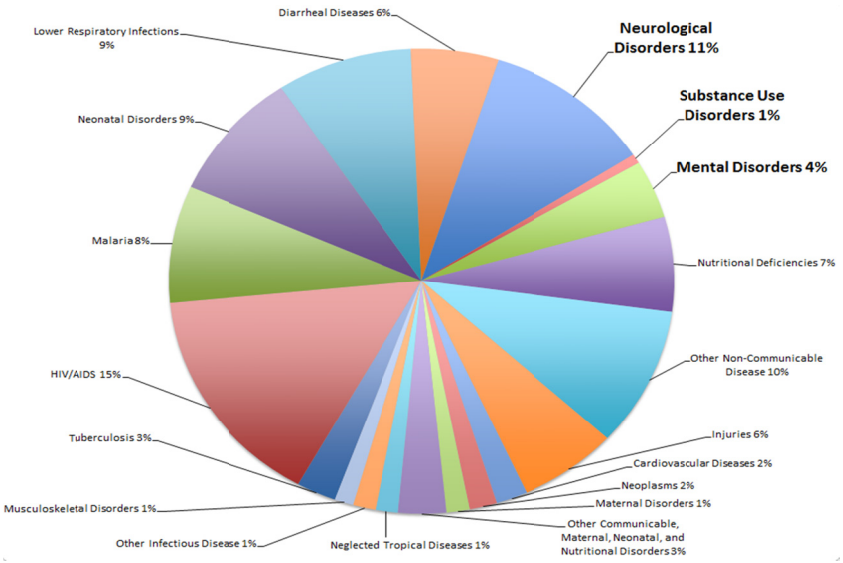
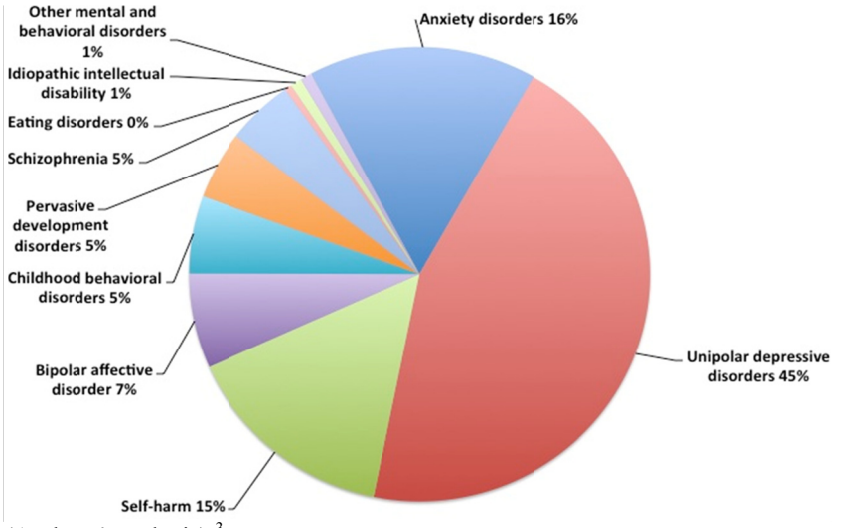
FIGURES



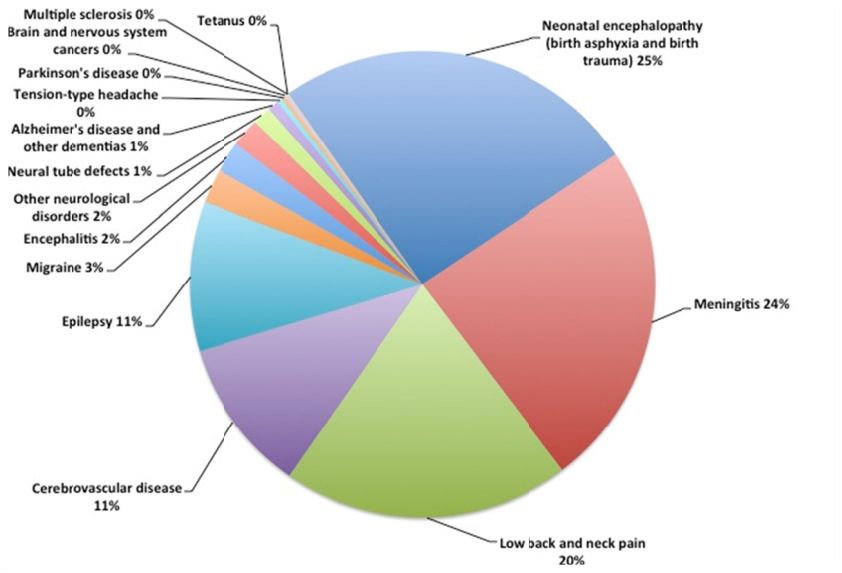
(Authors' analysis).[3]

FIGURE E-1 Burden of disease in Kenya, 2010.



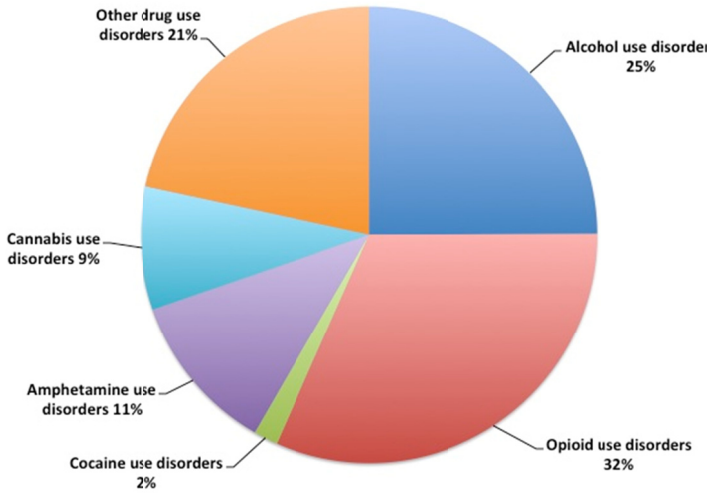
(Authors' analysis).[3]

FIGURE E-2 Burden of disease due to mental disorders in Kenya, 2010.



(Authors' analysis).[3]

FIGURE E-3 Burden of disease due to neurological disorders in Kenya, 2010.



(Authors' analysis).[3]

FIGURE E-4 Burden of disease due to substance use disorders in Kenya, 2010.

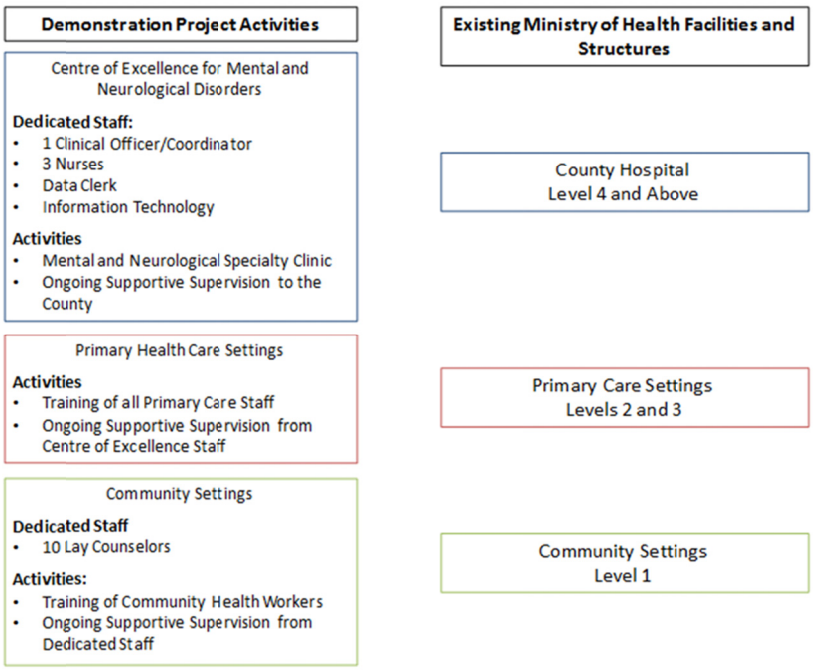


FIGURE E-5 Demonstration project structure.

F

Providing Sustainable Mental Health Care in Ghana: A Demonstration Project

Julian Eaton[a] and Sammy Ohene[b]

A commissioned paper prepared for the April 28–29, 2015, workshop on Providing Sustainable Mental Health Care in Ghana, hosted by the National Academies of Sciences, Engineering, and Medicine's Forum on Neuroscience and Nervous System Disorders and Board on Global Health. The authors are responsible for the content of this article, which does not necessarily represent the views of the National Academies of Sciences, Engineering, and Medicine.

"Knowing is not enough; we must apply.
Willing is not enough; we must do."
Goethe

"No condition is permanent."
Popular Ghanaian saying

[a]CBM International.
[b]University of Ghana Medical School.

INTRODUCTION

Ghana has experienced a positive trend in its economic development over the past two decades, and seen a gradual strengthening of its democracy in recent years. This has led to its reclassification (by the World Bank) as a lower middle-income country, and it is on track to meet the Millennium Development Goal of halving extreme poverty by the year 2015. This positive overall picture hides persistent inequity. Infrastructure of basic services, including health, is far from meeting the needs of the population. This is particularly the case in mental health, where many years of neglect have left services even farther behind. This is now beginning to change. Ghana recently adopted a progressive Mental Health Act (2012), a reflection of the substantial efforts made by a growing civil society sector interested in mental health. These efforts, over the past decade, have also seen the emergence of one of the strongest service user movements in Africa, new cadres of trained personnel, and a greater awareness of mental health issues in the country.

This document sets out to propose a model for a project that will build on these considerable achievements, and bring together relevant aspects of evidence-based practice that would make a good fit for the needs of the situation in Ghana. The Institute of Medicine (IOM) has convened several activities related to strengthening the capacity for delivering quality mental health services in low- and middle-income countries (LMICs, a designation by the World Health Organization, or WHO) over many years. The landmark publication *Neurological, Psychiatric and Developmental Disorder: Meeting the Needs in the Developing World*[1] was an early driver of the growth of global mental health as a discipline. In recent years, three key workshops have been held, bringing together international and local experts to explore sustainable solutions to service development challenges, including addressing the treatment gap and improving quality of care, human resource development, and access to appropriate medication.

The first section of the report provides a summary of the context in which the project will run, and the considerations made in development of the project. The second section contains the proposal for the demonstration project itself, made up of a project narrative and logical framework for its successful implementation.

SECTION 1: BACKGROUND AND SITUATION ANALYSIS

General Development Indexes

Ghana is a West African country with a population of approximately 25.3 million people (2012) (see Table F-1). About 45 percent of the population are below age 18 (2012), and there is an annual increase in population of 2.5 percent. The population is generally denser in the southern part of the country, and there is a rapid growth in urban populations (currently 52.8 percent of the total population), especially in Accra.

Although there is a strong growth in the economy (7.1 percent in 2013), 28 percent of the population still live on less than $1.23 USD per day, with greater levels of poverty and worse health and development indexes in the northern part of the country.

TABLE F-1 Main Development Indicators (Health, Education, Economy)

Indicator	Value	Year	Source[2, 28–30]
Total population	25,366,500	2012	Census
Population under 18 years	11,423,500 (45% of total)	2012	Census
Population annual growth rate	2.5%	2012	UNICEF
Life expectancy at birth	61 years	2012	UNICEF
Under-5 mortality rate	82 deaths/1,000 live births	2011	MICS
Maternal mortality rate	378 deaths/100,000 live births	2011	UNICEF
Primary school net attendance rate	73%	2011	MICS
Literacy rate (total)	82%	2012	UNICEF
Population below international poverty line (USD 1.25 per day)	28.6%	2011	World Bank
Gross national income per capita	USD 1,594	2011	World Bank
GDP	$47.93 billion	2013	World Bank
GDP growth	7.1%	2013	World Bank
Human development index and rank	0.573 Rank 138th (out of 187)	2014	UNDP HDI/R

NOTE: GDP = gross domestic product; HDI/R = human development index and rank; MICS = Multi-Indicator Cluster Survey (UNICEF); UNDP = United Nations Development Program; UNICEF = United Nations Children's Fund; USD = United States dollar.

Health Services

Despite good progress since the 1990s, as shown by infant and under-5 mortality rates that have halved between 1980 and 2012 and an increasing life expectancy (see Figure F-1), provision of health services is generally weak and inconsistent in quality across the country.

The Ministry of Health (MoH) provides policy direction for all health-related issues in Ghana, and the Ghana Health Service (GHS) is responsible for provision of public health services. The system is functionally divided into the 216 administrative districts covering the 10 regions of the country. Each district has a District Health Management Team headed by a district director, who reports to the regional director. Every region has a regional hospital, and each district should have a district hospital, although the facilities available in some are limited. Subdistricts are served by health centers (see Table F-2).

The smallest unit of health care in the Ghanaian public health system is the Community-based Health Planning and Service Compounds (CHPS) compound, providing the most basic health care. Most communities have CHPS compounds, but the nearest health center or district hospital may be quite a distance away, especially in the northern parts of the country. Access is also further limited by the poor transportation network in many rural areas, and the high costs of transport.

A number of faith-based health facilities provide services in Ghana. Most are organized under the ambit of the Christian Health Association of Ghana (CHAG). Their facilities are controlled by the churches, while the Ghana government pays the salaries of the nurses and doctors who work there. CHAG runs 58 hospitals and 121 health centers. Their facilities are responsible for 20 percent of outpatient visits and 30 percent of hospital admissions.

Private clinics are available in parts of the country, and provide an important first point of contact with services for many people, especially in urban areas, but their services are generally more expensive.

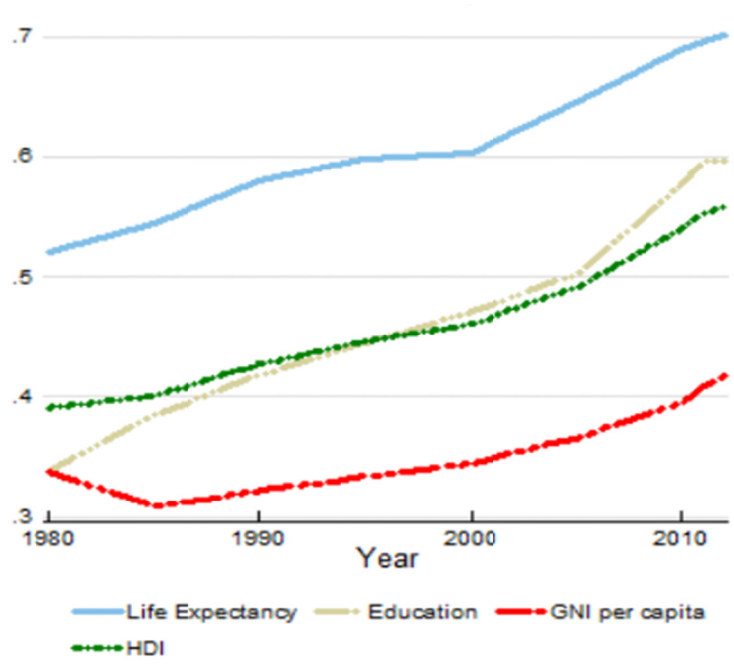


FIGURE F-1 Contribution of human development index (HDI) domains to gradual improvement in HDI and gross national income (GNI) in Ghana (1980–2012).[c]

TABLE F-2 Current Health Facilities and Human Resources

Facilities	
Hospitals (total)	244
Regional hospitals	10
District hospitals	130
Health centers	810
Community-based health planning and service compounds	1,562
Personnel	
Doctors (total)	2,200
Physician assistants	2,280
Registered nurses	17,322

[c]As defined by the Abuja Declaration of 2001.

The National Health Insurance Scheme (NHIS) introduced in 2007 provides coverage for most common disease conditions. It is available upon payment of an annual premium of GHS20.00 or $6.00, which is about 3 days of the minimum wage and considered affordable. Registration by an adult parent gives automatic coverage to all offspring below age 16. The poorest members of communities can register for free. About 10 million of the estimated 25 million population is currently covered. The low level of state funding has an impact on the quality of these services. For example, many service providers complain that they are not reimbursed for services provided in a reasonable time. Nevertheless, the plan is still widely used and serves to lessen considerably the strain on families. Perinatal care and delivery, including caesarean sections, in public facilities is free.

Mental Health Services

Mental health services are provided in three large psychiatric hospitals, all located in the coastal south, and in smaller psychiatric units in five regional hospitals (see Appendix 1). Three teaching hospitals, one each in the south (Accra), central (Kumasi), and northern (Tamale) parts of the country, provide services on a relatively small scale. Each has at least one psychiatrist, with services consisting of inpatient and busy outpatient departments.

Large parts of the country receive psychiatric services from community psychiatric nurses (CPNs), who can be found in 159 of the 216 districts. These CPNs work in the communities, but operate from district hospitals. There are four community-based mental health services, which are nongovernmental or faith based and mainly based in the middle and south of the country. In the Upper East and Upper West Regions, there are community-based rehabilitation (CBR) programs, again faith based, which link clients to GHS CPNs.

Since the Mental Health Act was enacted in 2012, a new Mental Health Authority has been charged with managing mental health issues, though it is still in its formative stages. The governing body of the Mental Health Authority is an 11-member board with a number of committees under it. There is an acting chief executive officer responsible for daily operations of the Authority. Legislative instrument and the law governing the source of mental health funding has yet to be passed, and funding streams for its activities have not been determined.

The psychiatric hospitals and CPNs provide the majority of psychiatric services in the country. The level of knowledge and standard of care offered to people with mental disorders by general practitioners and primary care services is generally poor. Most general practitioners avoid seeing people with psychiatric problems, preferring to refer them to the few mental health care providers. There are many reasons for the low level of interest in mental health. It is stigmatized and is not seen as an income-generating field or a positive career choice. Therefore, the area has been generally neglected by professionals and the health service sector, including international development agencies.

There are few non-health-oriented services, though a small number of CBRs interact with GHS-based nurses to provide a more comprehensive model of care in the north of the country. A few nongovernmental organizations (NGOs) provide community-based services, especially for substance abuse and in a few, for people with mental disorders.

Two special schools for children with intellectual disabilities, one private, and another funded by the government, exist in Accra. Every regional capital has a school for intellectual disabilities. A few small facilities for the care of children with autistic spectrum disorders have been set up by individuals. Professional psychiatric social work services are virtually non-existent and social services receive negligible funding from the state. There is no dedicated forensic psychiatric facility in Ghana, and the mentally ill who violate the law are often kept in the Accra Psychiatric Hospital, some indefinitely. Prisons have high rates of mental illness, with inadequate care provided.

Given this lack of services, particularly in more rural areas, it is not surprising that there is a large treatment gap. In nearby Nigeria, which has better resources, this gap was found to be 90 percent (as defined by those with DSM IV, or *Diagnostic and Statistical Manual*, version 4, disorders not receiving any treatment within the previous 12 months).[3] The treatment gap for mental health disorders in Ghana is estimated at more than 98 percent.

The Informal Sector

Most people who start exhibiting signs of mental illness (especially in the rural communities) will first be taken to a traditional healer, herbalist, or religious leader, such as a Christian Pastor or Muslim Imam. This is because mental health problems are generally perceived as spiritual, and often seen as punishment for doing wrong. The treatment of-

fered, particularly for people with severe and enduring mental disorders like schizophrenia, can be very abusive and often makes the problem worse.[4] Engaging faith leaders is important given their position of authority in communities in health care. Some efforts have been made to work constructively, but this remains a challenge due to the high levels of human rights abuse in some areas, and the fact that provision of modern mental health services can sometimes be unwelcome because it challenges authority and competes for their source of income.[5]

System Factors Impacting on Mental Health Services

Progressive change in mental health services cannot happen in a vacuum and is dependent on the existing health infrastructure, particularly if there is a commitment to investing in sustainable change through integration in mainstream structures. Comprehensive mental health services must provide access to biological, psychological, and social interventions (or facilitate access to such services for those who need them).

- *Access to biological treatments:* Having professionals in the right place with the right skills to prescribe appropriate medications is important, but cannot be done without a reliable supply of medications. This is particularly the case for severe mental disorders such as schizophrenia, bipolar affective disorder, moderate and severe depression, and epilepsy. Such evidence-based medical interventions are advised in the *mhGAP Intervention Guide*, a publication by the WHO Mental Health Gap Action Program (mhGAP).

  The government policy on mental health care has always been and remains to provide psychiatric treatment, including admissions and all medications, for free. In the face of a very small budget, the range and quantities of medications provided is often grossly inadequate. There is a turnaround time of around 2 years in the public procurement cycle, and in practice most medications are only accessible in the specialist public psychiatric facilities, which often procure them from private pharmacies (or through private donations). In less urban areas, most pharmacies do not find it cost-effective to stock psychopharmacological agents beyond the most basic (and usually inappropriately used) benzodiazepines. The overall result is long periods of shortages

of medication, which can lead to relapse of illness, and in the case of epilepsy, dangerous recurrence of seizures.

Costs are generally affordable for the few drugs made available through the state system, but most patients are unable to afford medication, even if they can be obtained from private sources. The real challenge is making an appropriate range of medications easily available at all times to patients within the policy of free care.

- *Access to psychological treatments:* In general, there has been a tendency for mental health services to mainly focus on biological treatments. There are a number of reasons for this: training is biologically focused, and there are few trained psychologists; patients expect and value medication; availability of appropriate, practical talking therapies has been limited even in international guidelines; and it is logistically more complex and expensive to provide talking treatments. Despite this, the evidence is growing for low-intensity, often group or peer, models of therapy, which is an important intervention in many disorders where the evidence implies talking therapies are equally or more effective than medications. Clinical psychologists are nearly absent from Ghana. There are only 16 clinical psychologists in public service in Ghana. This means any solution would require lay providers of simple psychological interventions.
- *Access to social interventions:* In general, there is inadequate intersectoral collaboration in providing the broad care that many people with mental health problems need. Apart from the few CBR programs, health, education, social welfare, and livelihood services do not engage well together. The emergence of organizations engaged in mental health advocacy made up of multiple stakeholders is a positive development that may help to break down some of the traditional vertical siloes in which different sectors work. The Mental Health Act has seen some collaborative work across agencies.

Health Management Information Systems

Recent years have seen a significant investment in improving the way that information is gathered and managed, both for recordkeeping and data collections for individual patients, and for service-level information. Unfortunately, as is often the case, mental health/psychiatry services

are often not sufficiently integrated into these mainstream systems, and must either develop their own or attempt to advocate for inclusion later.

With the stronger emphasis on mental health by international bodies such as the WHO, standard indicators are now being developed that can guide what data should be gathered for local and national planning, and for providing a means of comparison internationally. The indicators in the WHO Comprehensive Mental Health Action Plan[6] are a good example.

Health Promotion, Prevention of Ill Health, and Surveillance

In general, health surveillance is strongest in child and maternal health services that have been a focus of government health efforts, largely driven by the Millennium Development Goals. Within mental health work, awareness-raising activities have been a part in some comprehensive programs. In general though, the capacity to identify people in need early to reduce unnecessary morbidity has been poor, and duration of untreated illness is usually very long, with patients presenting to services very late. Knowledge about mental ill health among first-line clinicians is poor, and referral routes unclear or non-existent outside of major cities.

Human Resources for Mental Health Services

A lack of human resources is often cited as a major barrier to scaling up services in LMICs, and this is a major challenge to delivery of adequate care in Ghana (see Table F-3). The number of psychiatric nurses was estimated at 2.47 per 100,000 in 2011,[7] but this is probably an overestimate, particularly as only a proportion of this number work effectively in mental health settings, and the majority are not in the community or in rural areas. This reflects a general concentration of services in cities.

The country has 16 psychiatrists (around 1 per 1.5 million population), but they are mainly based in specialist hospitals in Accra. Many newly trained specialists leave the country to work abroad, where there is also often a shortage of psychiatric nurses and psychiatrists. In fact, there are more Ghanaian psychiatrists working abroad than in Ghana, mainly in the United States and the United Kingdom. Specialist psychiatrists from the diaspora occasionally come to provide teaching in Ghana.[8] Within the country, many trained mental health nurses are posted to inappropriate placements in other branches of medicine, so they are inefficiently used.

TABLE F-3 Mental Health Facilities and Human Resources

Mental health facilities	Number
Psychiatric hospitals	3
Regional hospital with psych unit	5
Teaching hospital with psych department	3
Substance Abuse Rehabilitation Centre	1
Day Centre	1

Mental health personnel[9]	Number
Psychiatrists (total)	16
- of which work in public facilities	9
Community mental health officers	493
Psychiatric nurses	967*
- of which are community psychiatric nurses	160
Clinical psychologists	100
- of which work in health facilities	20
Occupational therapists	1
Psychiatric social workers	0

*Many of whom do not work in mental health.

It is generally accepted that if the challenge of closing the gap in human resources is to be met, this will be done through a task-sharing model, where greater clinical responsibility will be given to less senior personnel than has traditionally been the case. Most recent major, evidence-based global initiatives have followed this principle, but in order to result in safe and quality care, there need to be clearly establish roles and tasks, adequate training, ongoing supervision and support, and in some cases changes in policy and schemes of service. Some work has recently been carried out to establish candidate core competencies for different cadres, for example, by the IOM,[10] and the West African Health Organization has recently finalized a process for harmonizing training for doctors, nurses, psychiatrists, and psychiatric nurses in the region. At present mental health/psychiatry training is not prioritized in medical and nursing schools, and many curricula are outdated.

The Kintampo College of Health, which specializes in training personnel for rural communities, has since 2011 been running a diploma program for community mental health officers, degrees for clinical psychiatric officers, and a diploma for medical assistants, specialized in psychiatry. This has started to fill an important gap in mid-level professionals at the community level. There is not a single psychiatric social worker active in the country.

Clinical psychologists number around 100, but fewer than 20 work in the public sector and are accessible mostly to people living in the two biggest cities. Several projects encourage development of self-help groups and peer support, an important source of care, not only in low-income contexts. The Mental Health Society of Ghana works to support these groups, not only for the potential therapeutic benefit, but for advocacy purposes.

Financing

At the individual and family levels, a chronic mental illness can have a catastrophic effect on financial security. The cyclical relationship between poverty and mental illness is well demonstrated, but there is increasing evidence to support intervention both in the "social drift" direction (mental ill health leads to poverty) and the "social causation" direction (social factors like poverty lead to mental ill health).[11]

Mental health services in the public sector of Ghana are, in principle at least, free as a matter of policy. This includes consultation, all medication, and admission, including food. Many people still spend large amounts on transportation and other opportunity costs to access services. The fact that services should be free can act as a barrier to internally generated revenue as an option for sustaining services.

NHIS is currently not designed for psychiatric services. Some psychotropic medications, however, are covered by NHIS when prescribed in general practice, and people with mental illness may access other NHIS services if they are registered.

In Ghana in the year 2012, total health expenditure as a percentage of gross domestic product was 5.2 percent—the agreed target is 15 percent.[d] In 2010, 1.3 percent of this figure was spent on mental health, very low when compared to the (global) estimate of 13 percent of total burden of disease attributable to mental, neurological, and substance use disorders (see Figure F-2).

With the recent increase in interest in mental health at the government level, and creation of the Mental Health Authority, it is hoped there will be a greater allocation of resources to mental health. Major donors such as the U.K. Department for International Development and the European Union have already invested in significant mental health program,

[d]As defined by the Abuja Declaration of 2001.

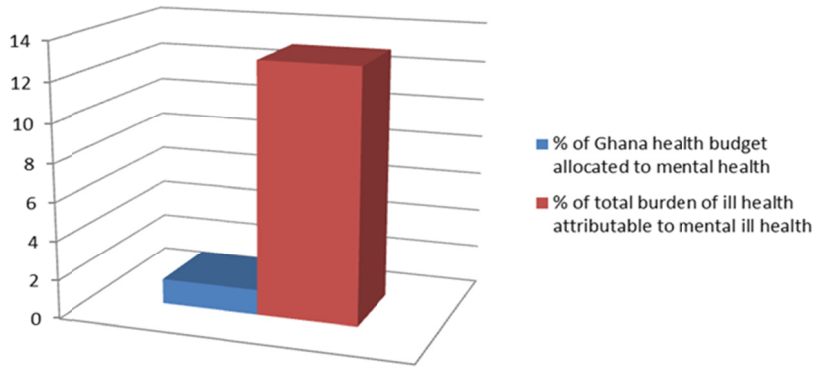


FIGURE F-2 Comparison between need (burden of disease, or disability-adjusted life years, for mental, neurological, and substance use disorders) and resource allocation (percentage of health budget for mental health) in Ghana.

in part because of the leadership shown by government and the positive framework for action that the Mental Health Act provides.

Lived Experience, Human Rights, and Social Inclusion

As well as the heavy cost to the individual and family from having a psychosocial disability, the stigma associated with these problems often leads to social exclusion, rejection from the community, and even to physical abuse. Holding people against their will is common when someone has destructive or aggressive behaviors, and traditional and religious treatments can involve beating, burning, and forced fasting, which can last for months at a time. Containment in a prison is common as a "solution" when families are unable to access the care they need for their relatives whose behavior they cannot manage, and women with severe mental illness are vulnerable to sexual abuse. Human Rights Watch published a comprehensive report on human rights in the formal and traditional sectors in 2012[4] that gained wide international attention. The new Mental Health Act provides some powers to the Mental Health Authority to enforce rights, and it will be interesting to see to what extent it will impact the experience of people being subject to human rights abuse in institutions and communities across the country.

Access to good health care is an important first step toward inclusion in community life, and acceptance into social structures. The human

rights messages in the awareness activities will reinforce this, with direct messages about social inclusion and reintegration after people have experienced discrimination while unwell.

Policy and Legislative Framework

The Mental Health Act 2012 (Act 846) is the current law that governs the practice of mental health in Ghana. It replaced the previous law, NRC Decree 30, of 1972, which focused largely on custodial care. It is the result of an 8-year collaboration among the WHO, civil society organizations including user groups, and Ghanaian mental health officials. Its eventual passage into law by the legislature was greatly facilitated by intense public advocacy and lobbying, which assumed an international dimension. The new law has been seen as a model for reform of mental health legislation in other parts of Africa. It is particularly strong in recognizing and upholding human rights of people with mental illness and emphasizes community care. Perhaps its greatest shortcoming is the absence of specific provisions recognizing suicide attempts as a sign of mental illness because Ghana still maintains suicide as an offense in its criminal code.

A novel feature of the Act is that it covers the operations of traditional and faith healers. The Mental Health Act also provides for setting up a mental health fund to provide a dedicated source of funds for mental health activities. This has yet to be made available for full roll-out of the provisions of the Act.

There are plans to build a forensic psychiatric facility, have a psychiatric hospital in each region, and have dedicated beds for psychiatric patients in every district and regional hospital. Day hospitals and rehabilitation centers in the community are all included in the vision of the new Mental Health Authority. None of these have actually taken off yet, however.

The latest mental health policy in Ghana dates from 1996 (revised in 2000), but was never implemented. In 2006 Ghana passed its Disability Rights Act (Act 715). Ghana is a signatory and has ratified the United Nations Convention on the Rights of People with Disabilities (in March 2007 and July 2012, respectively).[12]

Civil Society in Mental Health

Ghana can boast strong civil society organizations and established networks in mental health. This includes strong service user organizations, which is rare in Africa. It is generally recognized that they, alongside professionals, have played an important part in advocating for, drafting, and now implementing the new mental health legislation. International NGOs have played an important supportive role in this, with BasicNeeds standing out as having a particularly important long-term role in supporting civil society to promote change in Ghana. BasicNeeds mobilized the advocacy group that carried out a widespread and effective campaign that expedited the passing of a new mental health law in 2012. It has continued to support meetings to draft legislative instruments to actualize the law.

User associations of people with mental illness have been formed in many regions, which also helps with rehabilitation and even occasionally the supply of medications to affected individuals. Many have become economically independent through such activities. The Mental Health Society of Ghana has been formed, again through the support of BasicNeeds, to bring together various civil society organizations interested in mental health and thus bring sustainability to their activities. See Appendix 2 for a list of civil society organizations working in mental health. However, interest in mental health by general health and development organizations is less than ideal. For example, the Ghana Federation of the Disabled does not have strong mental health representation.

Research

Ghana has a strong history of research in mental health, going back many decades.[13] Well-established local research institutions like the University of Ghana and the Kintampo Project have participated in important international collaborations such as the Mental Health and Poverty Project. International NGOs such as BasicNeeds and CBM International have a strong philosophy of evaluation and research within their projects, and have published examples of good practice.[14,15] The WHO is collaborating on an important demonstration project related specifically to improving services in the field of epilepsy using the evidence base of mhGAP.

Summary

Quality community-based services improve access to care by the poorest, most rural populations, who are usually excluded from hospital services. Unfortunately, despite evidence of their efficacy, and government policy officially stating that they should be available, such services are rare beyond the existence of psychiatric nurses at decentralized locations. The development of accessible community-based services in Ghana will considerably increase the chances of people receiving the care they need. Experience shows that even if services are available, it is only with efforts to increase community awareness that the services are well used. Therefore it is important to deliver simple awareness messages, including basic human rights messages, positive messages about mental health issues (e.g., treatability), and advice on how to access care in the community.

SECTION 2: THE DEMONSTRATION PROJECT

Terms of Reference

This report is a concept for a demonstration project for improving access to mental health services in Ghana. It was commissioned to inform a workshop that will consider ways of taking forward mental health services in Ghana.

Overall Objective

"Persons with mental health needs and psychosocial disability are able to have access to good-quality mental health care through local mainstream health services, and to be included in community life." A demonstration project will be carried out and evaluated to inform replication.

Principles Underlying Proposed Model

As a demonstration project, we have aimed to follow best practice principles, established evidence, and stakeholder consensus, to meet the specific needs using the available resources in Ghana.

The model is therefore designed to be:

- Comprehensive and holistic, addressing a wide range of issues that may be affected in the life of a person with a mental illness, and offering services encompassing biological (medical), psychological, and social interventions (often in combination)
- Accessible, made to be as easy to use as possible (taking into account proximity, cost, cultural acceptability)
- Integrated into the existing systems, mainstreaming mental health into general services, and reducing barriers across sectors
- Adapted for the local context and cultural norms of the people who would use the services
- Developed in a participatory way, from future users of the services to key decision makers whose buy-in at an early stage will facilitate future support
- Sustainable and economically viable in the economic context of Ghana, and able to show good value for investment by potential donors
- Replicable at scale; the project aims to inform possible scale up in Ghana and beyond
- Well evaluated; as a demonstration project, results that will be taken seriously by health leaders and planners need to be backed up by data collected in a methodologically sound way

Partnership

This technical proposal for a demonstration project in Ghana is an initiative of the IOM and developed with the collaboration of local partners. Subsequent refinement of the proposal will take place at a workshop in Accra, and implementation of the final proposal will depend on external funding. It is hoped that any such external funder will combine technical collaboration with funding of activities. Local implementation will depend on close collaboration with the MoH and GHS because the main thrust of the proposal is to integrate mental health into existing health structures, but the proposal is comprehensive and multisectoral. This means that other relevant government agencies (Ministry of Education, Ministry of Employment and Social Welfare) as well as Ghana's strong civil society will also play an important role. Effective implementation of transformative initiatives usually relies on a strong

oversight committee and implementation team beyond the routine systems in place in the existing system.

Scope of the Project

This demonstration project is nested within the overall stated aim of the Government of Ghana to improve and scale up mental health services. It is therefore defined by the goals and priorities established in Ghana Law, Policy, and Strategy and will seek to support their implementation.

Timeframe

The project is ambitious in aiming to bring about change in established systems. While this has been shown to be feasible, particularly in defined structures, it takes time (see Appendix 4). We recommend a project should not be considered for less than 3 years (taking into account pre-project negotiations, contracts and legal authorization, inevitable bureaucratic delays, establishing a project team, and proper evaluation, etc.).

Catchment Area

The overall objective of the project is to inform a process of reform of mental health services in Ghana with the aim of increasing coverage of accessible mental health services in the country. This demonstration phase, then, will provide the information necessary to inform subsequent scale-up.

Districts have been chosen as the unit of implementation, as these are an important political entity, with responsibility for coordinating decentralized care under Ghanaian law and practice. The district contains management structures that can be used in this project, as well as general political forums to aid broader awareness about the work (District Assemblies). In general, integrated mental health services are not available in a typical district, so a successful implementation plan would have a huge impact by showing that it is possible to integrate into this level. We would aim to work in a comprehensive way in each district, such as within general hospitals and primary health care, depending on the resources a particular district has, and within the other sectors present in the district.

Two demonstration districts will be identified that represent a balance of urban and rural contexts. This is necessary due to the (increasing) disparity between urban and rural settings, requiring a different approach to making services accessible. Having sites that are specific to needs in this way allows not only generalizability to a greater number of districts for replication, but also the ability to analyze implementation outputs and processes to compare what works between two sites. Other factors that will be considered in choosing the two sites will be:

- Willingness of district authorities to support the project;
- Other local partners identified who can support the project;
- A track record of success in other projects;
- Adequate human resources (but not atypically well resourced); and
- Ease of access for monitoring and research.

The sites will be identified by the government and implementing partners based on transparent standard criteria, including these listed above.

Sustainability

This project aims to develop systems that are fully sustainable within the existing GHS structures. It has therefore been designed to be integrated, using an appropriate model that is in keeping with other components of the health service, and using existing resources without putting into place overly complex or resource-intensive interventions that cannot last beyond the timeframe of the project. This means that we would expect commitment from the health system to maintain any changes brought about: processes, staff deployment, good practice, supervision, etc. It will not be possible or appropriate to pay significant incentives for routine day-to-day work that we would expect to continue after the lifetime of the project. Some one-off or time-limited investment in activities is necessary to kick-start or develop an integration of mental health. This includes situation analysis, planning and model development, awareness raising, initial capacity building and training, and the necessary evaluation and dissemination, etc.

Assumptions and Risks

(*see Appendix 3: Logical Framework Matrix*)

The reasons mental health is not a priority and services are not widely available have been well documented.[16] In addition to the risk analysis incorporated into the logical framework in relation to specific result areas (see Table F-4), we will briefly consider strategies to overcome these recognized barriers to change.

TABLE F-4 Barriers to Mental Health Care in Ghana

Barrier[15]	Situation in Ghana	Strategies to Address Barrier/Risk
1. Insufficient funding for mental health services	Mental health is allocated 1.3% of health budget (which is 5% of GDP), which is very low, and mainly spent on specialist services.	Use temporary external funds to invest in a model of integrated mental health care that will show efficient and impactful outcomes with use of funds. Also acts as bridging funds for initial high investment. Advocate for increased resource allocation.
2. Mental health resources centralized in and near big cities and in large institutions	Ghana has three large specialist hospitals, which are the main centers of care availability. Some examples of more accessible care exist, but are not fully integrated at a national level yet.	Use evaluation of demonstration project to show process and efficiency benefits of decentralization.
3. Complexities of integrating mental health care effectively in primary-care services	The project is likely to encounter such challenges in creating change in established systems.	Specific focus on good consultation in project design (for buy-in), collaborative working, integrating into management structures, and using a deliberate systems approach.

Barrier[15]	Situation in Ghana	Strategies to Address Barrier/Risk
4. Low numbers and limited types of health workers trained and supervised in mental health care	Very low numbers of specialist personnel. Positive development of new mid-level professional grade in mental health.	Develop a task-sharing model using existing workers. Add training (in Mental Health Gap Action Program [mhGAP]) to capacitate to deliver tasks as defined. Advocate for appropriate posting to demonstration sites. Supervision.
5. Mental health leaders often deficient in public health skills and experience	Relatively strong leadership in mental health compared to other countries in the region.	Use leaders with experience on Steering Committee, including those who have attended mhGAP. Clear policy briefs to update and inform health leaders in country on best practice for scale-up.

NOTE: GDP = gross domestic product.

Project Activities

(*see Appendix 3: Logical Framework Matrix*)

Under the main result areas listed below, specific expected outcomes have been listed. As part of detailed project planning, the activities designed to achieve these outcomes will be established in detail. Similarly, the budget for the project will be detailed in line with these activities. In view of the desire to move toward implementation, a projected overall budget for each result area has been included in the logical framework.

1: Establish buy-in, management structure, and project oversight. Engage with relevant structures for integration of mental health.

Management Structure and Partnerships
(*see organizational diagram in Appendix 5*)

This project will integrate mental health services into state health infrastructure, using the resources within that system, but also key external expertise and support. It is therefore a public–private partnership, recognizing the different strengths of different actors, particularly in view of the need for rapid implementation of a novel service model and its comprehensive evaluation. Service delivery management will follow the lines of the GHS, but with a separate project management team to drive the implementation, administration, and evaluation of the project. As an externally funded project, there will be a need for high-quality financial and narrative reporting of activities by a dedicated team. It is hoped that an external funder will bring not only financial resources, but expertise. Similarly, project oversight will be provided by a Steering Committee under the Mental Health Authority, but this will be made up not only of health system leaders, but a variety of professionals, persons with project management experience, and service users.

Accountability will be ensured through inclusion of service users in the Steering Committee, with user satisfaction being a key indicator. Financial accountability to the donor and the government will be ensured by a finance/administration officer in the Project Management Team. To ensure independence and high standards in evaluation, the research component will be a collaboration of Ghanaian and international researchers. These partnerships would be laid out in a contract associated with a funded project.

2: Situation analysis and planning: Complete full situation analysis in identified demonstration sites, design implementation model, develop monitoring and evaluation (M&E) plan.

Project Development Process

Although the actions in this proposal are based on accepted best practice and the practical experience of the authors, it was not possible to follow an extensive participatory development process with all relevant stakeholders. Key leaders representing likely partners in any future implementation of the program were consulted, notably mental health leaders and members of the Ghana Mental Health Authority and the MoH, and asked to review the proposal outline. It will be essential, as first steps

in any implementation, to have a fuller engagement with stakeholders, particularly those who would be personally affected by the service. A structured process such as Theory of Change would enrich this proposed project outline with detail and provide a structured review of likely issues to manage any risks. Prior to implementation, there would also be need for a phase of more detailed situation analysis and baseline data collection.

3: Establish integrated Community Mental Health services in government health structures in two demonstration sites.

Evidence Base for Interventions

The project aims to be comprehensive and patient centered. This means health services are designed to be responsive to patient needs, with evidence-based interventions used to respond to those needs. This means biological, psychological, and social elements of care are available as near to the patient and as affordable as possible. Some elements will be delivered by the services, and some via referral to other services. Priority conditions will be determined based on identified needs, Ghana mental health policy, and canvassed opinion.

The evidence-based foundation for interventions will be provided by the WHO mhGAP program, particularly the Intervention Guide[17] and other established sources, guidelines, and recommendations.[18,19] Many of these have already been used in Ghana and other West African countries[20,21] and an mhGAP adaptation has been carried out in Nigeria.[22] Training would be based on the mhGAP materials for the identified priority conditions. There are Master Trainers available in the country. mhGAP also provides additional materials such as the M&E guide, Community Workers Training, that can be used as a resource. The evidence for implementation processes is also drawn from published sources,[23,24] but significant efforts are made to ensure adaptation to local systems through significant input from local expertise, stakeholder validation of proposed activities, and regular review by experts and users throughout the processes. See notes above on the principles underlying the proposed model.

Task Sharing, Stepped Care, and Collaborative Care

These terms have come to be commonly used in service reform. They are defined in Box F-1.

These approaches will be used not only due to the limitation of available resources, but because much evidence supports their efficacy.[25] The details of how this would be done in Ghana will depend on the situation analysis and planning process, but are likely to include tasks being done at certain levels, as summarized in Figure F-3. Among these different groups, there should be regular communication and supervision, and clear lines of referral.

4: Maintain a systemwide perspective to enable necessary resource availability and smooth running of the project. Ensure good intersectoral links to facilitate access to non-medical services.

BOX F-1
Definitions

Collaborative care: When mental health professionals and general practitioners work together to provide care for a patient, this is called collaborative care. For example, the psychiatric nurse might do initial assessments and an annual review, but general nurses in a primary health care (PHC) unit might carry out routine reviews. Collaborative care sometimes involves families collaborating as part of a care team as well.

Stepped care: While many cases can be managed at a decentralized location by staff trained to provide certain treatments, some people will require more complex care. Stepped care involves enabling community or PHC practitioners to provide first-line care, but then to have clear points at which referral is made to the next level of care.

Task sharing: Task sharing means distributing tasks to a wider range of people than in the traditional doctor-led approach. Usually staff with less training are assigned tasks that previously would have been done by someone with more professional training. For example, a nurse in a primary care unit would be allowed to treat a patient with medication or provide counseling. This is supported by good training and support to ensure that high standards are maintained.

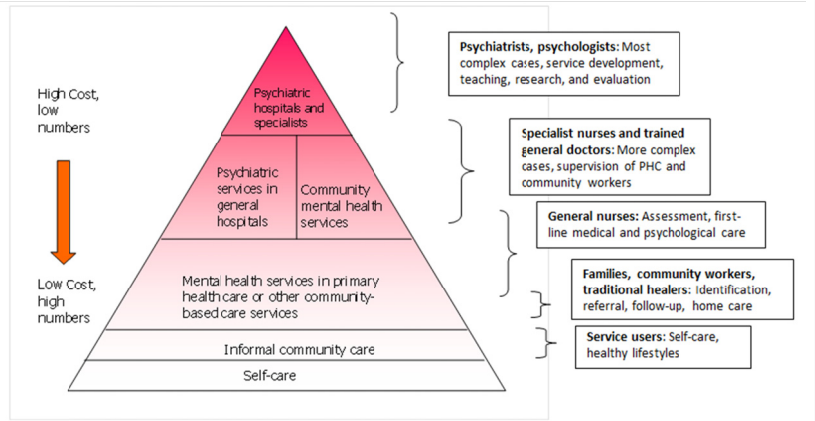


FIGURE F-3 The World Health Organization pyramid of mental health services. Self-care is pertinent at every level of the pyramid.
NOTE: PHC = primary health care.

Key Stakeholders

Although the main thrust of the service reform in this proposal occurs through integration into established (governmental) structures, there is an important role for others involved in mental health care in Ghana. They include service users and their families; NGOs providing health and social care services; advocacy and campaigning organizations and umbrella bodies; traditional and religious healers; international development organizations; and academic organizations interested in mental health. See stakeholder list in Appendix 2. A stakeholder analysis will be carried out as part of an activity in Result 2 to judge the best way for different actors to participate (Appendix 3).

Intersectoral Links

Mental health is uniquely crosscutting, with an impact on many related areas. By engaging with other sectors, it is possible not only to significantly impact the lives of persons with mental health problems encountering their services (in physical health, education, livelihoods, etc.), but also to improve the effectiveness of those other programs. A good example is how HIV/AIDS outcomes improve when mental health and medical issues are addressed together. Similar results have been

found with non-communicable diseases and maternal and child care services. In this project, we expect to include the Ministry of Education and the Ministry of Employment of Social Welfare because their work is central to an integrated approach that looks at patient needs as a focus for services.

In addition to intersectoral links, it will be necessary to engage with several discrete parts of the health system itself (MoH and GHS). For example, in advocacy efforts to improve access to medication and improve the health management information system, it will be necessary to engage with relevant departments to improve their focus on mental health. In each case, a thorough evaluation of the current system will be needed before a clear plan for addressing weaknesses and barriers to change can be implemented.

5: Increase community awareness of mental health issues, existence of new services. Challenge myths and stigma.

Changing Attitudes and Behavior

The negative experiences of discrimination and human rights abuse are frequently identified by service users and others as major priorities for action, given the detrimental impact on quality of life. In addition to the beneficial effect that a reduction in stigma and negative attitudes and behaviors would have, gaining awareness about services also increases use of those services.[26] Unfortunately, the evidence for effective strategies for changing community attitudes and behavior is limited.[27] One strategy that has been shown to be effective is direct exposure to people who have had mental health problems. This will be a central method used, harnessing Ghana's strong service user community. Changing attitudes among young people is a key strategy not only to reducing population-level stigma and discrimination, but also to teaching mental health literacy and helping people to learn basic skills to maintain their own mental health. We propose to develop a basic module for inclusion in the school curriculum, which will be evaluated for a possible wider roll-out.

Engaging with Key Influencers of Opinion and Behavior

Key opinion influencers such as traditional leaders and healers will be engaged in forums that allow a frank exchange of ideas so as to gain a greater understanding of local explanatory models of disease. In this way

the demonstration model can more sensitively meet the needs of the population, and also allow a positive ongoing collaboration while addressing human rights concerns about conditions in traditional healer/prayer camps. Similarly, journalists will be made aware of more positive representations of people affected by mental illness, and the way that reporting can influence stigma and discrimination, as well as illness behavior, such as in the case of reporting on suicide. Addressing issues of human rights abuse and unhelpful negative myths will also be possible in the various multistakeholder forums that will be held to develop, oversee, and evaluate the program.

The Ministry of Education has a Schools Health Education Program division. We will engage them to include mental health in the curriculum. In each of these initiatives for specific target groups, expertise will be sought to carefully assess the evidence for "what works" to optimize impact at the design and implementation stages. This includes engaging experts in behavioral change.

6: Monitoring and evaluation, accountability, research, measuring impact.

Evaluation and Research

This project should be seen as an essential step toward providing evidence and guidance for supporting a long-term process of improving access to mental health services in Ghana and other sub-Saharan countries. As part of the project development, a monitoring and evaluation plan will be developed that will ensure that data are collected to answer key questions on how the project is running, what resources are being used, and what the impact is. This plan will include basic cost data in recognition of the fact that we aim to use this information for advocacy for scale-up. Research expertise for evaluation of the project and proper analysis to present evidence in an effective way will be provided by a collaborative group of experts from local and international institutions.

Maximizing Impact and Scaling Up

To ensure that any evidence generated and lessons learned are applied within the overall framework of scaling up services in Ghana:

- All stakeholders, including key decision makers, will be engaged from an early stage so that there is government ownership
- This will also ensure that the project is appropriately designed for the local context and is sustainable within existing health structures
- Attention will be paid to ensuring that proposed practical interventions are designed to be relevant to the local demonstration sites, but also with an eye to ensuring that national-level processes are influenced (e.g., medication supply chain or health information system reform)
- Results of the evaluation will be analyzed and presented in an accessible format for those involved in health service development in Ghana
- These results will include quantitative and qualitative evaluations, process indicators (how the processes for running the project worked), and data on cost-effectiveness
- As well as individual meetings, a workshop will be held to present the findings to local and national health authorities
- The findings will also be submitted for publication in peer-reviewed journals and presented at academic conferences

The evidence generated would be a great resource in a country that is recognized as having made great strides in development, and has proved to have a strong and effective advocacy movement.

Conclusion

As the evidence for individual interventions builds, this project offers a unique opportunity to combine many of the different components of an effective service, in a country that has made outstanding progress in the legal and policy environments. The results would not only be valuable in Ghana, but provide the guidance needed by many countries as they strive to meet the expectations to improve mental health services. There is growing international and local public pressure to bring mental health services into parity with physical health services, through local progressive legislation, and global agreements such as the Comprehensive Mental Health Action Plan. The results of this demonstration project would go a long way toward achieving these aspirations in Ghana.

Major Sources of Evidence for Demonstration Project

- Ghana Mental Health Act 2012
- Comprehensive Mental Health Action Plan 2013–2020, WHO 2013
- mhGAP Program suite of resources, WHO
- *Lancet* Global Mental Health Series (2007/2011)
- Reports and conclusions from previous IOM workshops on mental health in sub-Saharan Africa

Acknowledgment

This demonstration project proposal is an initiative of the IOM as part of a wider program supporting mental health in sub-Saharan Africa. It was prepared by Dr. Julian Eaton and Dr. Sammy Ohene, who gratefully acknowledge the support of many experts in Ghana, particularly the Mental Health Board members.

List of Acronyms

(NOTE: Acronyms used in the appendixes are listed here rather than at the bottom of each appendix)

CBR	community-based rehabilitation
CHAG	Christian Health Association of Ghana
CHPS	Community-based Health Planning and Service Compounds
CMD	common mental disorder (e.g., mild depression, anxiety)
CMH	community mental health
CPN	community psychiatric nurse
DSM IV	*Diagnostic and Statistical Manual*, version 4 (of the American Psychiatric Association)
GDP	gross domestic product
GHS	Ghana Health Service (also the official acronym for Ghanaian New Cedi currency)
GNI	gross national income
HDI	human development index
HDI/R	human development index/rank
HMIS	health management information system
IOM	Institute of Medicine (U.S.)
LMIC	low- and middle-income country (World Health Organization definition)
LAMIC	low- and middle-income country (World Bank definition)
MAKS	Mental heAlth Knowledge Scale
M&E	monitoring and evaluation
MGMH	Movement for Global Mental Health
MH	mental health
MH Authority	Mental Health Authority
mhGAP	WHO Mental Health Gap Action Program
MHIN	Mental Health Innovation Network

MICS	Multi-Indicator Cluster Survey (UNICEF)
MoH	Ministry of Health (Ghana)
NCD	noncommunicable disease
NGO	nongovernmental organization
NHIS	National Health Insurance Scheme
PHC	primary health care
PWPD	people with psychosocial disabilities
SMD	severe mental disorder (e.g., schizophrenia, bipolar affective disorder, severe depression)
ToT	Training of Trainers
UNDP	United Nations Development Programme
UNICEF	United Nations Children's Fund
USD	United States dollars
WHO	World Health Organization

Appendix 1
Map of Facilities Providing Mental Health Care in Ghana

= Specialist hospital
= Regional hospital with psych unit
= Teaching hospital
= Nongovernmental organization providing mental care

Appendix 2
List of Civil Society Organizations Working in Mental Health

National Organizations

Name	Field of Work
National (multiple regions)	
Mental Health Society of Ghana	User movement for persons with mental illness or epilepsy
MindFreedom Ghana	Human rights–based organization involved in advocacy and public education
Ghana Mental Health Association	Umbrella organization for all persons and organizations with interest in mental health
Psycho-mental Health International	Public education
Remar	Drug rehabilitation
Chosen Rehab	Drug rehabilitation
Presbyterian Church of Ghana	Community-based rehabilitation programs in Upper East Region

International Organizations

Name	Field of Work
BasicNeeds	Mental health and development
CBM International	Disability and development
Department for International Development	Bilateral donor
European Union	Multilateral donor

Name	Field of Work
Mental Health Educators in the Diaspora	Training local mental health personnel
World Health Organization	UN agency

Research Groups Active in Mental Health Research

Name	Area of Research
National	
Christian Health Association of Ghana-Project Fives Alive!	Maternal depression and epilepsy
International collaborations	
Kintampo Health Research Centre	Community mental health
Fight Against Epilepsy Initiative	Epilepsy

Appendix 3: Logical Framework Matrix

	Project Description/Narrative	Indicators of Success	Source of Verification	Assumptions and Risks
Overall Objective	Persons with mental health needs and psychosocial disability in two demonstration sites are able to have access to quality mental health care through local mainstream health services, and to be included in community life.	Coverage: services established in two districts that will reach 20-40% of people with SMD and 5−10% of people with CMD regularly by 5 years. Quality of care provided by services. Service user satisfaction.	Project statistics on service activity. Patient outcome data collection and analysis. Additional qualitative work.	Assume government (national and local) cooperates and provides support. Assume other stakeholders will be motivated to form alliance.
Results 1: **Establish buy-in, management structure, and project oversight. Engage with relevant structures for integration of mental health.**	1.1 Meet with, and gain approval from, figures of authority in health care in Ghana and identified districts. Identify focal person in established structures. 1.2 Build a Steering Committee within established health system structures: a diverse group of people with mental health and service development experience. Include representation of those providing the services and using services. 1.3 Build a strong project management team though transparent recruitment of qualified people, building their capacity to deliver the project and reporting requirements.	1.1 Signed agreements for demonstration to go ahead, with commitments of support from MoH, GHS, and MH Authority. Support of other actors with a role in services for people with psychosocial disabilities. 1.2 Steering Committee meetings held quarterly, and project management team held to account through government structures and external donor system. 1.3 Full complement of appropriately qualified staff employed, in a suita-	Job descriptions for staff. Signed agreements to cooperate with work (Memorandum of Understanding) by government. Published document laying out plan for state MH development.	Government cooperation and support is needed. This is likely with good liaison. Also, there is little financial outlay on their part. Risk of change of government staff leading to need to repeat visits to engage new people.

	Project Description/Narrative	Indicators of Success	Source of Verification	Assumptions and Risks
	1.4 Participate in forums relevant to mental health. Mainstream mental health into work of other sectors.	ble work environment within 4 months. Includes new project staff and 1.4 MH representation and engagement in other relevant forums. Evidence of MH inclusion in other sector plans (e.g., maternal/child health, NCDs, disability, livelihood, development).		
Results 2: **Situation analysis and planning: Complete full situation analysis in identified demonstration sites, design implementation model, and develop M&E plan.**	2.1 Carry out detailed situation analysis in identified demonstration sites to document needs and available resources. 2.2 Use detailed situation analyses to inform development of a project model. 2.3 Develop M&E plan in line with recognized indicators that will provide evidence and lessons for replicability (include costs and process indicators). Measure baseline for indicators.	2.1.1 Situation analysis carried out and report written. Includes review of epidemiological data and policy framework. 2.1.2 Situation analysis reviewed and validated as part of a consultation to identify stakeholder priorities. 2.2.1 Detailed project model and implementation plan developed in participatory process. 2.2.2 Human resource availability mapped, and tasks defined at different levels of a stepped, collaborative care approach. Plan for training to meet task expectations and referral	Published reports on Ghana mental health situation (or extrapolation from other West African countries). Validation report. Baseline M&E report.	Assume information is available without need for major epidemiological work. Assume most major stakeholders will support plan for reform. Risk that even with task-sharing model, there are not enough personnel.

	Project Description/Narrative	Indicators of Success	Source of Verification	Assumptions and Risks
		system to support staff. 2.3.1 M&E plan developed and reviewed by experts and those who will use it. 2.3.2 M&E integrated into routine documentation and staff workplans. 2.3.3 Baseline indicators measured.		
Results 3: **Establish integrated Community Mental Health services in government health structures in two demonstration sites.**	3.1 Proposal has support of authorities. 3.2 Build capacity of personnel at each level based on clearly defined tasks. 3.3 Ensure staff at each level are equipped with tools they need to work. 3.4 Provide ongoing training and clinical supervision.	3.1 Relevant authorities at district level support implementation process. 3.2 Relevant personnel identified and trained according to required competencies (documented for each level of staff in Results 2 above). 3.3 Trained staff have requirements to fulfil tasks (leadership support, time, clinic space, furniture, stationery, medical equipment, medication). 3.4 Staff running services at district and PHC level receive quarterly training and supervisory visits.	Signed Memorandums of Understanding with districts. Documentation of personnel posted appropriately. Routine integrated MH statistics in health system. Quality of care provided by staff monitored in supervision process. Vehicle logs for supervision visits.	Assume resources will be available to implement. Risk that staff will not want to work in rural areas (reduced by recruiting from these areas for training). Assume that district authorities are willing to support reform, and that staff will be made available for program. Assume that access is possible throughout year.

	Project Description/Narrative	Indicators of Success	Source of Verification	Assumptions and Risks
Results 4: **Maintain a system-wide perspective to enable necessary resource availability and smooth running of the project. Ensure good intersectoral links to facilitate access to non-medical services.**	4.1 Systematically consider historical barriers to successful access of quality mental health care. Address: 4.2 Low availability of medication through detailed analysis of supply chain, and plan for finding solutions to barriers identified. 4.3 Lack of psychological care by ensuring best evidence-based, low-intensity approaches are incorporated. 4.4 Health management information system weaknesses, by engaging with relevant departments and proposing core set of indicators to be integrated into general system. 4.5 Ineffective referral and counter-referral/senior support. 4.6 Lack of intersectoral collaboration, including physical health education, social services, and traditional and religious healers.	4.1 Review of possible barriers to success (part of situation analysis) used to plan proactive interventions. 4.2 Uninterrupted supply of essential psychotropic medication available at point of need through advocacy and necessary action taken. 4.3 Explore most appropriate model for making psychological support (mhGAP recommendations) for key disorders available in Ghana. 4.4 Health management information system integrated in the mainstream system, easy to use, and providing information that informs improved care. 4.5 Referral mechanisms in place that ensure appropriate pathways in stepped collaborative care model. 4.6 Local social services mapped, and pathways for accessing services for clients developed and used.	Systems indicators related to medication, psychological care availability. Pharmacy records. Client records. Health information system reports. Referral records.	Risk that long-standing barriers to reform will not be amenable to change. Risk of factors outside our control being a block to progress (importation of drugs, prescription laws, etc.). Risk that few social services in existence. Other sectors may not be willing to integrate MH into their work.

	Project Description/Narrative	Indicators of Success	Source of Verification	Assumptions and Risks
Results 5: **Increase community awareness of mental health issues, existence of new services. Challenge myths and stigma.**	5.1 Hold forums to engage with traditional custodians of care to understand explanatory models and better engage collaboratively. 5.2 Develop advocates and equip them to promote messages to communities. 5.3 Develop messages for target groups that might include: - Mental health promotion and illness prevention. - The treatability of mental disorders. - The existence of (new) services for people in communities who need them. - The right of PWPDs to be included in community life and not face discrimination. 5.4 Engage in local- and national-level campaigns to change attitudes.	5.1 Key traditional leaders and healers in each district attend the forums. Report of findings and collaboration plan produced. 5.2 Advocates (including service users) who will engage in awareness-raising activities identified and trained. 5.3 Print materials for advocates to use in awareness-raising activities. 5.4.1 Expose target groups (schools, professionals, etc.) to people who can describe their experiences of living with mental health issues. 5.4.2 Brief module for school curriculum developed, used, and evaluated in demonstration districts. 5.4.3 Carry out event on World Mental Health Day. 5.4.4 Journalist training to reduce stigmatizing messages.	Pre- and post-knowledge and attitudes questionnaires (e.g., Mental heAlth Knowledge Scale, or MAKS). Copies of leaflets, posters, radio/TV programs. Awareness-raising plans. Qualitative research on stigma.	Assume advocates once trained will retain enthusiasm to do awareness-raising work. Should be the case as is funded, and those trained are stakeholders with a personal interest. Risk of attitude, behavior change, and experience of people with psychosocial disabilities not changing despite efforts (evidence is relatively weak).

	Project Description/Narrative	Indicators of Success	Source of Verification	Assumptions and Risks
Results 6: **Monitoring and evaluation, accountability, research, measuring impact.**	6.1 Internal recordkeeping, accounting, monitoring, and evaluation, so that reporting is of a high standard and audit occurs to maintain high standards. 6.2 Gather reliable data and analyze to have strong evaluation of model. Share evidence generated by research related to the program. 6.3 Document roll-out and make resources developed available. 6.4 Engagement with stakeholders in mental health (including government structures) so that findings can be disseminated and lessons learned to benefit Ghana and other LAMICs.	6.1 Maintain records (evidence of activities completed and accounts) and produce timely reports. 6.2 Write a report for publication in a peer-reviewed scientific journal; present in conferences. Develop user-friendly versions of findings (policy briefs). 6.3 Develop program, materials (training, record-keeping, HMIS, referral, etc.) in line with international and local standards that can be used as a resource in replication. Post online (e.g., MHIN, MGMH). 6.4 Dissemination meetings held for local community and health leadership in Ghana.	Quarterly and 6-monthly reports and audits. Program Annual Report. Published materials in journals. Presentations in conferences recorded in conference programs, minutes of management committee meetings.	Risk of personnel not completing reporting schedule (mitigated by intense training program and ongoing support). Risk of not being able to secure external funding for major research.

ACTIVITIES TO ACHIEVE THE OBJECTIVE AND EXPECTED RESULTS

	Suggested Activities (to Be Planned in Detail)	Activity Means/Input	Projected Costs	Possible Barriers to Success and Means of Overcoming Barriers
Results 1: Establish management structure and project oversight. Engage with relevant structures for integration of mental health.	Call meetings with MH leadership in Ghana. Clarify role of project in taking forward national MH strategy. Gain written commitment to support project (if possible financial commitment as matching funds). Transparent recruitment of team, and allocation of government staff.			
Results 2: Situation analysis and planning: Complete full situation analysis in identified demonstration sites, design implementation model, develop M&E plan.	Allocate demonstration sites. Meet with local leadership to gain support. Hold mapping exercise for needs and resources (national and in detail in demonstration sites). Hold stakeholder meeting to identify priorities. Theory of Change workshop to pin down detailed plan. M&E workshop (include government HMIS department).			

	Suggested Activities (to Be Planned in Detail)	Activity Means/Input	Projected Costs	Possible Barriers to Success and Means of Overcoming Barriers
Results 3: Establish integrated CMH services in government health structures in two demonstration sites.	Commission report on task-sharing options for Ghana. Validate with wide stakeholder group. Develop training for acquisition of defined tasks. Carry out TOT and trainings at each level. Ensure motivation of trained personnel to work in long term (remuneration).			
Results 4: Maintain a systemwide perspective to enable necessary resource availability and smooth running of the project. Ensure good intersectoral links to facilitate access to non-medical services.	Establish small working groups of experts in barrier subject areas. Workshops to agree on action plans. Dedicate Steering Committee time and staff resources to advocating on these issues. If necessary implement parallel/support structures, e.g., drug revolving fund or HMIS, until integration is possible. Invite other sectors to MH meetings and awareness. Provide materials for others to understand how to incorporate MH, e.g., evidence on MH/NCDs, livelihoods disability. Hold forums to engage informal care sector in districts, and provide a space to share understandings of mental health and illness.			

	Suggested Activities (to Be Planned in Detail)	Activity Means/Input	Projected Costs	Possible Barriers to Success and Means of Overcoming Barriers
Results 5: Increase community awareness of mental health issues, existence of new services. Challenge myths and stigma.	Forums for engagement with traditional leaders and healers. Stakeholder workshop to understand main issues and desired messages. Planning group to design campaign based on these messages for specific identified target groups (e.g., police, prisons, teachers, Pastors/Imams, etc.), ideally using service users and family members as advocates. Design of curriculum module for schools, testing, and evaluation. Brief training for advocates. Campaign of visiting and delivering messages to groups.			
Results 6: Monitoring and evaluation, accountability, research, measuring impact.	Regular (monthly) M&E meetings. Regular reports to director, Steering Committee, and international donors. Identify collaboration with Ghana and international research groups. Local dissemination meetings. Production of policy briefs. User-friendly report for government. Publication of papers in peer-reviewed journals. Sharing findings at conferences.			

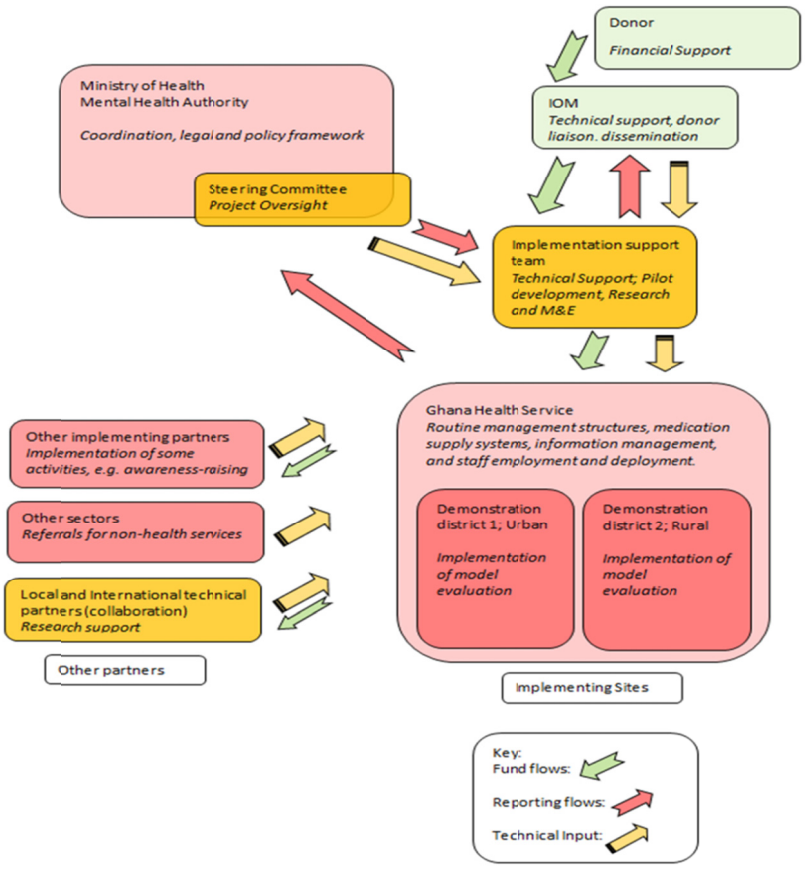
Appendix 4: Timeframe

		Year 1				Year 2				Year 3				Year 4			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Results 1: Establish buy-in, management structure, and project oversight. Engage with relevant structures for integration of mental health.	1.1 Meet with figures of authority in health care in Ghana and districts.																
	1.2 Build a Steering Committee within established health system structures.																
	1.3 Build a strong project management team.																
	1.4 Participate in forums relevant to mental health; mainstreaming.																
Results 2: Situation analysis and planning: Complete full situation analysis in identified demonstration sites, design implementation model, develop M&E plan.	2.1 Carry out detailed situation analysis in identified demonstration sites.																
	2.2 Use detailed situation analyses to inform development of a project model.																
	2.3 Develop M&E plan in line with recognized indicators.																

		Year 1				Year 2				Year 3				Year 4			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Results 3: Establish integrated CMH services in government health structures in two demonstration sites.	3.1 Proposal has support of authorities.																
	3.2 Build capacity of personnel at each level based on clearly defined tasks.																
	3.3 Ensure staff at each level are equipped with tools they need to work.																
	3.4 Provide ongoing training and clinical supervision.																
Results 4: Maintain a systemwide perspective to facilitate necessary resource availability and smooth running of the project. Ensure good intersectoral links to facilitate access to non-medical services.	4.1 Systematically consider historical barriers to success.																
	4.2 Address low availability of medication.																
	4.3 Lack of psychological care.																
	4.4 Health management information system weaknesses.																
	4.5 Ineffective referral and counter-referral/senior support.																
	4.6 Lack of intersectoral collaboration.																

		Year 1				Year 2				Year 3				Year 4			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Results 5: Increase community awareness of mental health issues. Challenge myths and stigma.	5.1 Hold forums of traditional leaders and healers.																
	5.2 Develop advocates and equip them to promote messages to communities.																
	5.3 Develop messages for target groups.																
	5.4 Engage in local- and national-level campaigns to change attitudes.																
Results 6: Monitoring and evaluation, accountability, research, measuring impact.	6.1 Internal record-keeping, M&E, research, and dissemination.																
	6.2 Gather reliable data and analyze to have strong evaluation of model.																
	6.3 Document roll-out and make resources developed available.																
	6.4 Engagement so that findings can be disseminated and lessons learned.																

Appendix 5: Organizational Diagram for Ghana Demonstration Project



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