REPUBLIC OF KENYA

MINISTRY OF HEALTH

KENYA MENTAL HEALTH INVESTMENT CASE

Providing Evidence for the Long-Term Health, Social and Economic Benefits of Investment in Mental Health in Kenya

UN INTERAGENCY TASK FORCE ON NCDs

World Health Organization
REGIONAL OFFICE FOR Africa

UNDP

Kenya Mental Health Investment Case 2021

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ABBREVIATIONS AND ACRONYMS

AIDS	Acquired Immunodeficiency Syndrome
GBD	Global Burden of Diseases
GBV	Gender-Based Violence
GDP	Gross Domestic Product
HIV	Human Immunodeficiency Virus
IOM	International Organization for Migration
IPV	Intimate Partner Violence
KEML	Kenya Essential Medicines List
KEMSA	Kenya Medical Supplies Agency
KEPH	Kenya Essential Package of Health
KES	Kenyan shillings
LMIC	Low- and Middle-Income Countries
mhGAP	Mental Health Gap Action Programme
MHIS	Mental Health Information System
MNTRH	Mathari National Teaching and Referral Hospital
NACADA	National Authority for the Campaign Against Alcohol and Drug Abuse
NASCOP	National AIDS and STIs Control Programme
NCD	Noncommunicable Disease
NGO	Nongovernmental Organization
NHIF	National Hospital Insurance Fund
PHC	Primary Health Care
PTSD	Post-Traumatic Stress Disorder
ROI	Return on Investment
SDG	Sustainable Development Goal
SEL	Social-Emotional Learning
SMS	Short Messaging Service
STI	Sexually Transmitted Infection
THP	Traditional Health Practitioner
UHC	Universal Health Coverage
UNCRPD	United Nations Convention on the Rights of People with Disabilities
UNDP	United Nations Development Programme
UNICEF	United Nations Children's Fund
WHO	World Health Organization
YEC	Youth Empowerment Centres
YLD	Years Lived with Disability

FOREWORD

The Kenya Constitution (2010), gives Kenyans the right to life and the highest attainable standard of health, which includes the right to quality health care services, reproductive health, emergency care, clean, safe and adequate water for all Kenyans, reasonable standards of sanitation, food of acceptable quality and a clean healthy environment. The Government of Kenya recognizes mental health as a key public health and development concern and recently implemented several reforms aimed at strengthening the country's mental health system.

Mental health is a growing area of concern in Kenya, as it is at the global level. Recent evidence suggests that the burden of mental illness in Kenya is high and increasing. The Kenya Mental Health Policy estimates that the burden of mental illness is 25% among outpatients and 40% among inpatients in different health facilities.

Mental health contributes to the wellbeing and prosperity of the nation as a key pillar in the overall health ecosystem. As such, it is one of the priorities in the health sector and the Government therefore remains committed to providing quality mental health services by integrating mental health services at all health care levels. This is aimed at bringing health care closer to the people and also to ensure sustainability of the nation's human capital base.

The Mental Health Investment Case provides quantification of the costs of mental health conditions to the health sector and to the national economy at large. It also points to the benefits of scaled up action. Besides, the Mental Health Investment Case includes an assessment of the current national mental health system, making it possible to identify the most appropriate, feasible mechanisms for scaling-up mental health promotion, prevention and care in the country.

We look forward to working collaboratively across the sector with all stakeholders to ensure its successful implementation.

Sen. Mutahi Kagwe, EGH
Cabinet Secretary
Ministry of Health

KEY MESSAGES

Ministry of Health

In 2021, Kenya made significant strides in Mental Health by conducting its first Mental Health Investment Case (MHIC) through collaboration with developmental partners with the aim of providing quantified evidence of the long-term health, social and economic benefits of investment in mental health in Kenya.

The findings from this investment case confirm the large economic impact of mental health conditions in Kenya. The total estimated economic burden on account of mental health conditions on the Kenyan economy in 2021 is KES 62.2 billion (US$571.8 million), an equivalent loss of 0.6% of the GDP in 2020. Lost productivity due to premature mortality, absenteeism and presenteeism accounted for the largest share of this annual cost amounting to KES 56.6 billion while health care expenditure accounted for KES 5.5 billion. This evidence clearly demonstrates the multidimensional impact of mental health on the Kenyan population.

The MHIC has demonstrated that investing in Mental Health will accrue productivity gains and social value of health worth KES 161.6 billion over a ten-year period. Scaled up Intervention packages for Epilepsy, Depression and Anxiety disorders have the highest return on investment (ROI) at 5.5, 4 and 2.3 KES, respectively, for every 1 KES invested.

This Investment Case further outlines actionable steps which the Government of Kenya can take to strengthen a whole-of-government, whole-of-society approach to reduce the burden and impact of mental health conditions. To accomplish this goal, I call upon all stakeholders and partners to invest in mental health so that the nation can reap the huge health, financial and social benefits that will result from a mentally healthy population.

Susan N. Mochache, CBS
Principal Secretary
Ministry of Health

World Health Organization, Department of Mental Health and Substance Use

Mental health is neglected and underfunded in most of the African Region, including in Kenya, as it is in most countries around the world. There are large gaps in the promotion of mental health, the prevention of mental health conditions and the provision of mental health care for those in need at all levels of the health system. Current evidence has shown that inadequate investments in mental health results in poor mental health outcomes, and impacts negatively on society as a whole and the economy in particular. This report shows that investing financial resources in mental health will produce good economic returns. Investment in mental health thus becomes a "win-win" situation - population mental health improves and the economy benefits.

It is heartening that President Uhuru Kenyatta has identified Kenya as having a mental health crisis and has recommended the Ministry of Health to implement programmes and policies to address the challenges. Through illustrating beneficial returns on investment, this report gives added impetus to this.

Dévora Kestel
Director MSD
WHO

United Nations Development Programme Country Office in Kenya

The Mental Health Investment Case comes at an opportune time, as the COVID-19 pandemic has had a major effect on people's mental health. This report provides robust evidence that increased investment in mental health not only advances Kenyan's right to health but also makes eminent economic sense. It is our hope that the investment case will assist the Government of Kenya and Ministry of Health in prioritizing mental health investments and in mobilizing sectors beyond health including education, labour, finance as well as others.

UNDP stands ready to assist the Government in implementing the investment case recommendations. In its new Strategic Plan for 2022–2025, UNDP has explicitly committed to working with partners to scale health system strengthening, including around equitable access to mental health care services. We congratulate Kenya for taking clear steps towards prioritizing mental health: As the UN Secretary General, António Guterres said in his address on World Mental Health Day, "there can be no health without mental health".

Walid Badawi
UNDP Resident Representative

Mandisa Mashologu
UNDP Deputy Resident Representative

United Nations Inter-Agency Task Force on the Prevention and Control of Non-communicable Diseases

Last year, we joined over 100 experts to kickstart the development of this investment case. We are delighted that this landmark report has been published, with the Task Force as a partner. The report highlights the costs to Kenya from mental health conditions but importantly the huge benefits to Kenya and her people from investing in mental health. It highlights the importance and urgency of delivering Kenya's Mental Health Action Plan 2021–2025. We are in no doubt that with sustained political and financial commitment, along with coordinated multisectoral action, Kenya will make great strides in improving mental health.

The Task Force and its members are committed to support the Government of Kenya and its partners implement the Recommendations of the Mental Health Investment Case and the country's Mental Health Action Plan 2021–2025.

Nick Banatvala
Head of the Task Force
Secretariat

Svetlana Akselrod
Director, Global NCD Platform
WHO

EXECUTIVE SUMMARY

The burden of mental, neurological and substance use conditions in Kenya is substantial. Close to a half of adults in Kenya have ever experienced at least one mental health condition in their lifetime. These conditions are not only associated with human suffering and a public health burden, but also have significant social and economic consequences. These include, among others, the increasing financial burden on the health systems and the loss of productivity among the workforce, as individuals who suffer from mental health conditions are more likely to leave the labour force (due to premature death or disability), miss days of work (absenteeism) or work at reduced capacity (presenteeism).

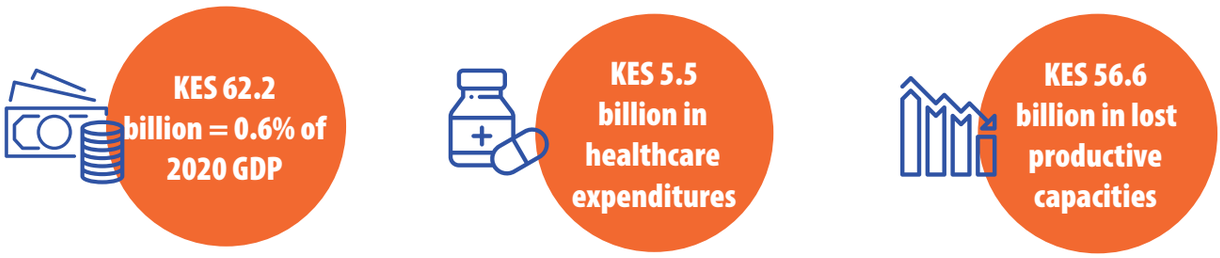
This report presents the findings of a study that assessed the current mental health situation in the country, including the challenges to and opportunities for development of the mental health system. Secondly, it presents the economic evidence of the attributable and avertable burden associated with six leading mental, neurological and substance use conditions, i.e. anxiety disorders, depression, psychosis, bipolar disorder, epilepsy and alcohol use disorder. Intervention costs, health gains and economic benefits were estimated for these conditions and their treatment, as well as for two population-based prevention interventions: a universal school-based intervention for preventing depression and suicide and a nationwide regulatory ban on highly hazardous pesticides to prevent suicide.

Main findings

Situation analysis

- There is a lack of nationally representative data on the burden of mental health conditions in Kenya.
- A community survey conducted in western Kenya in 2017 reported that 45.5% of adults had experienced at least one mental health condition in their lifetime.
- 10.4% of population aged 15–65 years have an alcohol use disorder.
- **Major achievements in the mental health landscape:** Kenya has a standalone mental health policy, and efforts to review the outdated mental health act are on-going. Kenya developed its first ever mental health action plan in 2021.
- **Key gaps in the mental health system:** Mental health services are scarce and inaccessible, the mental health workforce is limited, and budgetary allocation to mental health is inadequate.

Economic analysis



- In 2021, mental health conditions cost the Kenyan economy 62.2 billion Kenyan shillings (KES) (US$ 571.8 million), equivalent to 0.6% of the gross domestic product (GDP) in 2020. These annual costs include 5.5 billion KES in health care expenditure and 56.6 billion KES in lost productivity due to premature mortality, absenteeism and presenteeism.
- By acting now, Kenya can reduce the burden of mental health conditions. The findings of the investment case demonstrate that investment in evidence-based, cost-effective mental health interventions would:
    - Over the next 10 years: Save more than 5000 lives, prevent close to 1 million cases of mental health conditions and result in 352 000 healthy life years gained, by reducing the incidence, duration or severity of the assessed mental health conditions;
    - Over the next 20 years: Save more than 20 000 lives; prevent 4.3 million cases of mental health conditions and result in over 1.6 million healthy life years gained.
    - Over the next 10 years: Provide economic benefits (161.6 billion KES) that significantly outweigh the costs (81.7 billion KES) of implementation.
    - Over the next 20 years: Provide economic benefits (625.8 billion KES) that significantly outweigh the costs (209.5 billion KES) of implementation.
    - The intervention packages for scaled-up treatment of depression, anxiety and alcohol use disorder (some of the commonest mental health conditions in Kenya) would have a high return on investment (ROI), resulting over 20 years in 5.1, 3.8 and 2.7 KES, respectively, for every 1 KES invested.

Conclusion and Recommendations

The results of the mental health investment case confirm the large economic impact of mental health conditions in Kenya. In addition, they show that investment in a selected number of evidence-based interventions can significantly improve people's mental health and life expectancy, while simultaneously decreasing national economic losses. The Government of Kenya can take the following actionable steps to strengthen a whole-of-government, whole-of-society approach to mental health conditions and their consequences:

Strengthen mental health legislation, governance and leadership by:

» Fast-tracking enactment of the Mental Health Amendment bill currently in the National Assembly.
» Supporting current efforts to repeal section 226 of the Penal Code which criminalises suicide attempts.
» Establishing mental health councils at the County level as outlined in the Kenya Mental Health Action Plan 2021–2025.

Prioritize mental health action and improve mental health financing by:

» Increasing budgetary allocation to mental health at national level starting in the financial year 2022/2023
» Counties allocating budgets to mental health and developing costed work plans starting in the financial year 2022/2023

Strengthen mental health systems and improve access to affordable, quality mental health care by:

» Integrating mental health into all levels of the health care system.
» Training of community and primary health care workers on mental health using the mhGAP.
» Investing in strategies to increase the numbers of specialist mental health service providers.
» Capitalize on the use of technology and mHealth to increase access to mental health care.

Invest in evidence-based, cost-effective clinical and population-based mental health interventions modelled in the investment case.

Strengthen multisectoral coordination by:

» Integrating and mainstreaming mental health across all relevant sectors, including education, criminal-justice system, youth and sport and social services.

Raise awareness and reduce stigma surrounding mental health in Kenya by:

» Sensitising the public, media, healthcare workers and policy makers though mass-media campaigns.

» Developing and circulating mental health literacy materials using print, broadcast and social media.

» Identifying and engaging mental health champions in the community to raise awareness and advocate for mental health.

Dr. Patrick Amoth, EBS
Ag. Director General for Health

Kenya

The case for investment in mental health

CURRENT BURDEN OF MENTAL HEALTH CONDITIONS

62.2 billion KES per year

0.6% of GDP

5.5 billion KES direct costs

due to healthcare expenditures

56.6 billion KES indirect costs

due to loss of workforce and reduced productivity

INVESTMENT REQUIRED

81.7 billion KES

(1,717 KES per capita)

Investment required for selected clinical packages and population-based preventive interventions over a 10-year period

ANXIETY DISORDERS	DEPRESSION	PSYCHOSIS	BIPOLAR DISORDER
8 billion KES	13 billion KES	13.2 billion KES	32 billion KES

EPILEPSY	ALCOHOL USE DISORDER	PESTICIDE BAN	UNIVERSAL SCHOOL-BASED INTERVENTIONS
3.7 billion KES	4.2 billion KES	2.2 billion KES	5.4 billion KES

RETURN ON INVESTMENT OVER 10 YEARS

161.6 billion KES

includes productivity gains and social value of health

	ROI	Healthy life-years gained	Total productivity gained
Anxiety disorders	2.3	56 273	27 billion KES
Depression	4	143 543	64 billion KES
Psychosis	1*	28 031	13 billion KES
Bipolar disorder	0.2*	14 651	7 billion KES
Epilepsy	5.5	50 559	24 billion KES
Alcohol use disorder	1.3	11 669	9 billion KES
Pesticide ban	1.6	11 514	5.7 billion KES
Universal school-based interventions	1	37 698	11 billion KES

*Benefit-cost ratio

ACKNOWLEDGEMENTS

The development of the Kenya Mental Health Investment Case involved a comprehensive process accomplished through literature review, key informant interviews, and consultative meetings with various stakeholders. This report was developed through the stewardship of the Ministry of Health, and with close collaboration of the World Health Organization (WHO), the United Nations Development Programme (UNDP) and the United Nations Inter-Agency Task Force (UNIATF) on the Prevention and Control of NCDs.

We acknowledge the office of the Cabinet Secretary, Chief Administrative Secretaries and Principal Secretary for their leadership and guidance at all stages of the preparation of this report. We thank the technical team headed by the Director General for Health and support from all heads of Directorates at the Ministry of Health. Sincere gratitude to the Division of Mental Health and the technical working team who coordinated the project from inception, data collection, analysis up to report writing and dissemination.

We also acknowledge The National Treasury and Planning, Ministry of Public Service, Gender, Senior Citizens Affairs & Special Programmes, Ministry of Labour, Ministry of Education and Ministry of ICT, Innovation and Youth Affairs, Council of Governors, Presidential Delivery Unit, Office of the Presidential Advisor on Mental Health, National Assembly departmental Committee on Health, The Senate and Kenyan Parliamentary Caucus on SDGs and Business whose contribution was vital in the institutional context analysis.

Special thanks to the user organisations, mental health professional associations, Mental health service providers, mental health experts, research institutions and Non-Governmental Organizations who participated in the key informant interviews.

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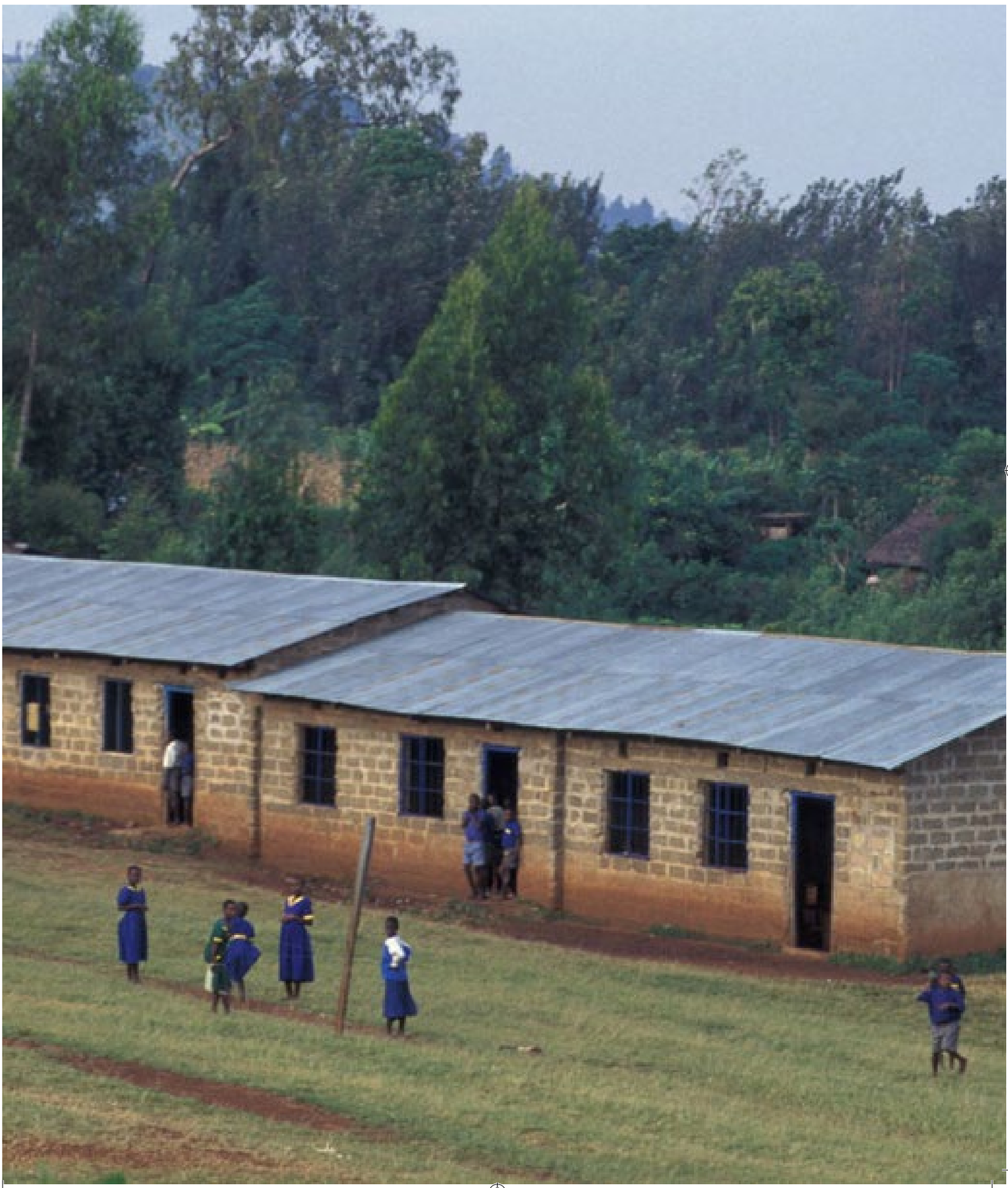
Lastly, we acknowledge and appreciate the voluntary contribution of the Russian Federation for funding the process of development, printing and launch of Kenya's first Mental Health Investment Case.

Photo: © World Bank



INTRODUCTION

Mental health is an integral part of health and well-being and has an important impact on people's capacity to lead fulfilling, productive lives. Mental health and psychosocial well-being are affected by the interaction of genetic and other biological characteristics with societal, cultural and environmental factors. Increased exposure to adverse determinants of mental health, together with the aging of populations in many parts of the world, has been associated with a 30% rise in the global prevalence of mental health conditions in the past 30 years (1).

Mental, neurological and substance use conditions, such as depression, anxiety disorders, psychosis, epilepsy, dementia and alcohol use disorders, not only cause individual human suffering but also have negative economic impacts at household, country and global levels. These include the financial burden on the health system, and reduced productivity resulting from missed days of work (absenteeism), working at reduced capacity (presenteeism) and premature death. WHO has estimated that mental health and neurological conditions account for 28% of the non-fatal disease burden in the world, and for 10% of the overall disease burden (2). In addition to the health and economic consequences, mental, neurological and substance use conditions have important social implications. For example, alcohol use disorders may be related to violence and accidents, those affected by mental conditions may drop out of education or may underperform, and family members – especially girls and women – may lose opportunities because they have to take on the role of carer. In addition, there is considerable stigmatization and discrimination against people with mental health conditions (3).

Approximately three-quarters of the global disease burden that is due to mental and neurological disorders affects low- and middle-income countries (LMICs) (4). In these settings, there is frequently little or no access to affordable, high-quality mental health services and the treatment gap can be as high as 75% (5). In addition, mental health

systems in LMICs are often weak and characterized by poor governance, insufficient government expenditure, and other systemic challenges (6). In such settings, the negative health and socioeconomic impacts of mental health conditions constitute a major hindrance to the development agenda.

Strengthening policy and increasing interest and investment in mental health have benefits for both public health and sustainable development, particularly in LMICs where the burden is high and systems under-resourced. Investment in evidence-informed mental health interventions could improve overall health and quality of life, and increase life expectancy. In addition, such investments will contribute to the achievement of a number of sustainable development goals (SDGs), including target 3.4 ("by 2030 to reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being"), SDGs 4 (education), 5 (gender), 8 (employment and economic growth), 10 (equality), 11 (safe cities), 16 (reducing violence) and 17 (partnership, capacity building and domestic resource mobilization). Improving mental health is critical to the SDG vision of a just, inclusive, equitable society. The importance of promoting mental health and addressing the social and economic challenges posed by mental health conditions was highlighted during the High-level Meeting of the United Nations General Assembly on the Prevention and Control of NCDs in 2018 and emphasized in WHO's Thirteenth General Programme of Work (2019–2023) (113).

Strengthening policy and increasing interest and investment in mental health have benefits for both public health and sustainable development.

This report presents the case for investing in mental health in Kenya. It is divided into four sections. **Section 1** outlines the mental health situation in Kenya and the current and planned responses by the Government. **Section 2** describes the methods and tools used in the economic analyses. **Section 3** presents the results, including total costs and the expected health and economic benefits (such as healthy life years gained, mortality averted and productivity gained) of implementing clinical and population-based preventive mental health interventions. **Section 4** draws conclusions from these findings and provides recommendations for the Government of Kenya for strengthening and scaling up cost-effective preventive and clinical interventions for mental health conditions.

SITUATION ANALYSIS	METHODS	RESULTS	CONCLUSION
Presents the mental health situation in Kenya and the current and planned responses by the Government.	Describes the methods and tools used in the economic analysis.	Presents the results, including total costs, and the expected health and economic benefits.	Outlines the conclusions to be drawn from these findings and provides recommendations for the Government of Kenya.

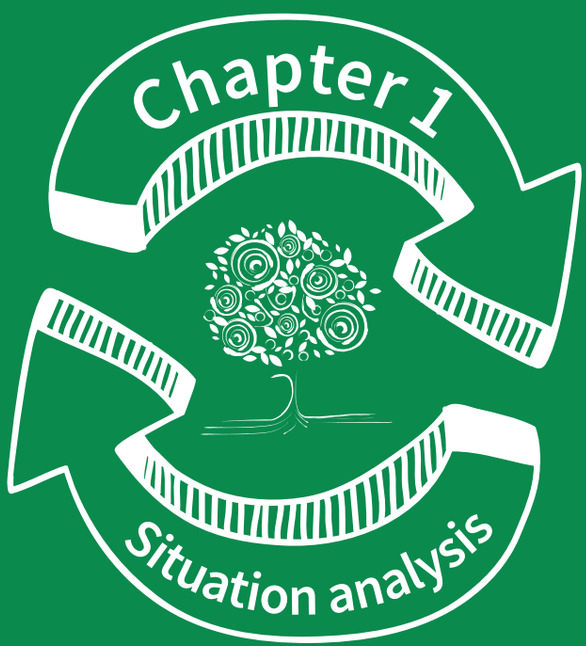
Box 1. Roadmap to mental health investment case in Kenya

The WHO-UNDP Joint Programme, working in collaboration with the United Nations Inter-Agency Task Force on the Prevention and Control of Non-communicable Diseases, is supporting countries to implement investment cases in order to strengthen action in Member States aimed at reducing the burden of non-communicable diseases and mental health conditions.

Interest in mental health in Kenya has been increasing over the past few years. In 2020, a Mental Health Taskforce was constituted to assess the status of mental health in Kenya. The Taskforce found a significant burden of mental health conditions in Kenya; yet existing mental health systems were weak and poorly resourced. The Ministry of Health in 2021 made a decision to embark on its first ever mental health investment case with the aim of providing data that could convince the government to invest in mental health in Kenya.

The Kenya mental health investment case aligns with the key global and local commitments including the Sustainable Development Goal 3 (SDG 3) which requires that governments ensure healthy lives and promote well-being for all at all ages; and the Comprehensive mental Health action plan, and Resolution 4 of the Sixty-fifth World Health Assembly which requires that countries invest in mental health. In addition, the Kenya mental health investment case is in line with the Kenya mental health policy 2015–2030, and the Kenya mental health action plan 2021-2025, both of which highlight the need for the government and stakeholders to implement evidence based and cost-effective mental health interventions.

Image courtesy of Ministry of Health, Kenya


Chapter 1
Situation analysis

SITUATION ANALYSIS

Kenya is a lower-middle-income country in eastern Africa. As of 2019, Kenya has a population of 47.5 million, distributed across 47 counties, the most populous being Nairobi County, Kiambu County and Nakuru County (7). The Kenyan population is predominantly youthful, the majority (53%) being between 15 and 64 years of age (7). According to the Global Burden of Disease (GBD) study, life expectancy in Kenya is 68.8 years for women and 63.2 years for men (9).

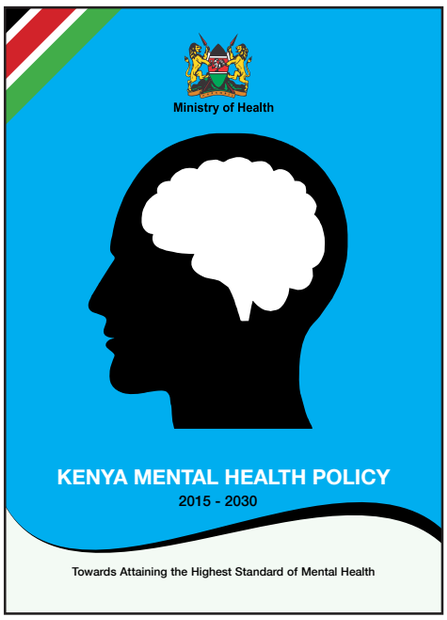
The government's budgetary allocation to the health sector has steadily increased over the past few years.

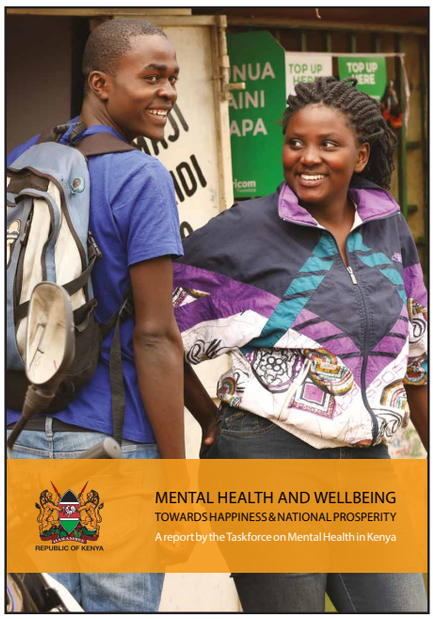
The country is one of the largest economies in sub-Saharan Africa. In the years prior to the COVID-19 pandemic, the country experienced steady economic growth, with real gross domestic product (GDP) increasing on average by about 5.6% per year between 2014 and 2018 (10). The government's budgetary allocation to the health sector has also steadily increased over the past few years. Kenya's combined (national and county government) allocation to health increased from 78 billion Kenyan shillings (KES) (in the fiscal year 2013–14, the first fiscal year post-devolution) to KES 207 billion in 2018–19: a 165% increase (11). Allocation however remains low relative to the Abuja declaration, which requires 15% of total government funds to be allocated to health. In 2018–19, for instance, only 9.2% of the total government budget was allocated to health (11).

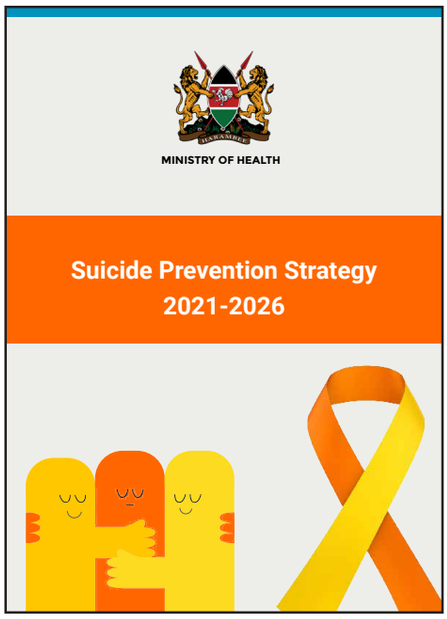
Interest in mental health in Kenya has been growing over the past few years. In 2015, Kenya launched its first mental health policy (12) and, in 2018, the Mental Health Amendment Bill was introduced in the Senate in an attempt to overhaul the outdated Mental Health Act of 1989. On 1 June 2019, President Uhuru Kenyatta indicated in his official Madaraka Day speech that the country was facing a mental health crisis, and ordered the Ministry of Health to implement programmes and policies to address the problem. A task force was established to examine the mental health situation in Kenya and make recommendations for improvement.

The findings of the Taskforce have since been published (13). Also in 2019, a presidential advisor on mental health was appointed. The COVID-19 pandemic has helped fuel the growing interest in mental health in Kenya. During the pandemic, discussions about mental health increased in print, social and broadcast media. The Kenya Mental Health Action Plan 2021–2025, which operationalizes the Kenya Mental Health Policy and recommendations of the Taskforce report, was launched in June 2021.

Images courtesy of Ministry of Health, Kenya







The situation analysis was conducted through a combination of institutional context analysis and desk review of relevant documents:

Institutional context analysis

The institutional context analysis was conducted by the investment case team from March to September 2021. The analysis was based on discussions with representatives of the following institutions:

- Ministry of Health,
- Ministry of Education,
- Ministry of ICT, Innovation and Youth Affairs,
- The National Treasury and Planning,
- Ministry of Public Service, Gender, Senior Citizens Affairs & Special Programmes,
- Ministry of Labour,
- Council of Governors,
- Presidential Delivery Unit,
- Office of Presidential Advisor on Mental Health,
- National Assembly Departmental Committee on Health,
- The Senate,
- Kenyan Parliamentary Caucus on SDGs and Business,
- Wajir County Government,
- Makueni County Government,
- The Mental Health Taskforce,
- Kenya Medical Research Institute (KEMRI),
- Mathari National Teaching and Referral Hospital,
- Mental Health Alliance Kenya,
- Chiromo Hospital,
- African Mental Health Foundation,
- Kenya Counsellors and Psychologists Association,
- Kenya Psychiatric Association,
- Health Rights Advocacy Forum (HERAF),
- Kenya Healthcare Federation,
- Basic Needs Basic Rights,
- Christian Aid.

These meetings addressed how mental health affects the national development agenda, the priorities of various sectors and stakeholders and how they could support a strengthened whole-of-government response, including implementation of the interventions recommended in the investment case. The insights gained from these discussions are included in the report and informed its findings and conclusions.

Desk reviews

The situational analysis was conducted through desk reviews of the thematic areas. Key reference was made to WHO mental health reports (78), the Kenya Mental Health Action Plan 2021–2025 (95), the Kenya Mental Health Taskforce report (13), the Kenya Mental Health Policy 2015–2030 (12), and other relevant Ministry of Health policy documents. Data on human resources were collected using a questionnaire that was sent to the county governments and National health facilities. (**Annex 2**).

Epidemiology of mental health conditions

Noncommunicable diseases, including mental health conditions, are the second leading cause of death and disability in Kenya according to GBD 2019 estimates (14). Nationally representative data on mental health conditions other than substance use disorders are scarce in Kenya. WHO estimates that the burden of mental health conditions in Kenya is 2467.79 disability-adjusted life years per 100 000 population (2).

Major depressive disorder (depression). Depression is a major public health problem in Kenya that needs to be addressed. In a small community-based survey, Kwobah et al. reported a lifetime prevalence of depression of 12.3% (15). The study was conducted among 191 adults in Nandi County. In a larger survey conducted among 2770 inpatients and outpatients in ten general hospitals, the prevalence of depression was reported as 42% (16). Surveys conducted across other populations similarly indicate a significant burden: 22.9% among adult patients seeking care from traditional health practitioners (THPs) in Makueni county (17); 13.8% among adults living with HIV infection in Kilifi County (18); and 18.7% among postpartum mothers (19).

Anxiety disorders. In all parts of the world, anxiety disorders contribute to severe and significant morbidity, decreased productivity and low quality of life (23). These disorders are highly prevalent in Kenya. A study conducted in a community-based sample of adults found that anxiety disorders were the most prevalent of the mental disorders assessed (15.7%) (15). Anxiety disorders usually co-exist with other chronic mental and physical conditions, and may adversely influence the outcomes of these chronic conditions (24).

Alcohol and substance use disorders. These disorders are highly prevalent in Kenya. In a nationally representative household survey of Kenyans aged between 15 and 65 years, the 12-month prevalence of alcohol use disorders was found to be 10.4%, tobacco use disorder 6.8%, cannabis

use disorder 0.8%, and khat use disorder 3.1% (82). Harmful alcohol use is of particular concern in Kenya. The country has one of the highest number of disability-adjusted life years (DALYs) lost (54 000) due to alcohol use disorders in Africa (25). In a nationally representative household survey of 4203 adults aged 18–69 years, of whom 60% were male, the prevalence of heavy episodic drinking was high at 12.5% (27). A report by the Taskforce on Mental Health in Kenya highlighted the worrying trend of increasing mortality and morbidity related to substance use disorders (13).

Bipolar and psychotic disorders. In a community-based sample of adults, the prevalence of bipolar disorder was found to be 5.2% and that of psychotic disorders 1% (15). In clinical settings, the rates are much higher. A study conducted among adult patients admitted to the largest mental hospital in Kenya reported that schizophrenia was the most frequent diagnosis (based on the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) (28)) (51%), followed by bipolar I disorder (42.3%) (29).

Epilepsy. Epilepsy is found in both adults and children and is associated with considerable disability in Kenya (30). A survey of 11 223 school-aged children (50% male) in Kilifi found that the lifetime prevalence epilepsy was 20.9 per 1000. The prevalence of acute symptomatic seizure was 68.8 per 1000 (31). In a large study involving 151 408 individuals aged 6 years and above (46% male), the adjusted prevalence of active epilepsy was 4.5 per 1000, with an unadjusted prevalence of 2.9 per 1000. Prevalence was higher in males and in people aged between 13 and 28 years (32).

Other mental health conditions. Exposure to traumatic events is common in Kenya. A household survey conducted by Jenkins et al. reported that 48% had been exposed to severe traumatic events (33). Among those who had experienced a major trauma, the prevalence of probable post-traumatic stress disorder (PTSD) was 10.6%. A community-based survey conducted in Nandi County reported a prevalence of eating disorders of 1.7% and of antisocial personality disorder of 3.1% (15).

Suicide. In 2019, WHO estimated a crude suicide mortality rate in Kenya of 6.1 per 100 000 population (20). Using data collected by the Health and Demographic Surveillance System, Bitta and colleagues found that, between 2008 and 2016, 104 people in Kilifi County died by suicide (21). The true incidence of completed suicide in Kenya may be underestimated for several reasons. First, suicide attempts are illegal in Kenya (22). Secondly, there is a fear of stigma if a death is reported as suicide. Thirdly, deaths by suicide are sometimes misclassified as deaths by other causes, such as accidents (21).

Child and adolescent mental health. In Kenya, empirical work indicates a significant burden of mental health disorders among children and adolescents. A nationwide survey of schoolchildren aged 12–18 years found that one in five had used at least one substance in their lifetime. The survey assessed for use of several substances including alcohol, tobacco, khat, heroin, cocaine, cannabis, inhalants, and prescription drugs (34). A school-based survey of 1276 students found clinically significant depressive symptoms in 26.4% of students aged between 13 and 22 years. The occurrence was higher in girls than in boys and there was a significant correlation between depressive symptoms and suicidal behaviour (35). In a community study of 3775 adolescents aged 13–21 years attending secondary schools in Nairobi, anxiety was recorded in 12.9% of all students, using the Multidimensional Anxiety Scale for Children (MASC). The Screen for Child Anxiety Related Disorders – Revised (SCARED-R) yielded a rate of 100% for separation anxiety and school phobia (36). This points to a high burden of anxiety disorders among this group in Kenya. Kamau et al. conducted a hospital-based survey and found the burden of neurodevelopmental and disruptive disorders among children and adolescents to be as follows: attention deficit and hyperactivity disorder (ADHD), 12.1%; autism spectrum disorder (ASD), 12.7%; intellectual disability, 10.8%; conduct disorder, 7.2% and oppositional defiant disorder (5.4%) (37).

Social and environmental determinants of mental health

A number of social and environmental factors fuel the occurrence of mental health conditions in Kenya. In 2016, around one-third (35.6%) of Kenyans were living below the poverty line (38). Poverty increases the risk of mental illness and can act both as a causal factor and a consequence of mental illness (39). Kenya also has the highest unemployment rate in east Africa at almost 10%, with youth unemployment at about 40% (13). Job insecurity is associated with a negative impact on mental health and unemployment is associated with an increased risk of depression (40).

Exposure to disasters is associated with a number of adverse mental health consequences including PTSD, substance use disorder and various psychological symptoms (41). Kenya is vulnerable to a number of natural disasters, the most common being weather-related, including droughts, floods and landslides (42). The effects of natural disasters and extreme weather are far-reaching. Natural disasters can result in distress reactions, an increase in risky behaviour, such as increased alcohol and tobacco use, and exacerbation or development of psychiatric disorders (43). Children, in particular, are at high risk; research suggests that experiencing a natural disaster before the age of 5 years significantly increases the risk of developing mental health and substance abuse disorders as an adult. Natural disasters can also negatively affect parenting behaviours (43). Other disasters, such as mass violence and terrorism, also have adverse mental health consequences (41). Exposure to post-election violence is associated with high rates of PTSD among Kenyans. Among internally displaced persons in Nakuru County, 62% had PTSD following the 2007–08 post-election violence, while 27% of students in Kasarani and Kiambu West met the criteria for PTSD 9–10 months after the onset of post-election violence (44, 45). In addition, more than 1000 Kenyans were killed in terror attacks between 2008 and 2016 (46). Health care service delivery is commonly disrupted in

the aftermath of a disaster, interrupting services for people with existing mental health conditions and causing significant delays in the treatment of new cases emerging after the disaster (47).

Other factor that continues to increase the mental health burden in Kenya is gender-based violence, including spousal abuse. A government survey in 2014 found that 45% of women and girls aged 15–49 years had experienced physical violence and 14% had experienced sexual violence. Among women who had ever been married, the most common reported perpetrators of both physical and sexual violence were the current husband or partner (57% and 55%, respectively) and the former husband or partner (24% and 28%, respectively) (48). Women who live in informal settlements are more likely to experience violence (49). Women who experience intimate partner violence (IPV) are more likely to experience depressive and anxiety symptoms, PTSD and suicidal thoughts (50).

Mental health conditions remain highly stigmatized in Kenya. Stigmatizing attitudes start at a young age, with evidence of stigma present among primary school children in Kenya (51). Media coverage exacerbates the stigma surrounding mental health in Kenya. A recent media analysis found that 52% of news reports about mental health were negative, often linking mental illness with danger, violence and criminality (52). Stigma can have a negative impact on help-seeking behaviour, adherence to treatment and recovery for people with mental health conditions (53, 54).

Mental health policy and legislation

At the highest level, the right to mental health is acknowledged in Article 43(a) of the Constitution of Kenya which guarantees every person the right "to the highest attainable standard of health, including the right to health care services".

The Kenya Mental Health Act 1989, which replaced the English Mental Health Act 1959, provides the main legal framework for addressing mental health treatment and prevention in the country. The Mental Health Act 1989 simplified admission procedures, attempted to integrate mental health services into general health services, allowed for the provision of voluntary treatment, and created a regulatory board to oversee implementation. The Act was last amended in 1991 and requires further amendments to align with Kenya's Constitution and be compatible with current international standards. The 1989 Act has several shortcomings, including an overemphasis on inpatient treatment, failure to address the patient's rights to information, consent, and confidentiality, failure to ensure access to essential mental health care and services, not promoting community mental health services, not promoting integration of mental health care into primary care and not distinguishing between mental illness and mental disability (55). Moreover, it does not define which functions are the responsibility of the county governments and which of the national government. In recognition of this, the Mental Health (Amendment) Bill (2018) was drafted and introduced in the national assembly for consideration by the health committee.

The Amendment Bill aims to provide a framework to: promote mental well-being for everyone and reduce the prevalence of mental illness; coordinate access to mental health services including prevention, treatment and rehabilitation services; reduce the impact of mental illnesses, including the effects of stigma; promote recovery and improve rehabilitation and reintegration back into the community; and ensure that the rights of people with mental illness are protected and safeguarded. In line with the Constitution, the bill delineates the roles and responsibilities of the national and county governments in delivering mental health services. The Bill also sets out guidelines for establishing a regulating body for mental health services, the Mental Health Board. The role of the Mental Health Board includes advising the national and county governments, setting standards, approving and inspecting mental health units, developing guidelines on emergency treatment, and preparing reports on the prevalence of mental illness in Kenya (56). While the new Mental Health Bill seeks to address shortcomings of the existing legislation, there remains concern about the failure to implement existing legal provisions, and lack of awareness on legal provisions among both the public and some mental health professionals, which may continue if not specifically addressed (55).

The Health Act 2017 also contains provisions related to mental health. This Act defines disease as a physical or mental condition and defines health as "a state of complete physical, mental and social well-being". The Act requires that legislation is established by an Act of Parliament that contains provisions to: protect the rights of persons with mental health conditions; establish, manage, and control mental health hospitals to serve all parts of the country at both national and local level; and ensure that adequate mental health research is conducted. The Act also requires the national health system to implement interventions to promote a healthy lifestyle, including interventions to counter the excessive use of alcohol, tobacco and other addictive substances (57). Implementation remains a challenge.

The Penal Code 2009 Section 226 states that any person who attempts to kill him- or herself is guilty of a misdemeanour. The Penal Code also uses derogatory terminology to describe vulnerable groups. The Taskforce has recommended that the derogatory language is amended and Section 226 repealed (13).

The Kenya Mental Health Policy 2015–2030, the country's first ever, seeks to align mental health services with the Constitution of Kenya and the national and global health agenda. The policy aims to: address the systemic challenges, respond to emerging trends, mitigate the burden of mental disorders, integrate mental health services within all levels of the health care system, and promote, respect and observe the rights of persons with mental disorders. The policy also outlines the vital role of the county governments in implementation of the policy, in accordance with the Constitution of Kenya. Under the Constitution, the national Government is responsible for health policy, national referral facilities, capacity-building and technical assistance, while the responsibilities of county governments include mental health facilities in the county, promotion and provision of mental health services, emergency services and an effective mental health referral system (12). This policy is operationalized through the Kenya Mental Health Action Plan 2021–2025. Mental health has also been included in a number of other laws, policies and strategies (see **Annex 1**).

Mental health services: availability and access

In Kenya, health services are provided by a mix of public and private sector entities, organized into six levels (**Figure 1**). As of January 2022, there are a total of 12 833 facilities in the Kenya Master Health Facility List: 10 593 level 2 facilities, 2132 level 3 facilities, 880 level 4 facilities, 20 level 5 facilities and 6 level 6 facilities (114). The package of services provided at each level of care is defined in the Kenya Essential Package of Health (KEPH).

Fig. 1. Levels of the health care system in Kenya

Source: Kenya Health Sector Referral Implementation Guidelines. 2014. Ministry of Health

There are significant gaps in mental health care in Kenya, affecting the availability, quality, and affordability of services. Nationally, only 13% of the health facilities (private and government-run) offer at least one mental health service. The most commonly available mental health service is treatment of severe mental disorders such as depression, psychosis, or bipolar disorder (12%). The least available service is inpatient treatment for mental health conditions with only 2% of facilities offering this service (116). Within the public sector, fewer than 1% of government-owned health facilities in Kenya provide mental health services. There are no mental health services in health facilities below level 3. Most mental health care is delivered in one specialized mental hospital (Mathari National Teaching and Referral Hospital (MNTRH)) and in general hospitals (levels 4, 5 and 6) located mostly in major cities. Inpatient mental health care is available in only 15 of the 47 counties (13). Patients therefore often have to incur significant financial costs associated with travel and accommodation to access mental health services.

There are also only two public facilities for inpatient treatment and rehabilitation of persons with substance use disorders, with a combined capacity of fewer than 70 beds (13). The space and operational capacity of these and most other public mental health facilities has not increased in recent years, resulting in significant overcrowding. At the same time, private institutions offering mental health services provide limited coverage, since they tend to be located in urban regions.

Substance use treatment and prevention services in Kenya are delivered and overseen by multiple bodies (58). This is largely because, historically, substance use was not considered a mental disorder. Under the Ministry of Health, opiate substitution therapy (methadone)[1] and needle exchange programmes operate as part of HIV prevention interventions through the National AIDS and STIs Control Programme (NASCOP) (59). There are ten methadone clinics. At the county government level, treatment and prevention programmes are implemented by both health and non-health departments (58). The National Authority for the Campaign against Alcohol and Drug Abuse (NACADA) also delivers prevention activities and programmes across the country (60). There are a total of 90 inpatient/residential rehabilitation centres across Kenya, of which 86 are private for-profit facilities and just four are run by the Government (60a).

Community-based mental health services are scarce and are mainly delivered by nongovernmental organizations (NGOs). Kamili Organization provides accessible and free mental health services in 27 of the 47 counties (13). The integration of mental health care into primary health care also remains a major problem. A recent audit of mental health services in Kenya reported that there were no mental health services at any of the primary care facilities (level 2 and 3) (61).

Where mental health services are available, the facilities and equipment usually are not adequate to provide modern evidence-based treatment. A series of mental facility assessments done as part of the WHO QualityRights project in Kenya reported that the mental health services are of low quality and characterized by poor infrastructure, unsanitary conditions, coercive treatment practices, and limited delivery of psychosocial interventions. Visits to mental health units and interviews with patients and staff conducted by the Taskforce on Mental Health revealed poor infrastructure and severe shortages of basic resources required for diagnosis and care, including a lack of adequate sanitation facilities in some of the institutions. Even in the MNTRH, most mental health wards have not been renovated for decades, making them inappropriate or even dangerous for use (13). However, significant funds have recently been allocated for renovations and modernization of the MNTRH.

The supply of medicines for mental health care, including psychotropic drugs, is also limited (62). According to the Kenya Mental Health Policy 2015–2030 (12), the essential drug list should include essential psychotropic drugs in adequate quantities and varieties. The procurement, storage and distribution processes should ensure the availability of the drugs at all levels of the

1 There are methadone clinics at the following sites: Mathari National Teaching and Referral Hospital (Nairobi), Ngara Health Center (Nairobi), Kisauni Health Center (Mombasa), Malindi Sub-County Hospital (Malindi), Kombani Health Center (Kwale), Jaramogi Oginga Odinga Teaching and Referral Hospital (Kisumu), Karuri Health Center (Kiambu), Lamu County Referral Hospital (Lamu), Miritini Clinic (Mombasa), and Shimo la Tewa Prison (Mombasa).

health system, including the community level. In addition, the health facilities should have up-to-date medical equipment and technology for effective management of mental disorders. While the Kenya Essential Medicine List (KEML) 2019 includes a broader list of psychotropics than are recommended by WHO (**Annex 3**), the limited supply of medicines remains a major barrier to treatment (13, 63-65). In particular, both public institutions and private pharmacies frequently run out of stock (13, 65). In the case of public institutions, the shortages are partly attributable to deficiencies in ordering and distribution. Standard kits are distributed from national warehouses to public health facilities on a monthly or quarterly basis without necessarily taking into account variations in demand (13, 65).

Obtaining a prescription for medicines can also be challenging because of the lack of qualified mental health specialists who are authorized to prescribe appropriate medication. Many community-level primary health centres do not dispense psychotropic medicines because they have no mental health unit, which forces patients to travel to county and subcounty-level hospitals (65).

While some newer second-generation drugs are gradually becoming available, the medicines in circulation are mostly first-generation drugs, and are not optimal for long-term use because of their adverse side-effects (13, 62).

Out-of-pocket expenditures associated with accessing mental health services or medicines at private institutions are prohibitive for many patients. The National Hospital Insurance Fund (NHIF) provides only partial coverage for some mental health and substance use disorder treatments, while most private health insurance plans do not offer any coverage for mental health services and medicines. Given that a large proportion of the population in Kenya has a low income, long-term treatment, regular consultations and psychosocial follow-up are generally not affordable (13).

A national e-health policy has been developed, one of the objectives of which is to facilitate the use of telemedicine to improve access to health care services, particularly for those in geographically isolated communities (66). Recent research has shown the feasibility of digitally delivered mental health interventions (66-68). In response to the COVID-19 pandemic, more digital mental health programmes and interventions have been implemented. The Ministry of Health, in collaboration with a local mobile network provider, has set up a call centre for telecounselling for health care workers (69), and has developed guidelines for tele-mental health service delivery (70). One private hospital has also implemented a telehealth intervention for its patients (71). Given the high penetration of mobile phone subscriptions in Kenya, and the high rates of internet use from mobile phones (72), digital strategies represent a viable opportunity for increasing access to mental health care, but investment in the infrastructure will be needed for successful scale-up.

Given the significant gaps in the availability of mental health services in Kenya, it is not surprising that the treatment gap is high. A study conducted by Kwobah et al. (15) reported that only 1.7% of those who screened positive for a mental illness had ever received a diagnosis.

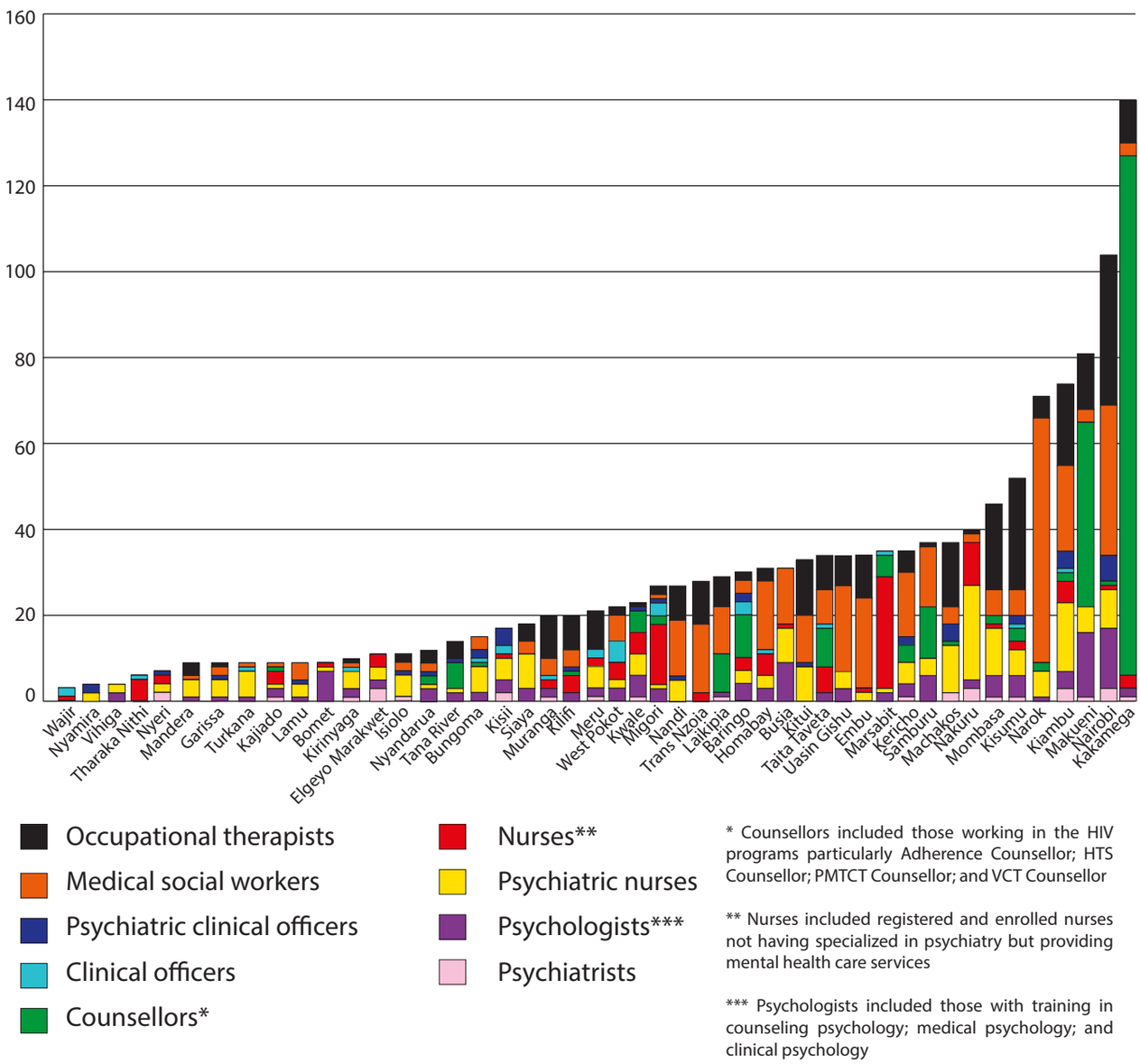
Box 2. QualityRights project in Kenya

Kenya has recently embarked on a mission to improve the quality of its mental health services and align them with the requirements of the United Nations Convention on the Rights of People with Disabilities (UNCRPD). To this end, Kenya launched the QualityRights movement in 2019. So far, the Ministry of Health, in collaboration with WHO and non-state stakeholders, has conducted training on mental health, human rights and recovery among key mental health and disability stakeholders, and assessed five mental health facilities and one community-based facility for compliance with UNCRPD standards. Plans are under way to scale up these assessments and develop plans to transform mental health services across the country (73).

Human resource for mental health

Kenya has a shortage of qualified personnel in all mental health specialties within the public sector. Nationwide, there are only 1382 mental health professionals working under the 47 County governments and 354 employed by the National Government (**Annex 2**). Kakamega and Makueni Counties had some of the highest numbers of mental health professionals. It is important to note however that this high number was a result of a large number of HIV testing counselors within those Counties. Counselors comprised of 86% and 53% of the mental health professionals in Kakamega and Makueni Counties respectively. Specialist mental health providers therefore remained scarce even within these counties. Several counties had critically low numbers of mental health professionals. Nyeri, Tharaka Nithi, Wajir, Lamu, Nyamira, Vihiga, Kajiado, Mandera, Garissa and Turkana counties had less than 10 mental health care workers each (**Fig. 2**). The number of psychiatrists is particularly low with only 23 working within the national government facilities and 30 across the 47 counties. To help address this shortage, the Mental Health Action Plan 2021–2025 is aiming to provide mental health training to 5% of health care providers in each county by 2025.

Fig. 2. Summary of number of mental health care workers within the 47 counties



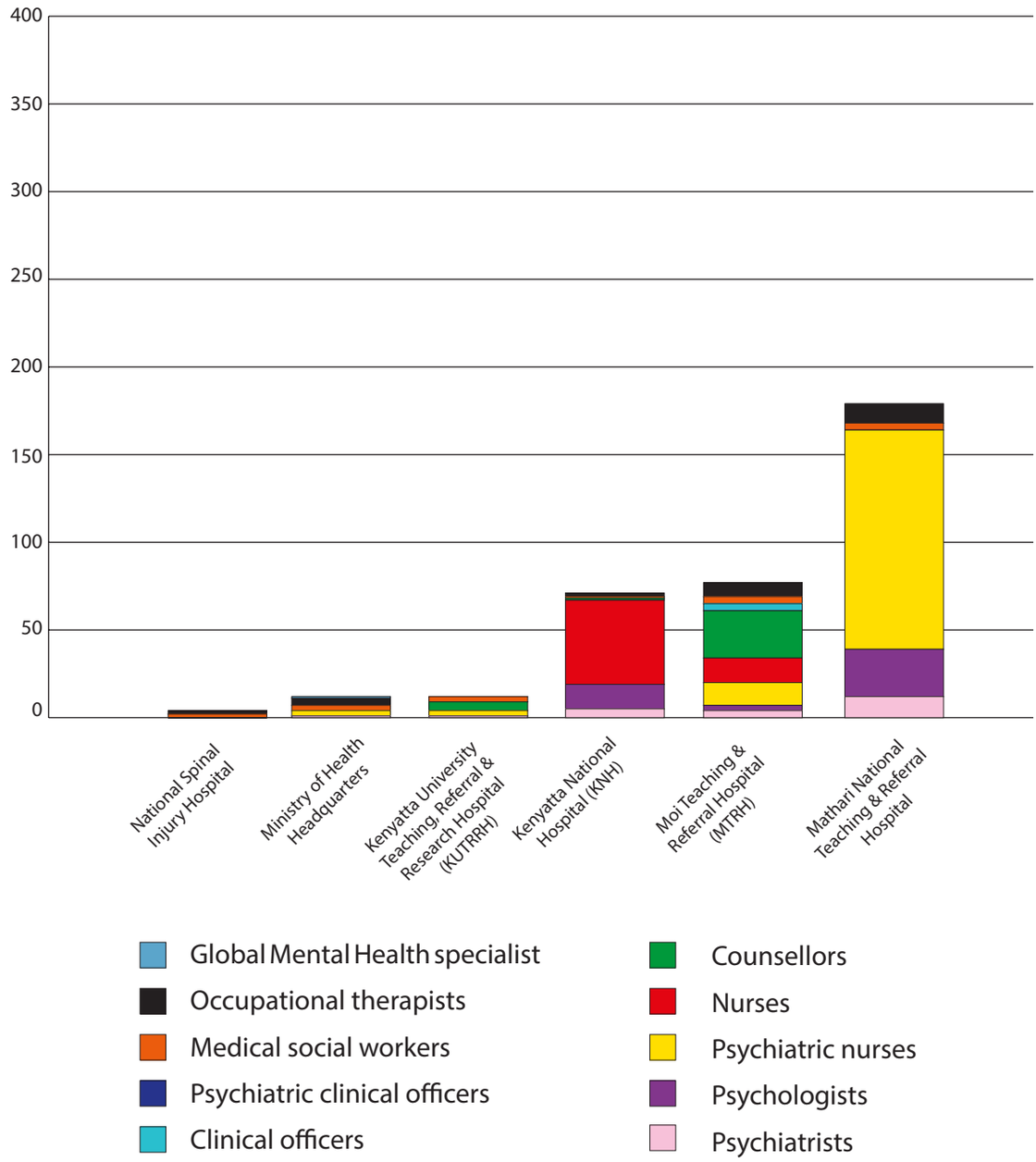
* Counsellors included those working in the HIV programs particularly Adherence Counsellor; HTS Counsellor; PMTCT Counsellor; and VCT Counsellor

** Nurses included registered and enrolled nurses not having specialized in psychiatry but providing mental health care services

*** Psychologists included those with training in counseling psychology; medical psychology; and clinical psychology

Mathari National Teaching & Referral Hospital had the highest number of mental health professionals among the facilities that are under the national government (**Fig. 3**). This is unsurprising given that Mathari is the only standalone mental health facility within the public sector in Kenya. Psychiatric nurses constituted the highest proportion (40.1%) of mental health care workers under the national government with most of them (87%) working at Mathari Hospital. The Ministry of Health tasked with the role of policy making and technical support to the counties has a mental health workforce of only 12 (**Annex 2**). This further highlights the dire shortage of mental health personnel across the country's health system. In line with The Kenya Mental Health Policy 2015-2030, it is incumbent on the government to support and finance the training of more mental health workers at national and county levels.

Fig. 3. Summary of number of mental health care workers at national level



Financing of mental health care

Both health spending per capita and the share of public expenditure in overall health spending increased between 2000 and 2018, from US$ 20.5 to US$ 88.4 and from 28.6% to 42.1%, respectively. The share of public health spending in overall government expenditure also increased from around 7% in 2000 to 9% in 2018. However, out-of-pocket spending remains substantial, accounting for 23.6% of total health expenditure in 2018 (74). Despite these developments, the funding of mental health remains low.

In 2017, the per capita government mental health expenditure in the WHO African Region was US$ 0.1. In LMICs like Kenya, more than half of this amount is often allocated to mental hospitals (76). While the global median mental health expenditure per capita is US$ 2.5 per year, Kenya spends only US$ 0.0015 annually (75).

In the financial year 2021–22, only 2% of the government health budget was allocated for mental health at the national government level, a 12% increase from the previous financial year. This amount was allocated to the Kenya Mental Health Board, the Mathari National Teaching and Referral Hospital and the Division of Mental Health at the Ministry of Health (**Annex 4**) (76). Although the budget includes an allocation to the Kenya Board of Mental Health, this board is yet to be established (13) and the funds are therefore not accessible. Furthermore, the actors directly involved in providing mental health services rarely have any influence over budget distribution, and face challenges in accessing funds and resources. In the absence of adequate public resources channelled towards meeting the population's mental health needs, the major portion of associated expenditures is typically borne by patients and their families.

The Government-established NHIF provides coverage for mental health conditions and substance use disorders. However, NHIF coverage remains poor at only 16%, and the scheme does not provide comprehensive coverage for mental disorders (77). Although the Kenya Mental Health Policy 2015–2030 requires that the health insurance system does not discriminate against persons with mental health conditions, private medical insurance coverage is discriminatory, and mental health care and treatment services are often excluded from essential packages of interventions or insurance schemes (12). Consequently, payments for mental health services are mostly or entirely out of pocket (75). Out-of-pocket payments for mental health care have driven people in Kenya into poverty (13).

Health information

Mental health data at health facility level are captured in a number of tools on the Kenya Health Information System (KHIS) (**Annex 5**). However, these data are often of poor quality and not adequate for decision-making. Other challenges include a weak infrastructure for computing technologies, inadequate staffing and training, and little dissemination of existing information (78). Other sources of mental health data in Kenya include population-based surveys on substance use

by the National Authority for Campaign against Alcohol and Drug Abuse,[2] the Kenya Demographic and Health Survey, the Global Adult Tobacco Survey and the STEPwise survey. There are no population-based surveys that collect data on other mental health conditions. Mental health research in Kenya remains limited. Most of the available surveys have been conducted among small populations in hospital settings (13).

Multisectoral coordination

The Government of Kenya has stressed the importance of a multisectoral response to mental health. President Uhuru Kenyatta, in his Madaraka Day speech in 2019, directed the Ministry of Health, "in consultation with County Governments, Ministries of Education, Labour and Social Protection and Public Service, Youth and Gender Affairs, to formulate an appropriate policy response". In December 2019, the Mental Health Taskforce was inaugurated, consisting of a multisectoral team with the primary mandate to study the status of mental health in Kenya and provide recommendations for reform of the mental health system (79). The Taskforce report recognized social and other determinants of mental health as well as the need for a multisectoral and multidisciplinary approach. One of the key recommendations of the Taskforce was to "implement a multisectoral approach to the Mental Health challenges (similar to that adopted in 1999 against HIV/AIDS)" (13). Both the Mental Health Action Plan 2021–2025 and the Kenya Mental Health Policy 2015–2030 recognize the importance of employing a multisectoral approach in addressing mental health issues in Kenya.

There has been some multisectoral coordination and policy linkages have been established with various ministries. Relevant ministries, such as those responsible for police, schools, child protection and social welfare, have a major interest in contributing to mental health policy, and have all participated in stakeholder policy development (80).

In its 2018–2022 National Education Sector Strategic Plan, the Ministry of Education has called for the establishment of protective systems, such as counselling for students with mental health and psychosocial needs (81); this is in line with the life course approach suggested by the Ministry of Health (12).

According to a mental health expert at the Ministry of Education, the Ministry has stationed guidance and counselling teachers in almost all primary and secondary schools in the country. The guidance and counselling teachers, however, have other teaching responsibilities and are often unable to provide the counselling services and psychosocial support needed. Mental health has been integrated into the curriculum of primary and secondary schools, including a life skills training programme, a psychosocial support programme, and a mentorship and coaching programme. A pilot study in 2017 demonstrated the efficacy of life-skills interventions in Kenyan primary schools. The study found a 75.5% overall net mental health improvement in self-reported scores of young people after the intervention (82).

2 NACADA publications are available from: https://nacada.go.ke/publications.

Between 2008 and 2012, 152 youth empowerment centres (YECs) were established as a Vision 2030 flagship project under the Ministry of Information and Communications Technology (ICT), Innovation and Youth Affairs. The YECs were intended to be "one-stop centres", offering a unique response to the many challenges facing young people in Kenya, including poor access to ICT and guidance and counselling on substance abuse (83). However, the centres remained largely unused and needed to be refurbished to make them operational and beneficial for Kenyan youth. In August 2019, the Ministry of Public Service, Youth and Gender launched 15 refurbished YECs in various counties and allocated funding to refurbish another 60 centres (84).

Box 3. Mental health: how do non-health sectors contribute?

Mental health, like other aspects of health, is affected by a range of socioeconomic factors. A comprehensive and coordinated response to mental health promotion, protection and care therefore requires action and partnerships across multiple sectors, including health care, education, employment, justice, housing, social welfare and other relevant sectors.

Education. Evidence-based school interventions addressing the social and emotional skills of young people can help build their resilience to adverse life events, while encouraging them to seek help early. Programmes aimed at reducing bullying, problem behaviour and substance misuse need to be implemented to reduce rates of self-harm, suicide and mental health problems. Support services in schools can be an important first line of help or referral point.

Social welfare. Individuals and households at risk need legal protection (such as child welfare), social protection (such as support for low-income households) and financial protection (such as for people who are unemployed or in debt) to lower the risk of mental health problems. Family support programmes for those at risk can improve the social and emotional skills of both children and parents.

Employment. Campaigns and educational programmes in workplaces can build awareness of mental health issues and encourage individuals to seek help early. Well-being at work positively affects productivity. Workplaces should offer accessible first-line mental health help or referrals for their employees.

Housing. Contact with green areas and good-quality living conditions are examples of factors known to positively affect mental health. Moreover, many people with mental health conditions require help with housing to avoid homelessness.

Justice. Introducing population-based restrictions on the availability and marketing of alcohol and tobacco can help reduce the incidence of mental health conditions in the population. Mental health problems are exacerbated by high levels of substance use, as well as by obesity and poor nutrition (85).

Development priorities and international response

Kenya Vision 2030 aims to transform Kenya into a middle-income country and provide a high quality of life to all its citizens by 2030. The social pillar aims to improve the quality of life of all Kenyans and includes a number of social welfare programmes and special provisions for people with disabilities and previously marginalized communities. The Medium Term Plan III 2018–2022 (The Big 4 agenda) of Vision 2030 prioritizes universal health care coverage. Addressing the growing mental health burden will be crucial. Development partners have been key contributors to the growth of the Kenyan health system, both through direct in-service provision and through the Government (86, 87). However, donor spending has declined since 2010–11 (88).

NGOs are involved in a number of mental health projects in Kenya. Their programmes are diverse and address issues such as capacity-building, mental health awareness, stigma reduction, prevention of mental health conditions and promotion of mental health (89).

Box 4. Case study: Makueni County

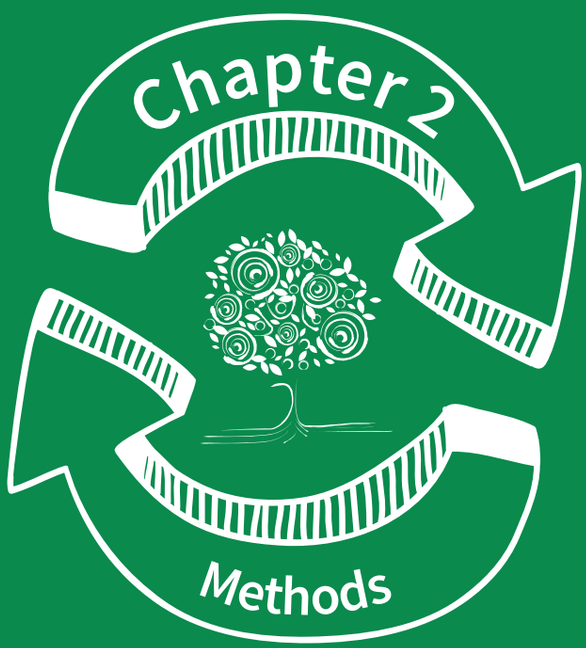
According to health officials in Makueni County, a number of major incidents involving illicit alcohol consumption in 2014 and a foiled terror attack in 2016 affected many in the community and prompted the County Government to prioritize and invest in mental health.

County health officials report that in 2016, psychological counsellors were stationed at the county referral hospital and all subcounty hospitals. In 2021, the County Government began building a modern outpatient and inpatient mental health unit at Makueni County referral hospital, as well as counselling units in each subcounty. Makueni has mainstreamed mental health in primary care and Makueni Care, the County's universal health programme. Makueni has also capitalized on the use of mobile phones during COVID-19 to provide mental health care, including for cases of gender-based violence, where it has been extensively utilized.

In collaboration with Africa Mental Health Research and Training Foundation, Makueni has undertaken various research studies and interventions including mhGAP (90, 91), stigma reduction in carers of people with dementia (92), and the use of traditional and faith-based healers for mental health care (93, 94).

County health officials report that these actions have resulted in increased training of personnel, including psychiatrists, clinical officers, psychiatry nurses and psychotherapists, and mental health services are now available in all subcounty hospitals in Makueni. The county is now also able to offer debriefing sessions, grief and loss treatment programmes and substance use disorder treatment for all health care staff. There has also been increased mental health advocacy, including from the Governor of Makueni, who has published several articles on mental health. The First Lady also plays a key role in advocating for mental health. These changes have had a significant impact on the people of Makueni. Since 2016, the counselling unit has reached 65 000 people (6.5% of the population of Makueni) either directly or through group forums. Alcohol use disorder treatment programmes have reached 15 youth groups and around 48 000 people.

Photo: © World Bank


Chapter 2
Methods

METHODS

An economic analysis was carried out to determine the total costs and the expected health and economic benefits (such as healthy life years gained, mortality averted and productivity gained) of implementing clinical and population-based preventive mental health interventions. A multiagency, multidisciplinary team comprising staff from Kenya's Ministry of Health, WHO, the United Nations Inter-Agency Task Force on the Prevention and Control of Non-communicable Diseases, UNDP and Deakin University undertook remote data collection, complemented by an institutional context analysis. The team consisted of health economists, social development specialists and experts in mental health and public health. Intensive follow-up work, as described below, was undertaken as part of the collection and analysis of data.

This section outlines the methods and economic models used at various stages of the analysis, to:

- estimate the economic burden attributable to mental health conditions in terms of direct costs (i.e. Government health care expenditure) and indirect costs (i.e. productivity losses due to absenteeism, presenteeism and premature death);
- cost interventions;
- assess the health impacts of interventions; and
- perform return-on-investment (ROI) analysis.

Photo: © World Bank

Estimation of the economic consequences of mental health conditions

A model was developed to estimate the current direct and indirect costs attributable to mental health conditions in Kenya. Population data were obtained by age and sex for the period 2021–2041 from the Kenya National Bureau of Statistics and the United Nations Department of Economic and Social Affairs World Population Prospects study. The OneHealth tool (**Box 5**) was used to model prevalence and mortality rates by age and sex for the following six mental health conditions: anxiety disorders, depression, psychosis, bipolar disorder, epilepsy and alcohol use disorder. The model allowed prevalence and mortality for each condition to be projected for the years 2021 to 2041, assuming that rates remain constant.[3] These projections were summarized as total prevalence and mortality for the entire population and for the working-age population (aged 15–64 years).

Box 5. The OneHealth tool and its mental health module

The OneHealth tool is software designed for national strategic health planning in low- and middle-income countries. Development of the tool is overseen by a group of experts from United Nations agencies and development institutions.

The tool contains a mental health module for estimating the costs and health impacts of mental health services and interventions at population level. The module allows the number of people living with mental health conditions in a country to be estimated and the epidemiology of mental health conditions to be linked to national life tables for estimation of the numbers of cases averted and healthy life years gained over time at population level.

The direct and indirect economic burden of mental health conditions in Kenya was estimated according to the steps listed below.

3 The model estimated growth in prevalence and mortality due to population growth only – not growth in disease rates.

1 ESTIMATION OF TOTAL GOVERNMENT EXPENDITURES ON MENTAL HEALTH

Total expenditure on mental health was obtained from the Kenya National Health Account 2018-19 report compiled by the Kenyan Ministry of Health. Total expenditure on mental health was estimated as the sum of all mental health-related expenditures by the government, corporations, households and international funders. This estimate represents the total direct economic burden of mental health conditions in Kenya. It excludes non-health-care costs, such as transport, waiting times and informal care.

2 ESTIMATION OF INDIRECT ECONOMIC BURDEN

To estimate the indirect economic burden, the annual value (in terms of economic output) of each full-time worker in Kenya was calculated from the GDP per employed person, defined as the country's GDP (10 752 billion KES in 2020) divided by its total employed labour force. Local data on the total labour force aged ≥15 years, the unemployment rate and the labour force participation rate were used to determine the total employed labour force.

3 MENTAL HEALTH CONDITIONS AND WORKER PRODUCTIVITY

Data were included on the extent to which mental health conditions reduce worker productivity. As in a previous global ROI study (96), rates from the World Mental Health Surveys were used to describe: (i) the reduction in labour force participation due to each of the six mental health conditions; (ii) the reduction in full-time hours worked due to mental health-related absenteeism; and (iii) the reduction in productivity due to mental health-related presenteeism.

4 WORKERS WITH A MENTAL HEALTH CONDITION

The number of Kenyan workers with a mental health condition during 2020 was determined from data on labour force participation, unemployment and mortality. First, all people aged 15–64 years with a mental health condition were entered, and those who were not participating in the labour force, were unemployed, could not participate in the labour force because of their mental health condition or had died were subtracted.

5 CALCULATING ECONOMIC LOSSES

Finally, the economic losses attributable to absenteeism, presenteeism and premature death among workers with each mental health condition were calculated. The relevant productivity figures found in step 3 were applied to the eligible population determined in step 4 and multiplied by the GDP per employed person. This calculation resulted in the total indirect economic burden of mental health conditions in Kenya.

Calculation of the costs and health effects of clinical and population-based interventions

The OneHealth tool was used to estimate costs arising from several clinical interventions for each of the six mental health conditions (depression, anxiety, psychosis, bipolar disorder, epilepsy and alcohol use disorder). Custom-built Excel models were then used to estimate the costs associated with the following population-based mental health interventions: a nationwide regulatory ban on highly hazardous pesticides to prevent suicide, and universal delivery of social–emotional learning (SEL) programmes to adolescents in schools to prevent depression, anxiety and suicide. Each intervention modelled in the OneHealth tool and the custom-built Excel models contained assumptions made by WHO experts about the quantity of resource items required for implementation and enforcement at national level. In line with the methodological guidance for mental health investment cases (1), the main categories of resource cost were as follows.

- **Inpatient care:** people with mental health conditions who require hospitalization (e.g. 5% of moderate to severe cases of depression, for an average stay of 14 days).
- **Outpatient and primary care:** most cases require regular outpatient visits (e.g. from four visits per case per year for basic psychosocial treatment or pharmacological management to monthly or bimonthly visits for moderate to severe cases receiving intensive psychological treatment).
- **Medication:** essential psychotropic medications include antipsychotics, antidepressants and anti- epileptics.
- **Programme costs and shared health system resources:** these include programme management and administration, training and supervision.

Unit costs for each resource item were obtained from local sources (e.g. the Kenyan Ministry of Health, the Kenya Medical Supplies Authority price list and the Salaries and Remuneration Commission) and the WHO-CHOICE database (97, 98).

To estimate the health impact of these interventions, a population-based model was used in the OneHealth tool to calculate the number of healthy years of life lived in the population at current and target levels of coverage (see **Table 1**). Healthy life years include both expected changes in life expectancy (e.g. as a result of a decrease in the case-fatality rate after introduction of a pesticide ban) and also non-fatal health outcomes (e.g. reduced incidence or duration of depressive episodes after treatment). Default effect sizes for the modelled interventions are taken from WHO's cost-effectiveness work programme and are summarized in **Table 1**.

Table 1. Interventions considered in the mental health investment case

Intervention	Baseline coverage (2021) (%)	Target coverage (2041) (%)	Health impacts assessed
Anxiety disorders *(Service delivery setting: primary health care)*			
Basic psychosocial treatment for mild cases	5	30	Improved functioning/level of disability (7–12%) and rate of remission (36–42%) among people with anxiety disorder aged ≥15 years after adjustment for non-adherence (30–40%)[4]
Basic psychosocial treatment and antidepressant medication for moderate to severe cases	5	40	
Intensive psychosocial treatment and antidepressant medication for moderate to severe cases	1	30	
Depression *(Service delivery setting: primary health care)*			
Basic psychosocial treatment for mild cases	5	30	Improved functioning/level of disability (4–9%) and rate of remission (15–25%) among people aged ≥15 years with depression, after adjustment for non-adherence (30–40%)[5]
Basic psychosocial treatment and antidepressant medication of first episode for moderate to severe cases	5	40	
Intensive psychosocial treatment and antidepressant medication for first episodes of moderate to severe cases	5	30	
Intensive episodic psychosocial treatment and antidepressant medication for recurrent moderate to severe cases	5	30	
Intensive maintenance psychosocial treatment and antidepressant medication for recurrent moderate to severe cases	1	30	As above, plus reduced incidence of recurrent episodes (28%), after adjustment for non-adherence (30%)
Psychosis *(Service delivery setting: secondary health care)*			
Basic psychosocial treatment and antipsychotic medication	20	60	Improved functioning/level of disability among people aged ≥15 years with psychosis (21–35% after adjustment for non-adherence)[6]
Intensive psychosocial treatment and antipsychotic medication	5	30	

4 For details of treatment impact, see reference 96.
5 For details of treatment impact, see references 96 and 99.
6 For details of the model and its parameters, see reference 100.

Intervention	Baseline coverage (2021) (%)	Target coverage (2041) (%)	Health impacts assessed
Bipolar disorder *(Service delivery setting: secondary health care)*			
Basic psychosocial treatment plus mood-stabilizing medication	20	50	Improved functioning/level of disability among people aged ≥15 years with bipolar disorder (22–29%, after adjustment for non-adherence[7]
Intensive psychosocial treatment plus mood-stabilizing medication	5	20	
Epilepsy *(Service delivery setting: primary health care)*			
Basic psychosocial treatment plus antiseizure medication	30	90	Improved functioning/level of disability (47%) and rate of remission (60%) among people aged ≥1 year with epilepsy, after adjustment for non- adherence (30%)[8]
Alcohol use disorder *(Service delivery setting: secondary health care)*			
Identification and assessment of new cases of alcohol use disorder	5	30	Improved rate of remission (10–15%) among people aged ≥15 year with alcohol use disorder, after adjustment for non-adherence (50%)[9]
Brief interventions and follow-up for alcohol use disorder	5	30	
Management of alcohol withdrawal	5	30	
Relapse prevention for alcohol use disorder (12 sessions of cognitive behavioural therapy)	5	30	
Population-based mental health interventions			
Nationwide regulatory ban on highly hazardous pesticides to prevent suicide	5	100	A relative risk reduction in the incidence of pesticide-related suicide (35%), subsequently linked to overall suicide and mortality in the population[10]
Universal school-based SEL interventions to prevent depression/anxiety and suicide in adolescents aged 12–17 years	5	100	A relative risk reduction in the incidence of depression and anxiety (16%) and of suicide (5.8%) among adolescents attending school[11]

7 For details of the model and its parameters, see reference 101.
8 For details of the model and its parameters, see reference 102.
9 For details of the model and its parameters, see reference 115.
10 For details of the model and its parameters, see reference 103.
11 Details of the model that was developed and populated are provided in a background paper prepared and presented by Dr Yong Yi Lee and others at an expert consultation held at WHO headquarters on 20–21 August 2019. It is in preparation for publication in a peer-reviewed academic journal.

The SEL interventions are described in **Box 6**.

Box 6. School-based social–emotional learning (SEL) interventions

The incidence of depression and suicide increases rapidly during adolescence (10–19 years). Prevention of depression and suicide at this crucial developmental stage could result in substantial health gains during the life-course of an individual. School-based SEL interventions to prevent depression and/or suicide typically involve a trained facilitator (e.g. a teacher, health professional or lay worker) who delivers a series of modules to teach psychotherapeutic strategies to improve overall well-being and reduce the risk of adverse mental health outcomes. There is evidence that school-based SEL interventions targeting adolescents are effective in reducing the incidence of depression and suicide (104-106). Schools are increasingly recognized as an important platform for delivery of preventive mental health interventions to young people (107, 108). Psychological interventions in schools are typically delivered to all students, regardless of their underlying risk profile.

Analysis of return on investment

The benefit–cost ratio is used to evaluate the efficiency of health investments in terms of their ROI. It is a direct comparison of the present value of the impacts of an intervention on health and productivity with the present value of intervention costs. Future impacts on health and productivity and future intervention costs were discounted to their present value to account for the time value of money, whereby a unit of currency obtained in the future is worth less than the same unit of currency obtained in the present. An Excel model, developed by WHO for the ROI analysis, provided estimates of the economic gains accruing from investing in a range of cost–effective mental health interventions previously identified by WHO. Table 1 lists the clinical and population-based interventions included.

Estimates were made of how each of the mental health interventions listed (except those encompassing psychosis, bipolar disorder and epilepsy) would improve national productivity, measured in terms of GDP. The economic value of an increased healthy labour force due to avoided mortality was calculated by taking the total number of deaths avoided, adjusting this number to account for those who participate in the labour force and are currently employed, and then multiplying by the net present value of foregone GDP per capita over the model time horizon of 20 years. The economic value of an increased healthy labour force through avoided cases of illness was calculated by taking the total number of cases averted, applying the same employment-related adjustments as above, multiplying by the annual GDP per employed person and then further multiplying the result by 5% (i.e. the increase in labour force participation among those with a mental health condition who receive treatment). The 5% increase in labour force participation was based on the findings from a previous global ROI study, in which 5% restored productivity was assumed after mental health treatment (96).

The economic value of reduced absenteeism and presenteeism was estimated in a similar way; however, multiplication by 5% represented the decrease in absenteeism and presenteeism among those with a mental health condition who received treatment. The 5% reductions in absenteeism and presenteeism were based on findings from a previous global ROI study, in which 5% restored productivity was assumed after mental health treatment (96).

Productivity gains resulting from each mental health intervention (with the exception of interventions for psychosis, bipolar disorder and epilepsy) were calculated as the sum of the productivity gains attributable to increased labour force participation (by avoided mortality and illness) and reduced absenteeism and presenteeism. In the case of the universal school-based intervention for adolescents, only productivity gains due to increased labour force participation could be estimated. Productivity gains due to reduced absenteeism and presenteeism were not estimated for the school intervention, as they are not relevant to people of non-working age, and there is currently no established method for determining how impacts on educational attainment during adolescence (which can be improved by preventing mental ill health) translate into better earning potential later in life.

A different method, the imputed method, was used to estimate restored productivity following treatment of psychosis, bipolar disorder and epilepsy, because of the absence of data on labour force outcomes for people with these conditions. A Lancet commission on investing in health determined that the value of a healthy life year gained is approximately 1.5 times GDP per capita (109, 110). Two-thirds of this value (1.0 times GDP per capita) is attributable to the instrumental value of improved health, i.e. economic or productivity-related gains, while one-third (0.5 times GDP per capita) is attributable to the intrinsic value of health, i.e. the value of health as an end in itself. Recent international guidelines for benefit–cost analysis (111) recommend, however, that the intrinsic value of health be valued fully (at 1.5 times GDP per capita) and counted in addition to the productivity-related value of being able to work or increase earnings. For the current analysis, productivity gains for psychosis, bipolar disorder and epilepsy were estimated by multiplying the total healthy life years gained by an intervention, by the GDP per capita for Kenya (i.e. the instrumental value of health). In a sensitivity analysis, separate assessments were made to determine how baseline results might change under different assumptions: increasing the relative coverage of community-based clinical treatment in place of facility-based care (SA1); application of the imputed method described above to value the impact on productivity of interventions for anxiety disorders, depression and alcohol use disorder (SA2); and a 50% reduction (halving) of the instrumental economic value assigned to 1 year of healthy life (i.e. 0.5 times GDP per capita) when applying the imputed method (SA3).

The concept of healthy life-years gained is explained in **Box 7**.

Box 7. Healthy life years gained

Healthy life years gained (equivalent to averted disability-adjusted life years lost) is commonly used in the global health literature as a summary measure of population health. National life tables are used to compute healthy life years, which reflect the combined time spent by the population in a state of health with a known degree (or absence) of disability. A disability weight ranging from 0 (denoting death) to 1 (denoting perfect health) is used to adjust the time spent in a particular health state. For example, if a person lives with disease X for 10 years and the disability weight for disease X is 0.4, the total healthy life years that could be gained by averting the disease for that person is 4 (10 multiplied by 0.4).

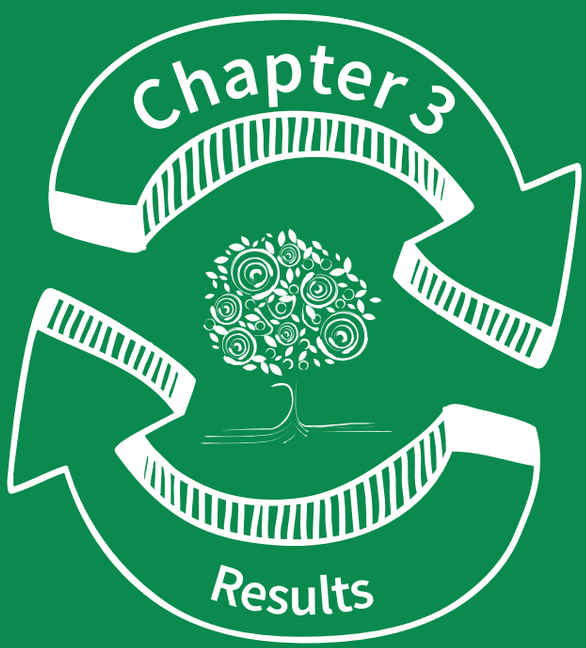
Photo: © UNDP

The ROI for each intervention was calculated by comparing the productivity gains produced by the intervention (measured as an increase in GDP) with the total costs of setting up and implementing the intervention. Projected costs and projected productivity gains were estimated using net present value and a 3% annual discount rate.

Separate estimates were made of the intrinsic value of improving health as an end in itself. The social value of health was estimated by multiplying the total healthy life years gained by an intervention by the 1.5 times the GDP per capita of Kenya. Addition of productivity gains and the social value of health represents the total economic gains produced by the mental health interventions.

The ROI metrics presented in this report are the benefit-to-cost ratio, defined as the present value of total health and/or productivity gains divided by the present value of total intervention costs, and the ROI ratio, defined as the present value of total health and/or productivity gains minus the present value of total intervention costs, divided by the present value of total intervention costs (1).

Photo: © World Bank


Chapter 3
Results

RESULTS

This section describes the economic burden of mental health conditions, summarizes the components of the ROI analysis, including health impacts, economic gains and total costs, and discusses the benefit–cost ratio and ROI for each intervention package.

Economic burden

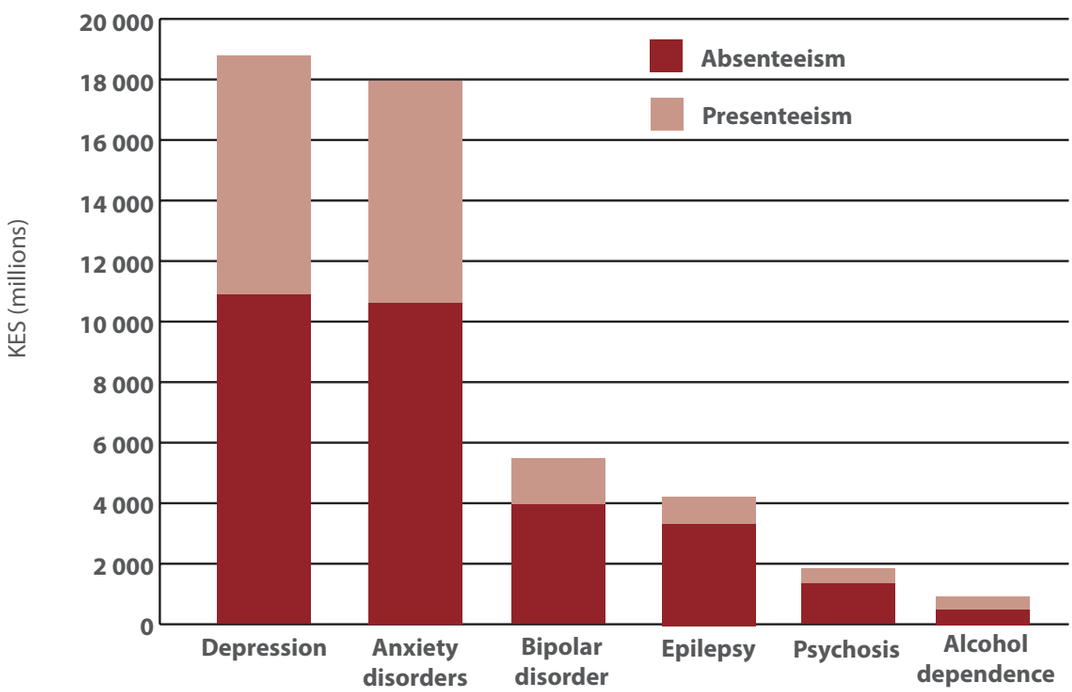
Direct costs

The total expenditure on mental health in Kenya was 5546.2 million KES (US$ 51.0 million) in 2021. The sources of financing were: the government (46.4%), private corporations (17.1%), households (27.4%) and international funders (9.1%) (**Table 2**). Total expenditure could not be disaggregated by mental health condition.

Indirect costs

The combined cost of absenteeism and presenteeism for the different mental health conditions in Kenya is presented in **Fig. 4**. The total number of working days lost due to absenteeism was estimated to be 12.0 million, while the total workings days lost due to presenteeism was 7.3 million. Altogether, this resulted in a total cost due to absenteeism and presenteeism of 49.2 billion KES (US$ 453.1 million) in 2021. Absenteeism and presenteeism costs are highest for depression.

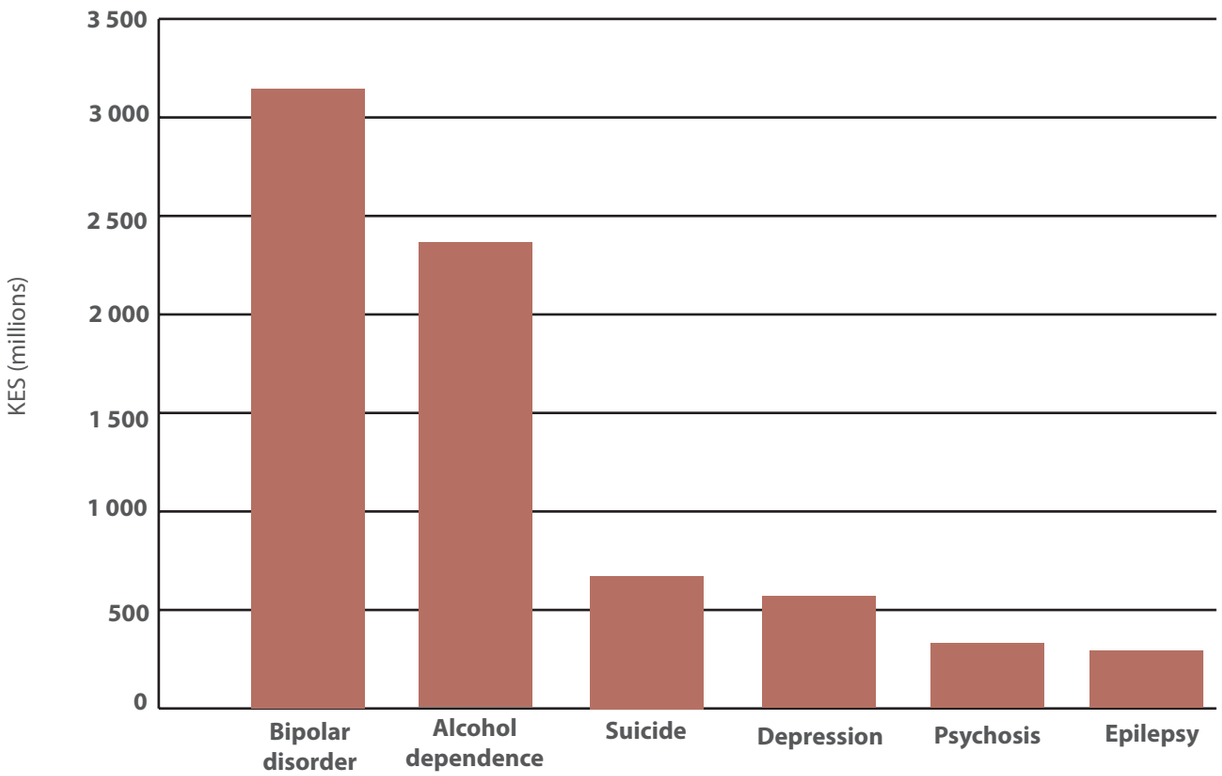
Fig. 4. Costs of absenteeism and presenteeism for six mental health conditions (2021)



The total costs of premature death due to the six mental health conditions were estimated to be 7.3 billion KES (US$ 67.7 million) in 2021 (**Fig. 5**).

Bipolar disorder and alcohol use disorder are the costliest mental health conditions in terms of premature death. This is due to the high estimated excess mortality for these two conditions in the Global Burden of Disease study, which is the source of the epidemiological data in the OneHealth tool (e.g. six times more estimated deaths in the population than due to depression or psychosis). The high mortality among people with alcohol use disorder is associated with various causes of death, from cancer to injuries (e.g. traffic accidents and falls). Anxiety disorders do not lead to death but, as described above, are associated with a high economic burden due to absenteeism and presenteeism. Deaths due to suicide encompass all causes of suicide and may overlap with suicide deaths due to a specific mental health condition (e.g. depression).

Fig. 5. Costs of premature death for mental health conditions (2021 KES, millions)



Total economic costs

Table 2 shows the total direct and indirect costs of mental health conditions in Kenya. The indirect economic losses are much higher than the direct losses. Total expenditure on health care for mental health conditions was 5546.2 million KES (US$ 51.0 million). In addition, the losses to the economy due to absenteeism, presenteeism and premature death amounted to 56.6 billion KES (US$ 520 million).

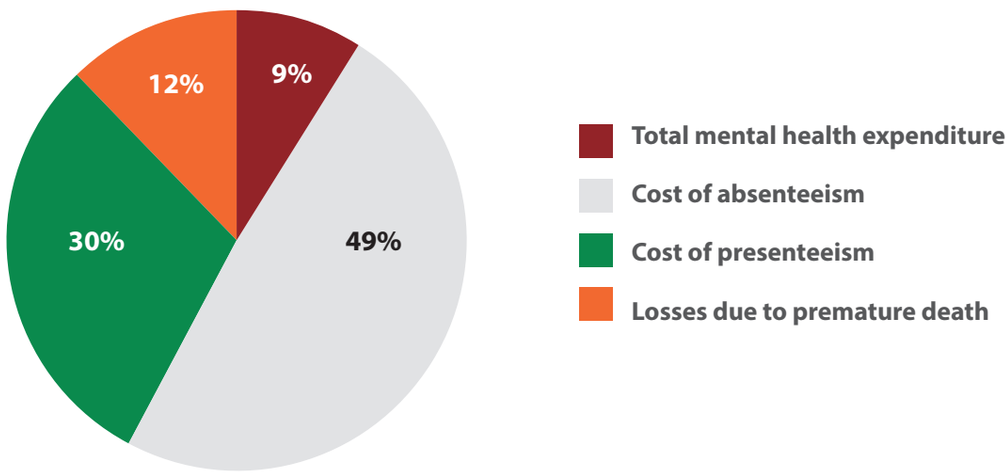
Table 2. Economic burden of mental health conditions in Kenya (2021 KES, millions)

Category	Total costs, 2021	
	KES, millions	US$, millions
Direct costs		
Health care		
Government	2573	23.7
Private corporations	948	8.7
Households	1520	14.0
International funders	505	4.6
Total direct costs	5546	51.0
Indirect costs		
Absenteeism	30 600	281.5
Presenteeism	18 654	171.6
Premature deaths	7358	67.7
Total indirect costs	56 612	520.8
Total	**62 158**	**571.8**

The total estimated economic burden of the selected mental health conditions on the Kenyan economy in 2021 is 62.2 billion KES (US$571.8 million), equivalent to 0.6% of the GDP in 2020. Despite this, the treatment gap remains substantial (15).

Fig. 6 shows the structure of the economic burden of mental health conditions in Kenya in 2021. Total health care expenditure represented only 9% of all mental health-related costs.

Fig. 6. Structure of the economic burden of mental health conditions in Kenya



Costs of intervention

The costs of the interventions were estimated for the period 2021–2041. **Table 3** shows the absolute costs during each of the first 5 years of this period plus the 10-year and 20-year total costs. **Table 4** shows the corresponding per capita costs (relative to the total population).

Table 3. Estimated absolute costs of interventions (KES, millions), 2021–2041

Mental health intervention package	2021	2022	2023	2024	2025	Total for 10 years	Total for 20 years
Anxiety disorders	162	294	431	576	726	8012	25 482
Depression	425	587	775	978	1191	12 947	39 189
Psychosis	760	881	1009	1143	1285	13 206	34 353
Bipolar disorder	2173	2413	2665	2928	3204	32 013	75 645
Epilepsy	227	259	293	329	367	3718	9117
Alcohol use disorder	160	211	267	327	390	4188	12 466
Pesticide ban	833	116	116	116	107	2154	2154
Universal school-based SEL intervention	157	163	290	290	290	5427	11 139
Total	**4896**	**4924**	**5847**	**6688**	**7561**	**81 665**	**209 545**

Table 4. Estimated per capita costs of interventions (KES), 2021–2041

Mental health intervention package	2021	2022	2023	2024	2025	Total for 10 years	Total for 20 years
Anxiety disorders	3.4	6.2	9.1	12.1	15.3	168.4	535.8
Depression	8.9	12.3	16.3	20.6	25.1	272.2	824.0
Psychosis	16.0	18.5	21.2	24.0	27.0	277.7	722.3
Bipolar disorder	45.7	50.7	56.0	61.6	67.4	673.1	1,590.4
Epilepsy	4.8	5.5	6.2	6.9	7.7	78.2	191.7
Alcohol use disorder	3.4	211	267	327	390	88.0	261.1
Pesticide ban	4.4	116	116	116	107	45.3	45.3
Universal school-based SEL intervention	3.3	3.4	6.1	6.1	6.1	114.1	234.2
Total	**102.9**	**103.5**	**122.9**	**140.6**	**159.0**	**1717.0**	**4405.7**

Clinical interventions for bipolar disorder, psychosis and depression incurred the largest estimated costs (because of the multiple care and support needs). Implementation of the entire clinical intervention package would cost 74.0 billion KES (or 1557 KES per capita) over the 10-year scaling-up period and 196.2 billion KES (or 4126 KES per capita) over the 20-year scaling-up period.

The total costs for the two population-based interventions (pesticide ban and universal school-based SEL) were among the lowest of all intervention packages. Altogether, these would cost 7.5 billion KES (or 159 KES per capita) over 10 years and 13.2 billion KES (or 279 KES per capita) over 20 years.

Interventions involving intensive psychosocial treatment and antidepressant medication have large planned costs. Nevertheless, numerous low-cost interventions exist, including basic psychosocial treatment (for anxiety disorders and depression particularly) and the nationwide regulatory ban of highly hazardous pesticides.

Health impacts

All the interventions result in a significant number of healthy life years gained (**Table 5**). The greatest impacts were observed for interventions for depression (143 543 healthy life years gained over 10 years) and anxiety (56 273), followed by clinical interventions for epilepsy (50 559) and the universal school-based SEL intervention (37 698).

Table 5. Estimated absolute health impacts

Mental health intervention package	Total healthy life-years gained		Prevalent cases averted		Total deaths avoided	
	20 years	10 years	20 years	10 years	20 years	10 years
Anxiety disorders	298 143	56 273	1 458 459	241 379	0	0
Depression	651 798	143 543	2 030 577	447 837	3620	744
Psychosis	125 387	28 031	NA	NA	NA	NA
Bipolar disorder	80 031	14 651	NA	NA	9711	2485
Epilepsy	258 995	50 559	239 352	33 985	1543	191
Alcohol use disorder	77 679	11 669	170 445	31 553	6710	1120
Pesticide ban	32 938	11 514	NA	NA	2270	735
Universal school- based SEL intervention[a]	91 981	37 698	407 860[a]	165 469[a]	230[b]	102[b]
Total	**1 616 952**	**353 938**	**4 306 693**	**920 223**	**24 084**	**5377**

NA - Not applicable
a - Prevalent cases of depression or anxiety.
b - Suicides attributable to depression.

Certain interventions also reduce mortality, either directly (pesticide ban, school-based SEL interventions) or by reducing the prevalence of conditions associated with excess mortality (depression, alcohol use disorder).

Bipolar disorder and psychosis are rarer than conditions such as depression and anxiety, but they are severe and usually persist throughout the life of an affected individual. The main benefits of treatment are a reduction in the severity of symptoms and improvement in the person's daily functioning. This is reflected as a reduction in the disability weight of these two conditions. Hence, the primary impact in terms of healthy life years gained is through reductions in the disability weight for these conditions rather than the number of prevalent cases or deaths.

Economic gains

The pesticide ban, the universal school-based SEL intervention, as well as the mental health interventions for alcohol use disorder, depression, anxiety disorder altogether resulted in productivity gains as follows:

- 8.4 billion KES from increased labour force participation due to avoided mortality;
- 10.8 billion KES from increased labour force participation due to avoided illness episodes.

Productivity gains from the pesticide ban, as well as from the mental health interventions for alcohol use disorder, depression, anxiety disorder altogether resulted in productivity gains totalling to 10.8 billion KES from a reduction in presenteeism and 10.8 billion KES from reduced absenteeism.

Productivity gains from the mental health interventions for psychosis, epilepsy and bipolar disorder were 5.5, 9.9 and 2.9 billion KES respectively.

In total all the intervention packages resulted in a net present value of 61 billion KES in productivity gains over 10 years, which would accrue to 249.7 billion KES over 20 years.

Return on investment

Comparison of the total costs and productivity gains of each package of interventions shows that four of the packages (for alcohol use disorder, anxiety disorder, depression and epilepsy) have benefit–cost ratios >1 over 10 years (**Table 6**).

Table 6. Costs, benefits (productivity gains only) and benefit–cost ratios at 10 and 20 years, by intervention package (2021 KES, millions)

Mental health intervention package	Total costs		Total productivity gains		Benefit–cost ratio (productivity gains only)		Return on investment (productivity gains only)	
	20 years	10 years	20 years	10 years	20 years	10 years	20 years	10 years
Anxiety disorders	25 482	8012	53 511	10 915	2.1	1.4	1.1	0.4
Depression	39 189	12 947	87 075	23 281	2.2	1.8	1.2	0.8
Psychosis	34 353	13 206	20 108	5492	0.6	0.4	–0.4	–0.6
Bipolar disorder	75 645	32 013	12 616	2850	0.2	0.1	–0.8	–0.9
Epilepsy	9117	3718	41 049	9853	4.5	2.7	3.5	1.7
Alcohol use disorder	12 466	4188	29 019	6175	2.3	1.5	1.3	0.5
Pesticide ban	2154	2154	6219	2376	2.9	1.1	1.9	0.1
Universal school-based SEL intervention[a]	11 139	5427	63	32	0.01	0.01	–1.0	–1.0
Total (all interventions)	**209 545**	**81 665**	**249 660**	**60 976**	**1.2**	**0.7**	**0.2**	**–0.3**

a - These results exclude productivity gains among students, because of methodological limitations.

Interventions for epilepsy have the highest benefit–cost ratio: for every 1 KES invested in the package of these interventions, the expected return is 2.7 KES over 10 years and 4.5 KES over 20 years. This is followed by: the package of depression interventions, which provides a benefit–cost ratio of 1.8 over 10 years and 2.2 over 20 years; the alcohol use disorder package with a benefit–cost ratio of 1.5 over 10 years and 2.3 over 20 years; and the banning of highly hazardous pesticides with a benefit–cost ratio of 1.1 over 10 years and 2.9 over 20 years.

Table 7 shows the impact of incorporating the social value of health in addition to productivity gains when calculating the benefit–cost ratio. The benefit–cost ratios for the intervention packages for anxiety disorders, depression, epilepsy, and the pesticide ban all increase substantially. More favourable benefit–cost ratios are also observed for alcohol use disorder (2.3 over 10 years), psychosis (1.0 over 10 years) and universal school-based SEL interventions (2.0 over 10 years). Over 20 years, the interventions returned 1.4 KES and 2.1 KES for every 1 KES spent.

Table 7. Costs, benefits (productivity gains plus social value of health) and benefit–cost ratios at 10 and 20 years, by intervention package (2021 KES, million)

Mental health intervention package	Total costs		Total productivity gains plus social value of health		Benefit–cost ratio (productivity gains plus social value of health)		Return on investment (productivity gains plus social value of health)	
	20 years	10 years	20 years	10 years	20 years	10 years	20 years	10 years
Anxiety disorders	25 482	8012	122 074	26 815	4.8	3.3	3.8	2.3
Depression	39 189	12 947	238 879	64 128	6.1	5.0	5.1	4.0
Psychosis	34 353	13 206	49 356	13 482	1.4	1.0	0.4	0.0
Bipolar disorder	75 645	32 013	30 967	6996	0.4	0.2	-0.6	-0.8
Epilepsy	9117	3718	100 756	24 185	11.1	6.5	10.1	5.5
Alcohol use disorder	12 466	4188	46 579	9 450	3.7	2.3	2.7	1.3
Pesticide ban	2154	2154	14 265	5650	6.6	2.6	5.6	1.6
Universal school-based SEL intervention[a]	11 139	5427	22 972	10 871	2.1	2.0	1.1	1.0
Total (all interventions)	**209 545**	**81 665**	**625 847**	**161 578**	**3.0**	**2.0**	**2.0**	**1.0**

a - These results exclude productivity gains among students.

Despite its low ROI, the intervention package for bipolar disorder is critical if Kenya is to have the services necessary to support human rights objectives and the Agenda 2040 pledge to leave no one behind. This condition is usually highly disconcerting and disruptive to both the individuals experiencing it and their families and communities. The ROI for the psychosis intervention package was lower than for other mental health interventions because treatment mainly reduces the disability weight of these disorders, rather than prevalence or mortality. Furthermore, these treatment options have less potential to increase labour force participation.

The intervention packages for anxiety disorders, depression, epilepsy and alcohol use disorders are the clearest "best buys" for maximizing productivity gains, as they result in the highest ROIs over 10 and 20 years.

The ROIs of the two population-based mental health interventions are underestimated for the following reasons. In the case of a regulatory ban on highly hazardous pesticides, productivity gains are calculated only on the basis of the reduction in premature mortality (valued over the course of the model timeframe). It is unclear how much pesticides contribute to suicide across Kenya, though it is anticipated that this will be high in rural counties, where there is greater access to highly hazardous pesticides. In addition, the method used to cost the intervention might overestimate the costs, as no account was taken of existing pesticide regulations. As Kenya already has a system for banning and regulating hazardous pesticides, the marginal cost of banning an additional pesticide would be fairly low. The only productivity gains that were valued for the universal school-based SEL intervention were those due to reductions in premature mortality. There is currently no method for calculating the net present value of future gains in productivity or employment due to better educational outcomes among adolescents.

The results of the sensitivity analysis are presented in **Table 8**. Increasing intervention delivery through community-based channels in place of facility-based channels (SA1) led to a 40% increase in the benefit–cost ratios for the interventions targeting anxiety, depression and alcohol use disorder. A one-way sensitivity analysis of the effect of halving the value attached to the instrumental value of a healthy life year to 0.5 of GDP per capita (SA3) reduced the overall benefit–cost ratios for the interventions for psychosis, bipolar disorder and epilepsy by 20%. Finally, application of the imputed value (of 1.0 times GDP per capita) for productivity gains to other conditions (SA2) showed a substantial increase in the benefit–cost ratio for depression (to 6.5) and a decrease for alcohol use disorder (to 2.4) but no significant change for anxiety.

Table 8. Percentage change in benefit–cost ratios at 20 years for each sensitivity analysis scenario relative to the base case (2021 KES)

Mental health intervention package	Benefit–cost ratio (productivity gains only)				Benefit–cost ratio (productivity gains plus social value of health)			
	Base case	SA1[a]	SA2[b]	SA3[c]	Base case	SA1[a]	SA2[b]	SA3[c]
Anxiety disorders	2.1	+43%	–12%	0%	4.8	+43%	–5%	0%
Depression	2.2	+45%	+20%	0%	6.1	+45%	+7%	0%
Psychosis	0.6	+23%	0%	–50%	1.4	+23%	+0%	–20%
Bipolar disorder	0.2	+19%	0%	–50%	0.4	+19%	0%	–20%
Epilepsy	4.5	+10%	0%	–50%	11.1	+10%	0%	–20%
Alcohol use disorder	2.3	+45%	–58%	0%	3.7	+45%	–36%	0%
Pesticide ban	2.9	0%	0%	0%	6.6	0%	0%	0%
Universal school-based SEL intervention[d]	0.01	0%	0%	0%	2.1	0%	0%	0%
Total (all interventions)	**1.2**	**+26%**	**–2%**	**–15%**	**3.0**	**+26%**	**–1%**	**–6%**

a - SA1 involved increasing the relative coverage of community-based clinical treatment in place of facility-based care.
b - SA2 involved using the imputed method to value the productivity impacts of interventions for anxiety disorders, depression and alcohol use disorder.
c - SA3 involved a 50% reduction of the instrumental economic value assigned to 1 year of healthy life (i.e. 0.5 times GDP per capita) when applying the imputed method.
d - These results exclude productivity gains among students due to methodological limitations.

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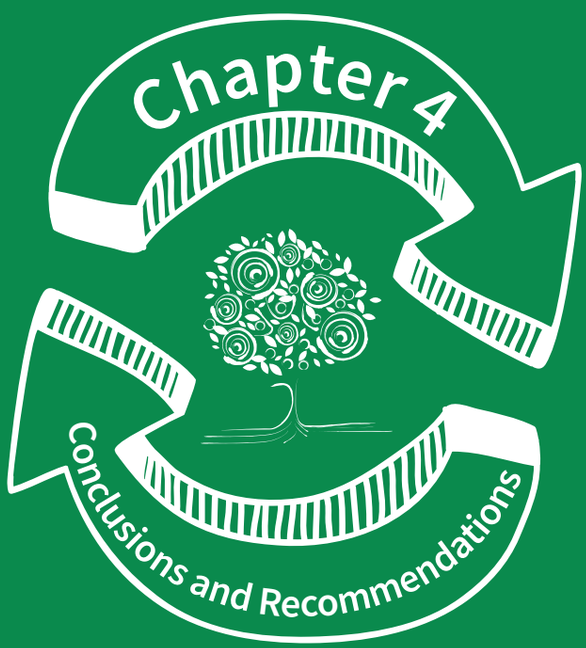
Chapter 4
Conclusions and Recommendations

CONCLUSIONS AND RECOMMENDATIONS FOR POLICY AND PRACTICE

This report assesses the current mental health situation in Kenya and highlights key gaps and opportunities. Importantly, it provides for the first time an estimate of the overall economic burden attributable to mental health conditions in Kenya, as well as economic evidence on the attributable and avertable burden associated with six leading mental, neurological and substance use conditions (anxiety disorders, depression, psychosis, bipolar disorder, epilepsy and alcohol use disorder). Intervention costs, health impacts, economic gains and return on investment were estimated for scaled-up treatment of these conditions, as well as for two population-based interventions for preventing depression, anxiety and suicide.

Main findings

Economic burden. In 2021, the total economic burden of the selected mental health conditions on the Kenyan economy was 62.2 billion KES (US$571.8 million), equivalent to 0.6% of GDP in 2020. About 90% of the economic costs were indirect costs (related to absenteeism, presenteeism and premature death), a pattern similar to that reported globally (112). Absenteeism and presenteeism costs were highest for anxiety disorders, while bipolar disorder and alcohol use disorder were the costliest mental health conditions in terms of premature death.

Costs of interventions. Implementation of the entire clinical intervention package for all six conditions would cost 81.7 billion KES (or 1717 KES per capita) over the 10-year scaling-up period, and 209.5 billion KES (or 4406 KES per capita) over the 20-year scaling-up period. Clinical interventions for bipolar disorder, psychosis and depression carried the largest estimated costs. Some of the lowest costs were associated with the pesticide ban and management of epilepsy and alcohol use disorder.

Health and economic gains. If the intervention packages are implemented over a 20-year period, more than 20 000 deaths will be avoided and about 4.3 million cases will be averted. Over the same period, approximately 1.6 million additional years of healthy life are expected. The greatest health impacts (over 20 years) were observed for interventions targeting depression (652 000 total healthy life years gained) and anxiety disorders (298 000 total healthy life years gained). The mental health packages resulted in a net present value of 61 billion KES in productivity gains over 10 years, which would accrue to almost 250 billion KES over 20 years.

Return on investment. Considering productivity gains only, a benefit–cost ratio greater than one at 20 years was observed for interventions targeting anxiety disorders, depression, alcohol use disorder, epilepsy and pesticides. For 1 KES invested in the package of interventions, the expected return is highest for epilepsy at 4.5, followed by 2.9 for the pesticide ban, 2.3 for alcohol use disorder, 2.2 for depression and 2.1 for anxiety disorder. Incorporating the social value of health

resulted in an increased benefit–cost ratio for all the intervention packages at 20 years. In addition, the benefit-cost ratio for all intervention packages increased to 3.0 over the same period. Overall, the intervention packages provide economic benefits in terms of productivity gains and the social value of health (625.8 billion KES) that would significantly outweigh the costs of implementation over a 20-year period (209.5 billion KES).

ESTIMATED HEALTH IMPACT

ALL INTERVENTION PACKAGES	10 years 2021–2031	20 years 2021–2041
MENTAL HEALTH CONDITIONS AVERTED	920 000	4.3 million
LIVES SAVED	5300	24 000
HEALTHY LIFE-YEARS GAINED	354 000	1.6 million

PRODUCTIVITY GAINS FROM INVESTMENT IN SCALED UP TREATMENT OF THE MOST COMMON MENTAL, NEUROLOGICAL AND SUBSTANCE USE CONDITIONS

SCALED UP TREATMENT OF:	Total cost (KES million) 10 YEARS	Total cost (KES million) 20 YEARS	10 years ROI FOR EVERY KES INVESTED	20 years ROI FOR EVERY KES INVESTED	10 years ROI INCLUDING SOCIAL VALUE OF HEALTH	20 years ROI INCLUDING SOCIAL VALUE OF HEALTH
EPILEPSY	3718	9117	1.7	3.5	5.5	10.1
ANXIETY DISORDER	8012	25 482	0.4	1.1	2.3	3.8
DEPRESSION	12 947	39 189	0.8	1.2	4.0	5.1
ALCOHOL USE DISORDER	4188	12 466	0.5	1.3	1.3	2.7

Recommendations

The results of the investment case confirm the large impact mental health conditions have on the Kenyan economy. Most importantly, they indicate the health and economic benefits to be reaped from investing in a selected number of evidence-based interventions for six priority conditions. In order to reduce the adverse consequences of mental health conditions and increase people's mental health, well-being, life expectancy and quality of life, while simultaneously reducing national productivity losses, Kenya can take the following actions to translate the projected benefits of scaled-up mental health investment into policy and practice.

1 Strengthen mental health legislation, governance and leadership

Kenya needs to make the necessary legislative changes to strengthen mental health governance and oversight. The government ought to support on-going efforts aimed at amending the mental health act as well as repealing section 226 of the penal code which criminalises suicide attempt. Strong leadership and oversight are required at both the national and county level to effectively tackle the growing mental health burden in Kenya. For this reason, mental health must have its own leadership structure at both the county and national level. The Kenya Mental Health Action Plan 2021–2025 identifies establishing county mental health councils and coordinators, as well as sub-county mental health focal points and ward mental health committees as a priority action. This should be pursued to strengthen mental health governance and leadership at the grassroots level.

2 Prioritize mental health action and improve mental health financing

Currently, mental health financing in Kenya is limited and most funds at the national level are allocated to administrative work and operations at one specialised mental health hospital. There is no specific budget for mental health in most counties. Furthermore, those directly involved in providing mental health services rarely have influence over budget allocation. The Kenya Mental Health Action Plan requires that the national and county governments progressively increase budgetary allocation for mental health and this ought to be implemented. Kenya should increase financing for mental health at the national level and counties should have separate budgets for mental health. Mental health stakeholders should be consulted during

the budgeting process. Kenya should also ensure that the expansion of the NHIF and UHC includes essential mental health inpatient and outpatient services, covering costs of service delivery as well as medicines.

The Ministry of Health can provide guidance to counties on the allocation for mental health. Specific budgetary allocations should also be made to fund preventive and promotion activities, as there is currently little focus on these. The Ministry of Health can assist counties in creating costed mental health plans that are aligned with the Kenya Mental Health Action Plan 2021–2025. The Government could also consider increasing excise taxes on tobacco, alcohol and other health-harming products to increase mental health budgets, as well as earmarking additional revenue for health.

3 Strengthen mental health systems and improve access to affordable, quality mental health care

The lack of trained mental health professionals severely limits access to affordable, quality mental health care in Kenya. Currently, only 14 county hospitals have a functional mental health unit and 75% of Kenyans are not able to access mental health care despite the significant burden of mental health conditions. A number of steps can help address this.

- Invest in and prioritize community-based mental health services by:
  - » setting up day care or drop-in services, home-based services, crisis centres, etc. in the community (i.e. outside of health facilities), that offer support for persons with mental health conditions;
  - » training community health workers and peers to offer evidence-based support for persons with mental health conditions using the mhGAP.
- Integrate mental health care into all levels of the health system in Kenya including primary health care, by:
  - » building the capacity of health care workers at all levels to identify, treat and follow up people with mental and neurological conditions, e.g. using the mhGAP; training curricula for health workers should include modules on mental health;
  - » investing in strategies to increase the numbers of specialist mental health service providers such as: offering incentives to encourage training in psychiatry, employment of psychologists into the public sector (many psychologists graduate annually from local universities);

  - » ensuring that mental health inpatient and outpatient services are provided at all levels of the health system;
  - » integrating mental health into other health services and existing programmes, such as HIV, NCDs, and maternal and child health.
- Ensure that the infrastructure and services offered are aligned with WHO QualityRights standards.
- Capitalize on the use of technology and mHealth to expand coverage, particularly to hard-to-reach populations. Several studies have shown feasibility of mHealth interventions for delivering mental health interventions in Kenya (8). Given the high mobile phone coverage, toll-free lines are an opportunity. Basic information and self-help content could also be provided via SMS and interactive voice response (IVR) platforms.
- Implement multisectoral mental health prevention and promotion interventions, for example, through schools and workplaces.
- Improve access to cost-effective essential medicine, equipment, and technologies. Strengthen the Kenya Medical Supplies Authority (KEMSA) to ensure an adequate and consistent supply of quality drugs for mental health facilities in Kenya.
- Strengthen research and surveillance to increase understanding of mental health conditions in Kenya and inform decision-making, including budgetary allocation.

4 Invest in the evidence-based, cost-effective clinical and population-based mental health interventions modelled in the investment case

Kenya can scale up basic and intensive psychosocial, psychiatric and neurological treatment for the most common mental health and neurological conditions, such as anxiety, depression and epilepsy. As evidenced by the economic analysis, the intervention packages to address these common conditions provide not only important health benefits, but also significant returns on investment. Implementing a nationwide regulatory ban of highly hazardous pesticides to prevent suicide and scaled-up treatment interventions for epilepsy and depression have the highest estimated cost-benefit ratios.

Even though economic return is important, it should not be the only consideration. For example, interventions targeting bipolar disorder are costly because of the requirement for care and support, but have the greatest potential to save lives of all the modelled packages. The ROIs of the population-based mental health

interventions may also be underestimated. In the case of the universal school-based SEL intervention, only the productivity gains from reductions in premature mortality are valued as there is currently no way of calculating the net present value of future gains in productivity or employment due to improved educational outcomes among adolescents. Despite the low ROIs, these packages of interventions are crucial to meet human rights objectives and the goal of leaving no one behind.

5 Strengthen multisectoral coordination

Kenya should encourage a whole-of-government and whole-of-society approach to mental health. Mental health should be integrated and mainstreamed across all relevant sectors, including education, criminal justice, youth, sport and social services. Mainstreaming of substance use interventions within government agencies by NACADA is an excellent example of how mental health interventions can be integrated across sectors. Strengthening coordination with the police and security personnel is necessary to improve understanding of mental health and address inequality issues, including gender-based violence. Kenya can also increase and strengthen existing partnerships with development partners. Kenya can benefit from the creation of coordination mechanisms at the national and county levels to encourage multisectoral action including non-health sectors and ensure a coordinated response to the growing mental health burden in the country.

6 Raise awareness and reduce stigma surrounding mental health in Kenya

There are low levels of understanding and knowledge about mental health in Kenya. Misconceptions and stigma surrounding mental health continue to exacerbate the burden, including by discouraging people in need of support from seeking and receiving qualified help and advice. The Government of Kenya should support and promote sensitization efforts at the community level as well as for health care workers and decision-makers, to improve understanding about mental health and combat stigma and discrimination. Kenya can also work with the media to encourage responsible reporting on issues surrounding mental health, including following WHO guidelines on responsible reporting and preventing suicide. Mental health literacy materials should be developed and circulated across all sectors, and mental health should be integrated into the curriculum in schools.

Efforts to change the conversation around mental health using mental health champions – individuals advocating for mental health and speaking out about stigma – are commendable. The Ministry of Health should continue to identify and engage mental health champions in the community to raise awareness and advocate for mental health. Kenya can also implement mass media campaigns to raise awareness around mental health, using lessons learned from previous campaigns, e.g. the campaign to reduce the stigma surrounding HIV/AIDS. In doing so, the Government should support people who have experienced such stigma and ensure their involvement at the centre of any anti-stigma programmes and campaigns.

These investments will contribute to the overall socioeconomic development of the country, with positive ripple effects across society.

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Annexes

Annex 1. Legislation and national plans that contain provisions related to mental health in Kenya

Table A1. Demographic and economic data

Legislation	Provisions related to mental health and substance use treatment and prevention
The Constitution of Kenya, 2010	• Article 43: Every person has the right to the highest attainable standard of health, which includes the right to health care services.
The Tobacco Control Act, 2007	• Mandates the government to educate the public on the adverse health consequences of tobacco. • Requires that the Ministry of Education and the Ministry of Health integrate instruction on the health consequences of tobacco use into syllabuses and health care, respectively. • Establishes a tobacco control fund, the money from which may be used for public education as well as for research, treatment and rehabilitation
The Alcoholic Drinks Control Act, 2010	• Mandates the government, NGOs and civil society to educate the public on the adverse health consequences of alcohol. • Requires that the Ministry of Education and the Ministry of Health integrate instruction on the health consequences of substance use into syllabuses and health care, respectively. • Requires that the government set up an agency, the roles of which will include research on the levels of alcohol use, promotion of rehabilitation programmes for persons dependent on alcohol, and public health education on alcohol. • Requires that the government set up an Alcoholic Drinks Control Fund (consisting of money obtained from licensing fees, fines and grants), which may be used for public education as well as for research, treatment and rehabilitation • Mandates punitive measures for being drunk and disorderly but directs that the magistrate should commit the person to treatment if they are arrested for being drunk & disorderly 3 times over a 12 month period.

Legislation	Provisions related to mental health and substance use treatment and prevention
The Narcotic Drugs and Psychotropic Substances (Control) Act, 1994	• Mandates the government, NGOs and civil society to educate the public on the adverse health consequences of narcotics and other psychoactive substances. • Requires that the Ministry of Education and the Ministry of Health integrate instruction on the health consequences posed by substances into syllabuses and health care, respectively. • Mandates that the government establishes rehabilitation centres for the treatment and rehabilitation of persons addicted to narcotic drugs or psychotropic substances. • Requires that the government sets up a rehabilitation fund to cover the capital and current expenditure relating to the rehabilitation centres. • Mandates punitive measures for substance use and possession. Provides for committal to rehabilitation for a fraction of the period of imprisonment for those found in possession if the court is satisfied that the person arrested is dependent and the substances were for personal consumption.
National Authority for the Campaign Against Drug Abuse *(NACADA) Act 2012*	• Establishes NACADA, the key functions of which are to conduct public education, facilitate development and operation of rehabilitation facilities and conduct research.
Counsellors and Psychologists Act 2014	• Provides the legal basis for counsellors and psychologists in Kenya, covering registration, regulation and professional conduct.

Policies, plans and strategies	Content related to mental health
Vision 2030	• Requires that the government implements projects and programmes to mitigate the harmful impact of substance use disorders and set up mental health centres of excellence at the national referral hospitals.
Kenya Health Policy 2014-2030 and the Kenya Health Sector Strategic Plan 2018-2023	• Halting the rising burden of NCDs and mental disorders highlighted as a health sector priority.
Kenya Primary Health Care (PHC) Strategic Framework	• Provides strategic direction for the implementation of PHC in Kenya. Recommends that PHC services include: inpatient and general outpatient management of mental disorders; a specialized mental health clinic to manage substance abuse, psychosis and neurotic conditions; health education on harmful effects of tobacco, alcohol and other substances. All of these are to be delivered in level 2, 3 and 4 health facilities, which are the focus of PHC network in Kenya.

Policies, plans and strategies	Content related to mental health
National Strategic Plan for the Prevention and Control of Non-Communicable Diseases 2021/2022–2025/2026	• The scope of NCDs includes mental disorders and the NCD risk factors, e.g. harmful alcohol use and tobacco use. • Strategic objectives relate to strengthening leadership and governance; strengthening the health system response to NCDs; enhancing advocacy and strengthening surveillance and research. • Notable key strategies: establishment of multisectoral county NCD boards; review of Alcoholic Drinks Control Act; strengthening of NCD management at primary care level; strengthening of human resources, supply chain systems and infrastructure for NCDs.
NACADA strategic plan 2019-2022	• Provides strategic direction in the area of prevention and rehabilitation services for substance use disorders.
National guidelines for provision of adolescent and youth friendly services in Kenya	• Define an essential package for adolescents that includes mental health services, counselling on substance use and stress management.
National Tobacco Control Strategic Plan 2019-2023	• Outlines strategies for reducing demand for tobacco, including ensuring access to treatment for tobacco use disorder; conducting awareness campaigns.

Annex 2. National and county specific data on human resources for mental health

Data collection tool

NAME	PERSONAL NO/ ID NO	DESIGNATION/ CADRE	JOB GROUP	AGE	GENDER	TERMS OF SERVICE	LEVEL OF HEALTHCARE SYSTEM	DEPLOYMENT/ WORK STATION

County Government Human Resource for Mental Health Data

LAIKIPIA	
Psychiatrist	1
Psychologists	1
Psychiatric nurses	0
Nurses	0
Counsellors	9
Clinical officers	0
Psychiatric clinical officers	0
Medical social workers	11
Occupational therapists	7
TOTAL	**29**

BUSIA	
Psychiatrist	0
Psychologists	9
Psychiatric nurses	8
Nurses	1
Counsellors	0
Clinical officers	0
Psychiatric clinical officers	0
Medical social workers	13
Occupational therapists	0
TOTAL	**31**

MACHAKOS	
Psychiatrist	2
Psychologists	0
Psychiatric nurses	11
Nurses	0
Counsellors	1
Clinical officers	0
Psychiatric clinical officers	4
Medical social workers	4
Occupational therapists	15
TOTAL	**37**

MAKUENI	
Psychiatrist	1
Psychologists	15
Psychiatric nurses	6
Nurses	0
Counsellors	43
Clinical officers	0
Psychiatric clinical officers	0
Medical social workers	3
Occupational therapists	13
TOTAL	**81**

MARSABIT	
Psychiatrist	0
Psychologists	2
Psychiatric nurses	1
Nurses	26
Counsellors	5
Clinical officers	1
Psychiatric clinical officers	0
Medical social workers	0
Occupational therapists	0
TOTAL	**35**

MERU	
Psychiatrist	1
Psychologists	2
Psychiatric nurses	5
Nurses	2
Counsellors	0
Clinical officers	2
Psychiatric clinical officers	0
Medical social workers	0
Occupational therapists	9
TOTAL	**21**

MIGORI	
Psychiatrist	0
Psychologists	3
Psychiatric nurses	1
Nurses	14
Counsellors	2
Clinical officers	3
Psychiatric clinical officers	1
Medical social workers	1
Occupational therapists	2
TOTAL	**27**

MOMBASA	
Psychiatrist	1
Psychologists	5
Psychiatric nurses	11
Nurses	1
Counsellors	2
Clinical officers	0
Psychiatric clinical officers	0
Medical social workers	6
Occupational therapists	20
TOTAL	**46**

MURANGA	
Psychiatrist	1
Psychologists	2
Psychiatric nurses	0
Nurses	2
Counsellors	0
Clinical officers	1
Psychiatric clinical officers	0
Medical social workers	4
Occupational therapists	10
TOTAL	**20**

NAKURU	
Psychiatrist	3
Psychologists	2
Psychiatric nurses	22
Nurses	10
Counsellors	0
Clinical officers	0
Psychiatric clinical officers	0
Medical social workers	2
Occupational therapists	1
TOTAL	**40**

NAROK	
Psychiatrist	0
Psychologists	1
Psychiatric nurses	6
Nurses	0
Counsellors	2
Clinical officers	0
Psychiatric clinical officers	0
Medical social workers	57
Occupational therapists	5
TOTAL	**71**

NANDI	
Psychiatrist	0
Psychologists	0
Psychiatric nurses	5
Nurses	0
Counsellors	0
Clinical officers	0
Psychiatric clinical officers	1
Medical social workers	13
Occupational therapists	8
TOTAL	**27**

NYANDAURA	
Psychiatrist	0
Psychologists	3
Psychiatric nurses	1
Nurses	0
Counsellors	2
Clinical officers	0
Psychiatric clinical officers	1
Medical social workers	2
Occupational therapists	3
TOTAL	**12**

NYERI	
Psychiatrist	2
Psychologists	0
Psychiatric nurses	2
Nurses	2
Counsellors	0
Clinical officers	0
Psychiatric clinical officers	1
Medical social workers	0
Occupational therapists	0
TOTAL	**7**

TAITA TAVETA	
Psychiatrist	0
Psychologists	2
Psychiatric nurses	0
Nurses	6
Counsellors	9
Clinical officers	1
Psychiatric clinical officers	0
Medical social workers	8
Occupational therapists	8
TOTAL	**34**

THARAKA NITHI	
Psychiatrist	0
Psychologists	0
Psychiatric nurses	0
Nurses	5
Counsellors	0
Clinical officers	1
Psychiatric clinical officers	0
Medical social workers	0
Occupational therapists	0
TOTAL	**6**

TRANS NZOIA	
Psychiatrist	0
Psychologists	0
Psychiatric nurses	0
Nurses	2
Counsellors	0
Clinical officers	0
Psychiatric clinical officers	0
Medical social workers	16
Occupational therapists	10
TOTAL	**28**

SIAYA	
Psychiatrist	0
Psychologists	3
Psychiatric nurses	8
Nurses	0
Counsellors	0
Clinical officers	0
Psychiatric clinical officers	0
Medical social workers	3
Occupational therapists	4
TOTAL	**18**

KERICHO	
Psychiatrist	1
Psychologists	3
Psychiatric nurses	5
Nurses	0
Counsellors	4
Clinical officers	0
Psychiatric clinical officers	2
Medical social workers	15
Occupational therapists	5
TOTAL	**35**

TANA RIVER	
Psychiatrist	0
Psychologists	2
Psychiatric nurses	1
Nurses	0
Counsellors	6
Clinical officers	0
Psychiatric clinical officers	1
Medical social workers	0
Occupational therapists	4
TOTAL	**14**

WAJIR	
Psychiatrist	0
Psychologists	0
Psychiatric nurses	0
Nurses	1
Counsellors	0
Clinical officers	2
Psychiatric clinical officers	0
Medical social workers	0
Occupational therapists	0
TOTAL	**3**

WEST POKOT	
Psychiatrist	0
Psychologists	3
Psychiatric nurses	2
Nurses	4
Counsellors	0
Clinical officers	5
Psychiatric clinical officers	0
Medical social workers	6
Occupational therapists	2
TOTAL	**22**

KITUI	
Psychiatrist	0
Psychologists	0
Psychiatric nurses	8
Nurses	0
Counsellors	0
Clinical officers	0
Psychiatric clinical officers	1
Medical social workers	11
Occupational therapists	13
TOTAL	**33**

KISII	
Psychiatrist	2
Psychologists	3
Psychiatric nurses	5
Nurses	1
Counsellors	0
Clinical officers	2
Psychiatric clinical officers	4
Medical social workers	0
Occupational therapists	0
TOTAL	**17**

BOMET	
Psychiatrist	0
Psychologists	7
Psychiatric nurses	1
Nurses	1
Counsellors	0
Clinical officers	0
Psychiatric clinical officers	0
Medical social workers	0
Occupational therapists	0
TOTAL	**9**

VIHIGA	
Psychiatrist	0
Psychologists	2
Psychiatric nurses	2
Nurses	0
Counsellors	0
Clinical officers	0
Psychiatric clinical officers	0
Medical social workers	0
Occupational therapists	0
TOTAL	**4**

ELGEYO MARAKWET	
Psychiatrist	3
Psychologists	2
Psychiatric nurses	3
Nurses	3
Counsellors	0
Clinical officers	0
Psychiatric clinical officers	0
Medical social workers	0
Occupational therapists	0
TOTAL	**11**

HOMABAY	
Psychiatrist	0
Psychologists	3
Psychiatric nurses	3
Nurses	5
Counsellors	0
Clinical officers	1
Psychiatric clinical officers	0
Medical social workers	16
Occupational therapists	3
TOTAL	**31**

ISIOLO	
Psychiatrist	1
Psychologists	0
Psychiatric nurses	5
Nurses	0
Counsellors	0
Clinical officers	0
Psychiatric clinical officers	1
Medical social workers	2
Occupational therapists	2
TOTAL	**11**

KAJIADO	
Psychiatrist	1
Psychologists	2
Psychiatric nurses	1
Nurses	3
Counsellors	1
Clinical officers	0
Psychiatric clinical officers	0
Medical social workers	1
Occupational therapists	0
TOTAL	**9**

KAKAMEGA	
Psychiatrist	1
Psychologists	2
Psychiatric nurses	0
Nurses	3
Counsellors	121
Clinical officers	0
Psychiatric clinical officers	0
Medical social workers	3
Occupational therapists	10
TOTAL	**140**

KIAMBU	
Psychiatrist	3
Psychologists	4
Psychiatric nurses	16
Nurses	5
Counsellors	2
Clinical officers	1
Psychiatric clinical officers	4
Medical social workers	20
Occupational therapists	19
TOTAL	**74**

KILIFI	
Psychiatrist	0
Psychologists	2
Psychiatric nurses	0
Nurses	4
Counsellors	1
Clinical officers	0
Psychiatric clinical officers	1
Medical social workers	4
Occupational therapists	8
TOTAL	**20**

KIRINYAGA	
Psychiatrist	1
Psychologists	2
Psychiatric nurses	4
Nurses	0
Counsellors	0
Clinical officers	1
Psychiatric clinical officers	0
Medical social workers	1
Occupational therapists	1
TOTAL	**10**

KISUMU	
Psychiatrist	1
Psychologists	5
Psychiatric nurses	6
Nurses	2
Counsellors	3
Clinical officers	1
Psychiatric clinical officers	2
Medical social workers	6
Occupational therapists	26
TOTAL	**52**

UASIN GISHU	
Psychiatrist	0
Psychologists	3
Psychiatric nurses	4
Nurses	0
Counsellors	0
Clinical officers	0
Psychiatric clinical officers	0
Medical social workers	20
Occupational therapists	7
TOTAL	**34**

KWALE	
Psychiatrist	1
Psychologists	5
Psychiatric nurses	5
Nurses	5
Counsellors	5
Clinical officers	0
Psychiatric clinical officers	1
Medical social workers	0
Occupational therapists	1
TOTAL	**23**

NAIROBI	
Psychiatrist	3
Psychologists	14
Psychiatric nurses	9
Nurses	1
Counsellors	1
Clinical officers	0
Psychiatric clinical officers	6
Medical social workers	35
Occupational therapists	35
TOTAL	**104**

NYAMIRA	
Psychiatrist	0
Psychologists	0
Psychiatric nurses	2
Nurses	0
Counsellors	0
Clinical officers	0
Psychiatric clinical officers	2
Medical social workers	0
Occupational therapists	0
TOTAL	**4**

LAMU	
Psychiatrist	0
Psychologists	1
Psychiatric nurses	3
Nurses	0
Counsellors	0
Clinical officers	0
Psychiatric clinical officers	1
Medical social workers	4
Occupational therapists	0
TOTAL	**9**

MANDERA	
Psychiatrist	0
Psychologists	1
Psychiatric nurses	4
Nurses	0
Counsellors	0
Clinical officers	0
Psychiatric clinical officers	0
Medical social workers	1
Occupational therapists	3
TOTAL	**9**

EMBU	
Psychiatrist	0
Psychologists	0
Psychiatric nurses	2
Nurses	1
Counsellors	0
Clinical officers	0
Psychiatric clinical officers	0
Medical social workers	21
Occupational therapists	10
TOTAL	**34**

SAMBURU	
Psychiatrist	0
Psychologists	6
Psychiatric nurses	4
Nurses	0
Counsellors	12
Clinical officers	0
Psychiatric clinical officers	0
Medical social workers	14
Occupational therapists	1
TOTAL	**37**

GARISSA	
Psychiatrist	0
Psychologists	1
Psychiatric nurses	4
Nurses	0
Counsellors	0
Clinical officers	0
Psychiatric clinical officers	1
Medical social workers	2
Occupational therapists	1
TOTAL	**9**

BARINGO	
Psychiatrist	0
Psychologists	4
Psychiatric nurses	3
Nurses	3
Counsellors	10
Clinical officers	3
Psychiatric clinical officers	2
Medical social workers	3
Occupational therapists	2
TOTAL	**30**

BUNGOMA	
Psychiatrist	0
Psychologists	2
Psychiatric nurses	6
Nurses	0
Counsellors	1
Clinical officers	1
Psychiatric clinical officers	2
Medical social workers	3
Occupational therapists	0
TOTAL	**15**

TURKANA	
Psychiatrist	0
Psychologists	1
Psychiatric nurses	6
Nurses	0
Counsellors	0
Clinical officers	1
Psychiatric clinical officers	0
Medical social workers	1
Occupational therapists	0
TOTAL	**9**

Summary of the number of mental health care workers within the 47 counties	
Psychiatrist	30
Psychologists	130
Psychiatric nurses	201
Nurses	113
Counsellors	242
Clinical officers	27
Psychiatric clinical officers	39
Medical social workers	332
Occupational therapists	268
TOTAL	**1382**

National Government Human Resource for Mental Health Data

Ministry Of Health Headquarters	
Psychiatrist	1
Psychologists	0
Psychiatric nurses	3
Nurses	0
Counsellors	0
Clinical officers	0
Psychiatric clinical officers	0
Medical social workers	3
Occupational therapists	4
Global Mental Health specialist	1
TOTAL	**12**

Kenyatta National Hospital (KNH)	
Psychiatrist	5
Psychologists	14
Psychiatric nurses	0
Nurses	48
Counsellors	1
Clinical officers	0
Psychiatric clinical officers	0
Medical social workers	1
Occupational therapists	2
Global Mental Health specialist	0
TOTAL	**71**

Kenyatta University Teaching, Referral & Research Hospital (KUTRRH)	
Psychiatrist	1
Psychologists	0
Psychiatric nurses	3
Nurses	0
Counsellors	5
Clinical officers	0
Psychiatric clinical officers	0
Medical social workers	3
Occupational therapists	0
Global Mental Health specialist	0
TOTAL	**12**

Mathari National Teaching & Referral Hospital	
Psychiatrist	12
Psychologists	27
Psychiatric nurses	125
Nurses	0
Counsellors	0
Clinical officers	0
Psychiatric clinical officers	0
Medical social workers	4
Occupational therapists	11
Global Mental Health specialist	0
TOTAL	**179**

Moi Teaching & Referral Hospital (MTRH)	
Psychiatrist	4
Psychologists	3
Psychiatric nurses	13
Nurses	14
Counsellors	26
Clinical officers	4
Psychiatric clinical officers	0
Medical social workers	4
Occupational therapists	8
Global Mental Health specialist	0
TOTAL	**76**

National Spinal Injury Hospital	
Psychiatrist	0
Psychologists	0
Psychiatric nurses	0
Nurses	0
Counsellors	0
Clinical officers	0
Psychiatric clinical officers	0
Medical social workers	2
Occupational therapists	2
Global Mental Health specialist	0
TOTAL	**4**

Summary for mental health care workers within National Government	
Psychiatrist	23
Psychologists	44
Psychiatric nurses	144
Nurses	62
Counsellors	21
Clinical officers	4
Psychiatric clinical officers	0
Medical social workers	17
Occupational therapists	27
Global Mental Health specialist	1
TOTAL	**354**

Annex 3. Overview of medicines for mental health conditions included in the WHO and Kenyan Essential Medicine Lists of 2019

Category of psychotropics	WHO essential medicine list 2019	Kenya Essential Medicine List 2019
Medicines for mental and behavioural disorders	chlorpromazine, fluphenazine haloperidol, clozapine, amitriptyline, fluoxetine, carbamazepine, lithium, valproate, diazepam, clomipramine	aripiprazole, flupentixol, chlorpromazine, fluphenazine haloperidol, clozapine, amitriptyline, fluoxetine, carbamazepine, lithium, valproate, diazepam, clomipramine, midazolam, olanzapine, paliperidone, quetiapine, zuclopenthixol, escitalopram, mirtazapine, bromazepam
Medicines for Alzheimer disease and dementia	none	donepezil, memantine
Medicines for substance use disorders	nicotine replacement therapy, methadone	vitamin B, bupropion, buprenorphine, buprenorphine/ naloxone, naltrexone, methadone, nicotine replacement therapy

Annex 4. Budgetary allocation for mental health at national level (KES)

Description	FY 2020–21	FY 2021–22
Division of Mental Health		
Recurrent	124 804 239	26 483 878
Kenya Board of Mental Health		
Recurrent	6 196 576	106 789 356
Mathari National Teaching and Referral Hospital		
Recurrent	1 199 176 953	1 199 000 000
Development	35 000 000	200 000 000
Total	**1 365 177 768**	**1 532 273 234**

Annex 5. Mental health data collection tools

Mental health data are generally captured in the following tools on the Kenyan health information system.

- The general outpatient morbidity registers for under 5 years (MoH 705A) and over 5 years (MoH 705B) (Number of patients with mental health disorders seen as outpatients)
- The service workload report (MOH 717) (Psychiatry clinic attendance).
- Integrated summary report (MOH 711):
  - » psychosocial counselling;
  - » alcohol and drug abuse;
  - » mental illness;
  - » adolescent issues;
  - » psychosocial assessments (psychological, social and economic);
  - » social investigations (home visits, follow-ups);
  - » psychosocial rehabilitation;
  - » outreach services, health talks;
  - » mental health referrals.
- Inpatient morbidity and mortality (MOH 718):
  - » mental and behavioural disorders due to psychoactive substance use;
  - » remainder of mental and behavioural disorders.
- Community health reporting tool (MoH 515) (Number of persons with mental Illness referred by CHVs).
- The AWP monthly service delivery report (Number of new outpatients with mental health conditions).
- Hospital administrative statistics (Number of patients in psychiatry wards).
- NCD facility commodity data report (NCD FCDR-MOH 647B) (Tracks commodity data for select medicines for mental health and neurological disorders. The tool has just been launched with pilot-tests in 3 counties.)

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REPUBLIC OF KENYA

MINISTRY OF HEALTH

UN INTERAGENCY TASK FORCE ON NCDs

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