# Investing in the future: How better mental health benefits everyone

By Brad Herbig, Erica Coe and Kana Enomoto with Pooja Tatwawadi

Mental and substance use disorders are on the rise, alongside other noncommunicable diseases. Investing in mental health interventions could help individuals reclaim years of healthy life and boost the global economy by up to \$4.4 trillion in 2050.

#### At a glance

- Despite contributing to a substantial 290 million disability-adjusted life years (DALYs) of the global disease burden, mental health conditions (which include mental and substance use disorders) only receive 2 percent of domestic government healthcare funding globally, resulting in an annual funding gap of \$200 billion to \$350 billion.
- Scaling known, cost-effective interventions to prevent, treat, and help people recover from mental health conditions<sup>1</sup> could avert 150 million DALYs globally in 2050.
- Each \$1 invested in scaling mental health interventions could have an economic return of \$5 to \$6.

**Noncommunicable diseases (NCDs),** such as cancer, depression, diabetes, and heart disease, have emerged as a formidable challenge to global health, representing a substantial shift from the infectious disease paradigm that dominated much of the 20th century. NCDs cause 76 percent of deaths globally, and their burden has been steadily rising at 1.3 percent annually over the past few decades.<sup>2</sup> Yet within this crisis lies an underappreciated opportunity for transformative change: investing in mental health.

Mental health conditions<sup>3</sup> contribute to 290 million disability-adjusted life years (DALYs), but they only receive approximately 2 percent spending on healthcare by governments around the world.<sup>4</sup> Addressing the \$200 billion to \$350 billion mental health investment gap can

<sup>&</sup>lt;sup>1</sup> In this research, the term "mental health conditions" includes both mental and substance-use disorders.

<sup>&</sup>lt;sup>2</sup> Global Burden of Disease 2021, Institute for Health Metrics and Evaluation.

<sup>&</sup>lt;sup>3</sup> In this research, the term "mental health conditions" includes both mental and substance-use disorders.

<sup>&</sup>lt;sup>4</sup> "Financing Mental Health: Current Status and Future Prospects," United for Global Mental Health. The analysis compared countries' mental health budgets with the Lancet Commission on Global Mental Health and Sustainable Development's recommendations: to allocate at least 5 percent of

have a transformative potential on the global NCD epidemic and economy.<sup>5</sup> McKinsey Health Institute (MHI) analysis finds that implementing and scaling proven mental health interventions globally by 2050 by 2050 could reduce direct and indirect mental health disease burden by over 40 percent. Furthermore, every dollar invested in expanding these interventions has the potential to generate an economic return of \$5 to \$6 in GDP growth globally.

Over the past 15 years, the United Nations General Assembly has convened three High-Level Meetings on the Prevention and Control of NCDs, with another scheduled for September 2025. The latest of these meetings, held in 2018, recognized mental health conditions as exacerbating the NCD crisis both directly and indirectly. Mental health conditions are the leading contributors to the global morbidity burden measured in years lived with disability (YLDs) and are on par with cardiovascular and circulatory diseases when measured by DALYs. Those with mental health conditions can face reduced life expectancy. Data makes the case clear: Individuals with mental health conditions experience significantly worse outcomes from NCDs compared with those without such conditions, compounding the overall disease burden. For example, people with depression are up to four times more likely to experience and die from cardiac-related problems than those without depression.

By 2050, scaling cost-effective, evidence-based mental health interventions could reduce the mental health disease burden by over 40 percent, or 150 million DALYs. This investment could also add 1.1 years to healthy life expectancy<sup>10</sup> and contribute up to \$4.4 trillion to the global economy in 2050. The profound influence of mental health conditions on the progression and management of NCDs highlights the urgent need for increased investment in cost-effective mental health interventions, both to improve access to current treatments and to drive innovation in developing even more affordable solutions.

Behind every dollar invested, there is a person with a mental health condition whose life could become healthier. But investing in mental health is more than a way to improve individual lives; it's a strategic economic move to reduce the global NCD and mental health

healthcare budgets to mental health in low- and middle-income countries and 10 percent in high-income countries.

<sup>&</sup>lt;sup>5</sup> \$350 billion gap per McKinsey Health Institute analysis of scaling mental health interventions, using an aspirational assumption to reach 90 percent of those in need in 2025.

<sup>&</sup>lt;sup>6</sup> For more, see *Political declaration of the third high-level meeting of the General Assembly on the prevention and control of noncommunicable diseases*, United Nations, 2018.

<sup>&</sup>lt;sup>7</sup> Daniel Vigo et al., "Estimating the true global burden of mental illness," *Lancet Psychiatry*, Volume 3, Issue 2.

<sup>&</sup>lt;sup>8</sup> Although suicide is an important cause of premature mortality in people with mental disorders, their excess deaths are mainly attributed to physical diseases. For more, see FJ Charlson et al., "Excess mortality from mental, neurological and substance use disorders in the Global Burden of Disease Study 2010," *Epidemiology and Psychiatric Sciences*, April 2015, Volume 24, Number 2. Chan, Joe Kwun Nam et al. "Life expectancy and years of potential life lost in people with mental disorders: a systematic review and meta-analysis," *eClinicalMedicine*, Volume 65, 102294.

<sup>&</sup>lt;sup>9</sup> "Depression and History of Attempted Suicide as Risk Factors for Heart Disease Mortality in Young Individuals," *JAMA Psychiatry*, 2005.

<sup>&</sup>lt;sup>10</sup> As measured by health-adjusted life expectancy at birth (HALE).

burden, extend healthy lifespans, and unlock substantial financial benefits. The following insights shed light on this critical, underappreciated opportunity to invest in mental health as a strategy for global health and economic growth.

# Mental health conditions exceed the leading NCDs in morbidity burden

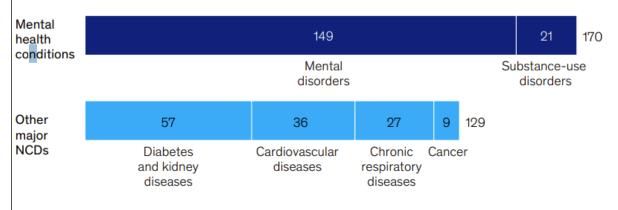
In 2025, the total burden from mental health conditions stands at approximately 183 million DALYs. The majority of this burden, amounting to 170 million DALYs, is attributed to morbidity, measured in YLDs.<sup>11</sup> When comparing this burden with other NCDs, the morbidity from mental health conditions is considerably higher than that of the four leading non-mental-health diseases, which include cardiovascular diseases, chronic respiratory diseases, diabetes and kidney diseases, and cancers, combined.<sup>12</sup> This means that mental health conditions cause more years of poor health globally than the four major NCDs do.

[Exhibit 1: While diabetes, cardiovascular, and respiratory diseases account for more deaths, mental health conditions contribute to more years of life lived with disability.]

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While other noncommunicable diseases, such as diabetes, account for more deaths, mental health conditions account for more years lived with disability.

Years lived with disability (YLDs) for mental health conditions vs 4 other major noncommunicable diseases (NCDs), millions of YLDs as of 2025



Mental and substance-use disorders.

Source: "Burden of disease scenarios for 204 countries and territories, 2022–2050: A forecasting analysis for the Global Burden of Disease Study 2021," Lancet, Dec 2024, Volume 404, Number 10,469; Global Burden of Disease study 2021: Findings from the GBD 2021 study, Institute for Health Metrics and Evaluation, May 16, 2024

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<sup>&</sup>lt;sup>11</sup> Global Burden of Disease 2021, Institute for Health Metrics and Evaluation. Data shown for 2025 to 2050 are projections from Stein Emil Vollset et al., 2024, "Burden of disease scenarios for 204 countries and territories, 2022–2050: a forecasting analysis for the Global Burden of Disease Study 2021."

<sup>&</sup>lt;sup>12</sup> Global Burden of Disease 2021, Institute for Health Metrics and Evaluation.

## Mental health conditions increase the risk for and exacerbate other NCDs

In 2025, the total disease burden from NCDs is estimated to reach approximately 1.8 billion DALYs. Mental health conditions contribute meaningfully to this burden, accounting for 290 million DALYs—183 million directly and 107 million indirectly from their exacerbation of other NCDs. Means that roughly one in six DALYs from NCDs can be attributed to mental health conditions. The indirect burden encompasses the effects of pre-existing mental health conditions that increase the likelihood and severity of other NCDs. For instance, depressive disorders increase the risk of cardiovascular diseases by three times and digestive system diseases by more than four times. Depressive disorders can make it harder for an individual to sleep well, exercise, quit smoking, or prioritize other well-being measures that could reduce the risk developing another chronic disease.

As another example, research shows that substance use disorders greatly increase the risk of NCDs. Alcohol use alters the gut microbiome, enabling toxins to enter the bloodstream and increasing the risk of seven types of cancer. Of the three million alcohol-related deaths that occur every year, more than half are due to NCDs like cancer, digestive diseases, and cardiovascular diseases.

These examples underscore the interconnectedness of mental health conditions and other NCDs, emphasizing the importance of integrated strategies to address these conditions effectively.

[Exhibit 2: Mental health conditions directly and indirectly contribute to the total NCD burden]

<sup>&</sup>lt;sup>13</sup> Global Burden of Disease 2021, Institute for Health Metrics and Evaluation, used with permission; all rights reserved. Data shown for 2025 to 2050 are projections from Stein Emil Vollset et al., 2024, "Burden of disease scenarios for 204 countries and territories, 2022–2050: a forecasting analysis for the Global Burden of Disease Study 2021."

<sup>&</sup>lt;sup>14</sup> Associated burden is calculated by 1) Identifying an estimate of the additional relative risk for people with a prior mental health condition diagnosis, 2) Calculating the population attributable fraction (PAF) for that condition pair, and 3) Applying this PAF to the disease burden for the relevant non-mental health NCDs.

<sup>&</sup>lt;sup>15</sup> Xin Han, et al., "Disease trajectories and mortality among individuals diagnosed with depression: a community-based cohort study in UK Biobank," *Molecular Psychiatry*, Volume 26, May 2021.

<sup>&</sup>lt;sup>16</sup> Carrie Daniel-MacDougall, "How does alcohol affect the microbiome?" The University of Texas MD Anderson Center, April 11, 2024.

<sup>&</sup>lt;sup>17</sup> "Alcohol use," NCD Alliance, accessed March 2025.

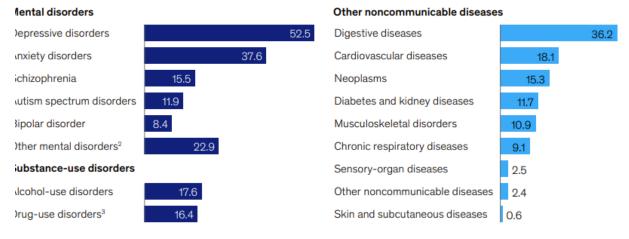
<sup>&</sup>lt;sup>18</sup> Other mental disorders include conduct disorders, idiopathic development intellectual disability, eating disorders, attention deficit/hyperactivity disorder, and other mental disorders.

<sup>&</sup>lt;sup>19</sup> Drug use disorders include cannabis use disorders, cocaine use disorders, opioid use disorders, amphetamine use disorders, and other drug use disorders.

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## Mental health conditions directly and indirectly contribute to the total noncommunicable disease burden.

'rimary disease burden of mental health onditions,¹ millions of disability-adjusted life ears (DALYs) as of 2025 Associated disease burden of mental health conditions, millions of DALYs as of 2025



Note: Figures may not sum to totals listed in related article, because of rounding. Mental and substance-use disorders.

Attention deficit hyperactivity disorder, conduct disorders, eating disorders, idiopathic development intellectual disability, and other mental disorders. Cannabis-, cocaine-, opioid-, amphetamine-, and other drug-use disorders.

Source: Global Burden of Disease study 2021: Findings from the GBD 2021 study, Institute for Health Metrics and Evaluation, May 16, 2024

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## Opportunity to intervene early with mental health conditions

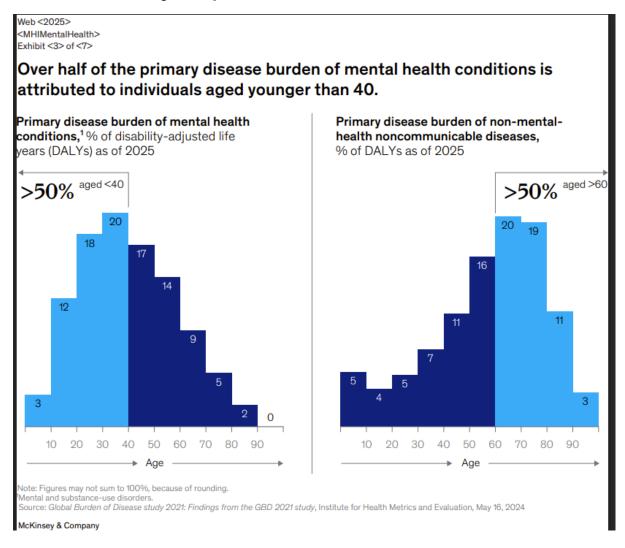
Many NCDs, such as cardiovascular disease, typically develop and worsen in older age, as evidenced by nearly half of the disease burden occurring in populations aged 60 and older. Mental health conditions are the opposite: More than half of the mental health disease burden affects individuals who are under 40 years old. This highlights the importance of early intervention for mental health conditions, which can not only improve immediate outcomes for health and workforce productivity but also set individuals up for better health throughout their lifespan.

There are also sex-based differences in disease burden from mental health conditions. Almost 80 percent of substance use disorder deaths are among men, underscoring the broader crisis of deaths of despair—suicide, drug overdoses, and alcohol-related diseases—which disproportionately impact men worldwide. Meanwhile, although women experience a lower overall burden from mental health conditions compared with men, they lose substantially more years to disability from mental disorders such as anxiety and depression,

<sup>&</sup>lt;sup>20</sup> Global Burden of Disease 2021, Institute for Health Metrics and Evaluation, used with permission; all rights reserved. Burden without intervention for 2025-2050 are projections from Stein Emil Vollset et al., 2024, "Burden of disease scenarios for 204 countries and territories, 2022–2050: a forecasting analysis for the Global Burden of Disease Study 2021."

leading to lower quality of life. These disparities underscore the importance of considering sex-specific approaches when addressing the mental-health-related NCD burden.

[Exhibit 3: Over half of the disease burden from mental health conditions is attributed to individuals under the age of 45]



# Scaling mental health interventions adds substantially to healthy life expectancy

On the current trajectory, the global burden of mental health conditions is projected to reach 365 million DALYs by 2050. However, implementing proven mental health interventions at scale could radically reduce this burden. By scaling interventions such that 90 percent of affected individuals receive the evidence-based services and support they need (in alignment with The Kennedy Forum's 90-90-90 aspirational goals<sup>21</sup>), the mental health

<sup>&</sup>lt;sup>21</sup> These goals are that 90 percent of individuals would be screened for mental health conditions or substance use disorders; 90 percent would receive evidence-based services and supports, and 90 percent of those treated would be able to manage their symptoms and achieve recovery. For more, see "Alignment for Progress Goals for 2033: 90-90-90," The Kennedy Forum.

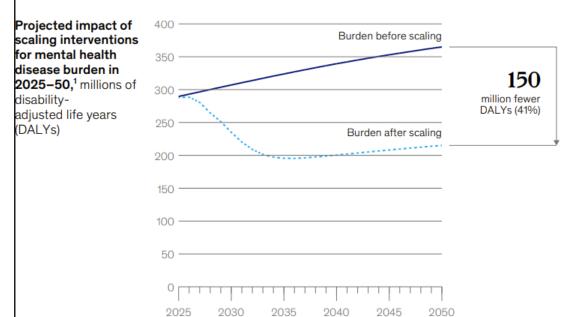
disease burden could be reduced by approximately 41 percent or 150 million DALYs, preventing 1.6 million deaths in 2050.

Advancements in healthcare and technology are leading to longer lifespans, with life expectancy projected to increase by nearly five years over the next 25 years. However, longer lives do not necessarily mean that people will spend all those years in good health. Expanding access to evidence-based mental health interventions could not only improve overall lifespan but also increase healthspan - the number of years of life lived in good health. By 2050, these interventions could increase average life expectancy by three months and health-adjusted life expectancy by 1.1 years per person—similar to the global impact of eliminating obesity.

[Exhibit 4: Scaling mental health interventions could avert 150 million DALYs and add 1.1 years to healthy life expectancy in 2050]

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#### Scaling mental health interventions could avert 150 million disabilityadjusted life years by 2050.



Based on 1.2 years of HALE change associated with removing all high-BMI-associated disease burden globally.
Source: Global Burden of Disease study 2021: Findings from the GBD 2021 study, Institute for Health Metrics and Evaluation, May 16, 2024

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<sup>&</sup>lt;sup>22</sup> Stein Emil Vollset et al., "Burden of disease scenarios for 204 countries and territories, 2022–2050: a forecasting analysis for the Global Burden of Disease Study 2021," *The Lancet*, May 18, 2024, Volume 403, Issue 10440.

## Scaling proven and cost-effective mental health interventions can bridge access gaps

Among the evidence-based, cost-effective interventions examined,<sup>23</sup> therapeutic interventions account for over 82 percent of the potential impact by 2050.<sup>24</sup> Expanding access to established treatments such as psychotherapy and psychiatric medications—which alone could avert nearly 80 million DALYs—will be key to reducing the global mental health disease burden. Additionally, emerging therapeutic options such as digital therapies<sup>25</sup> are gaining recognition for their accessibility and effectiveness,<sup>26</sup> particularly in low-resource settings.

Scaling these interventions will require substantial investment to address access and cost barriers to treatment. However, current funding for mental health conditions remains severely inadequate. Multiple expert groups, including The Lancet Commission on Global Mental Health and Sustainable Development, United for Global Mental Health (UGMH), and the Coalition for Mental Health Investment (CMHI), have reached the same conclusion that mental health interventions are systematically underfunded, undermining their potential impact.

[Exhibit 5: Therapeutic mental health interventions, combined with health promotion and prevention strategies, will be essential for reducing the rising disease burden by 150 million DALYs]

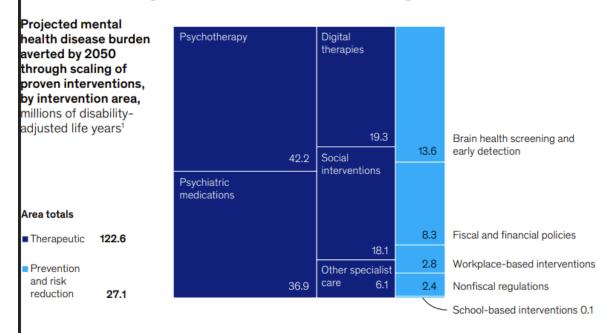
<sup>&</sup>lt;sup>23</sup> Proven interventions recommended in international guidelines and national clinical practice guidelines, assessed for relative cost-effectiveness in each income setting examined using World Bank income archetypes and reviewed by experts in the relevant field, including over 70 interventions across approximately 100 papers. It's important to note that while this analysis includes several health promotion and prevention interventions such as weight management, it doesn't comprehensively cover interventions addressing broader socioeconomic challenges (for example, food insecurity). These interventions will have cascading impacts on the mental health and NCD burden and are essential cost-effective solutions for addressing root causes and preventing disease at a population level.

<sup>&</sup>lt;sup>24</sup> It's important to acknowledge that while health promotion and prevention strategies likely offer a viable opportunity to reduce disease burden, the MHI model doesn't fully capture this due to limited robust evidence on these interventions. Since our model is grounded in published clinical studies, therapeutic interventions appear to play an outsized role, reflecting the abundance of research available in this area.

<sup>&</sup>lt;sup>25</sup> Examples include internet-based cognitive behavioral therapy, digital peer support communities, gamified interventions, mental health applications

<sup>&</sup>lt;sup>26</sup>Kathleen Kara Fitzpatrick et al., "Delivering cognitive behavior therapy to young adults with symptoms of depression and anxiety using a fully automated conversational agent (Woebot): A randomized controlled trial," *JMIR Mental Health*, April–June 2017, Volume 4, Number 2.

## Therapeutic mental health interventions, combined with prevention and risk reduction strategies, will be essential for reducing disease burden.



Based on 1.2 years of change in health-adjusted life expectancy associated with removing all globally estimated disease burden related to high body mass index. Source: Global Burden of Disease study 2021: Findings from the GBD 2021 study, Institute for Health Metrics and Evaluation, May 16, 2024

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#### Mental health interventions can be scaled cost-effectively

Based on a review of high-quality peer-reviewed studies on intervention costs, which included approximately 140 estimates across over 30 countries, cost-effective mental health interventions on average cost \$800 per DALY in low- and lower-middle-income countries and \$6,800 per DALY in upper-middle- and high-income countries, resulting in a global average of \$4,300 per DALY.<sup>27</sup> If mental health interventions were scaled to reach 90 percent of those in need today, it would require a global investment of \$350 billion in 2025.<sup>28</sup>

<sup>&</sup>lt;sup>27</sup> Based on cost per DALY analysis of approximately 140 estimates, with interventions defined as cost-effective based on WHO CHOICE thresholds (where cost per DALY is less than three times GDP per capita) across 33 countries, from the Tufts Cost-Effectiveness Analysis Registry and Disease Control Priorities Economic Evaluation for Health database. There is limited data available to quantify the relative costs associated with lower versus higher coverage; however, the authors anticipate that marginal costs would be effected.

<sup>&</sup>lt;sup>28</sup> Based on DALYs averted through scaling interventions, weighted by income archetype to get total costs.

This high-level estimate is limited by the current cost-effectiveness data available, especially in low- and lower-middle-income countries, where delivery costs can vary widely across studies and countries. However, this estimate is higher but similar in scale to others, such as United for Global Mental Health (UGMH), which estimated a \$200 billion mental health financing gap based on the difference between current and recommended allocations of health spend by country.<sup>29</sup> The difference between these two funding estimates arise from differing methodologies: MHI used a bottom-up approach to assess the impact of scaling specific evidence-based interventions to 90 percent of affected individuals, while UGMH conducted a top-down analysis to determine the funding needed to meet recommended spending levels.

However, both approaches point to the same conclusion—current levels of investment in mental healthcare are inadequate to address the growing mental-health-related burden and support populations to thrive in the "brain economy." <sup>30</sup>

[Exhibit 6: Mental health interventions are cost-effective in reducing the overall NCD and mental health disease burden]<sup>31</sup>

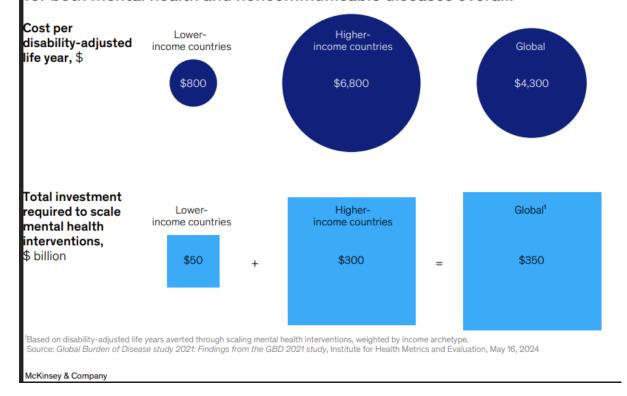
<sup>29</sup> United for Global Mental Health. *Financing Mental Health: Current Status and Future Prospects*. This analysis compared country mental health budgets to the recommendations in "The *Lancet* commission on global mental health and sustainable development"—allocating at least 5 percent of healthcare budgets to mental health in low- and middle-income countries and 10 percent in high-income countries.

<sup>&</sup>lt;sup>30</sup> The brain economy is an economic paradigm that prioritizes "brain capital" as its core asset, responding to the growing demand for brain skills in the modern workforce. Brain capital is a form of human capital that combines brain health with essential cognitive, emotional, and social skills such as analytical thinking, creativity, adaptability, and empathy. Based on "Brain gain: How improving brain health benefits the economy," World Economic Forum, September 9, 2024.

<sup>&</sup>lt;sup>31</sup> Income groups classified based on World Bank Income Group classifications, grouped into "lower" (comprising low-income and lower-middle-income groups) and "higher" (comprising upper-middle-income and high-income groups).



### Mental health interventions are cost-effective in reducing disease burdens for both mental health and noncommunicable diseases overall.



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#### Opportunity to invest in the brain economy

Scaling mental health interventions could unlock \$4.4 trillion in GDP by 2050 by enabling 60 million individuals to participate in the global labor force and enhance their productivity through improved health.

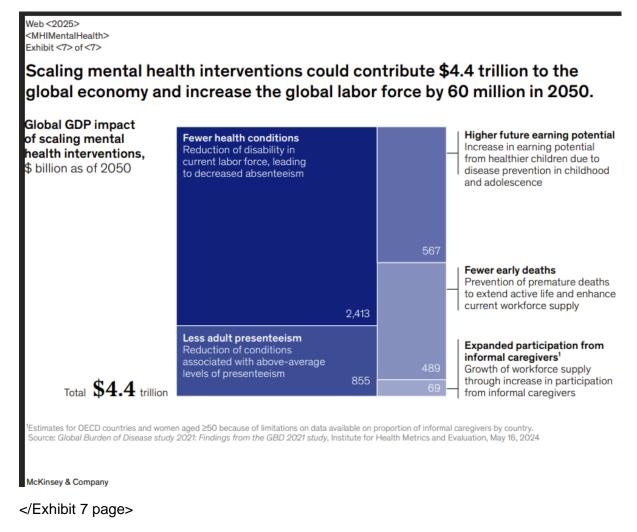
The economic impact at stake is estimated through five main levers. Increasing access to mental health interventions could lower absenteeism, short- and long-term absences from the workforce. Fewer premature deaths would let more people live long, fulfilling lives, both personally and professionally. Informal caregivers of those with mental health conditions—many of whom leave the labor force due to the logistics and emotional toll of care responsibilities—would have more freedom and flexibility to pursue their personal and economic goals. Better mental health would enhance productivity by reducing presenteeism for adults already in the labor force. Finally, preventing and reducing burden associated with mental health conditions in children through mental health interventions would not only improve their well-being and levels of educational attainment but also enable

<sup>&</sup>lt;sup>32</sup> Note that the estimates for increased participation from caregivers are only for OECD countries and women aged 50 years of age and above, due to limitations on data available showing the proportion of informal caregivers by country.

them to develop into healthier, more capable adults who can contribute more effectively to the economy in the future.<sup>33</sup>

When considering the additional impact mental health interventions can have on disease burden, each dollar invested in scaling mental health interventions could have an economic return of five to six dollars in global GDP.<sup>34</sup> Prioritizing mental health saves and improves lives, reduces healthcare costs, and has the potential to contribute to a thriving economy.

[Exhibit 7: Scaling mental health interventions could contribute \$4.4 trillion to the global economy and increase the global labor force by 60 million in 2050]



Addressing the rising burden of NCDs is a pressing global challenge, and mental health interventions offer a uniquely cost-effective solution with outsize impact, increasing both healthy life expectancy and economic returns. Achieving this future requires both increased

<sup>&</sup>lt;sup>33</sup> Johns Hopkins Bloomberg School of Public Health and United Nations Children's Fund, On My Mind: How adolescents experience and perceive mental health around the world, JHU and UNICEF, Baltimore and New York, May 2022.

<sup>&</sup>lt;sup>34</sup> Calculated based on the impact of 90 percent coverage of mental health interventions in 2025, assuming all else equal. GDP uses constant prices and exchange rate, with reference year for real GDP is 2022. Calculation only accounts for marginal costs and doesn't include fixed costs.

funding for mental health conditions and prioritizing evidence-based mental health interventions.

Countries of all sizes and income levels can consider their disease burden from mental health conditions and funding allocations for mental healthcare. In many cases, they will find it's a mismatch. As part of their NCD and mental health strategy, countries can consider a base guideline from the Lancet Commission on Global Mental Health and Sustainable Development's mental health funding targets of 5 percent of health budget for low- and middle-income countries and 10 percent for high-income countries to close the annual mental health care investment gap. However, achieving 90-90-90 impact and addressing the needs of the entire population will require a comprehensive public health approach and significantly greater funding beyond these government targets. Given the substantial mental health government financing gap, all sectors—including private and social—have a role to play as catalytic donor funding is needed. Furthermore, given that the benefits of mental health interventions extend beyond just mental health to the broader NCD burden as well, it will be essential to engage a wide range of NCD and public health stakeholders, alongside traditional mental health stakeholders.

Even within current budgets, there is an opportunity to spend more strategically to achieve better outcomes by focusing on cost-effective, evidence-based interventions. Countries can prioritize these interventions by shifting funding from institutional care to community-based approaches such as integrating mental health care into existing healthcare pathways. Currently, 66 percent of government mental health budgets globally are allocated to institutional care, such as long-stay mental hospitals, 35 despite community-based services being more accessible, cost-effective, and delivering better outcomes. The World Health Organization's Global NCD agenda underscores the need to address mental health alongside NCD prevention and control. Programs such as the WHO's Mental Health Gap Action Programme (mhGAP) and UNICEF's Mental Health and Psychosocial Support (MHPSS) have successfully implemented integrated care models in multiple countries, allowing patients to receive check-ups for both NCDs and mental health conditions in a single visit. S

These analyses not only make practical sense and offer long-term economic growth potential but offer the chance for cross-sector leaders to meaningfully improve the lives of individuals. There is an inextricable link between mental health conditions and physical health NCDs, and this analysis shows that addressing mental health conditions is key to reducing the rising NCD burden. By working together, leaders have an opportunity to create change and sustainable reductions in the NCD burden, extend healthy lifespans, and realize the transformative potential of mental health interventions on global health outcomes and economies.

<sup>&</sup>lt;sup>35</sup> Mental Health Atlas 2020, World Health Organization.

<sup>&</sup>lt;sup>36</sup> Fernando S, Brown T, Datta K, Chidhanguro D, Tavengwa NV, Chandna J, Munetsi E, Dzapasi L, Nyachowe C, Mutasa B, Chasekwa B, Ntozini R, Chibanda D, Prendergast AJ. The Friendship Bench as a brief psychological intervention with peer support in rural Zimbabwean women: a mixed methods pilot evaluation. Glob Ment Health (Camb). 2021

<sup>&</sup>lt;sup>37</sup> "Advancing the global agenda on prevention and control of noncommunicable diseases 2000 to 2020: looking forwards to 2030," World Health Organization.

<sup>&</sup>lt;sup>38</sup> "Mental health," Partners In Health, accessed April 2025.

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#### Research collaborators

**The research** was conducted in collaboration with the Clinton Health Access Initiative based on data from the Global Burden of Disease 2021 data suite by the Institute for Health Metrics and Evaluation. It builds on the 2022 research on <u>prioritizing brain health</u> performed by the McKinsey Health Institute in <u>partnership with HBGI.</u><sup>1</sup>

#### Methodology

The Prioritizing Brain Health model estimates the primary and associated disease burden of mental health conditions, the potential to reduce the NCD and mental health burden by scaling proven mental health interventions, and the impact this could have on the global economy. In this study, mental health (MH) conditions are defined as including both mental and substance use disorders. Self-harm and neurological disorders aren't included in this analysis.

#### Model overview:

- The core disease burden analysis uses the Institute for Health Metrics and Evaluation (IHME) Global Burden of Disease (GBD) 2021 data suite to estimate the primary and associated disease burden for all mental health conditions. A further evidence review was conducted to identify estimates of the additional risk of developing a non-mentalhealth noncommunicable condition for those with a prior mental health condition, for all relevant condition pairs.
- A comprehensive literature review was conducted to identify relevant, proven, scalable interventions for the mental health conditions included, and data was extracted from

<sup>&</sup>lt;sup>1</sup>Erica Coe, Martin Dewhurst, Andrew Doy, Kana Enomoto, and Richard Shin, "<u>Prioritizing brain health: Scaling what works to add years to life and life to years</u>," McKinsey Health Institute, November 8, 2022.

these studies to estimate the effectiveness and current adoption rates of these interventions across 100-plus condition-intervention pairs from about ~100 individual papers.

- To estimate the impact of disease burden reduction, health interventions were modeled sequentially on a year-over-year basis to quantify the mental health and NCD disease burden reduction potential over time, assuming a peak adoption rate of 90 percent. Note that this aspirational assumption is meant to show the art of the possible for scaling interventions over a timeframe of 25 years, assuming a gradual growth of adoption between 2025 and up until 2050.
- The potential economic impact on GDP is estimated across multiple levers including reduction in premature deaths, reduction in disability, improved productivity, improved future earnings for children, and reduction in informal caregiver need, affecting the size of the labor force and relative productivity stemming from the estimated mental health and NCD disease burden reduction.
- Lastly, a high-level estimate for the costs of implementation, and subsequent economic return, is estimated at a global level using estimates for cost per DALY averted adjusted by country-income archetype and intervention type.

Please see the technical appendix for more details on the methodology, data sources, and limitations.

#### Other brain-related conditions

**Brain health** encompasses mental disorders, substance use disorders, neurological disorders, and self-harm, and is focused on preventing and treating disease and promoting optimal brain function.

Although self-harm isn't included in the research, as it's not classified as a noncommunicable disease, it continues to pose a serious health threat. Suicide is the third-leading cause of death among individuals aged 15 to 29, with over 764,000 lives lost each year overall. Self-harm disproportionately affects men, accounting for 70 percent of related deaths and disease burden. There is a critical opportunity to reduce self-harm through targeted investments in surveillance, monitoring, and evidence-based suicide prevention efforts—such as school-based programs, behavioral therapy, and the 988 Suicide & Crisis Lifeline. Scaling mental health interventions by 2050 could save 25 percent of lives lost from self-harm.

Additionally, while neurological disorders aren't included as part of the mental health disease burden estimates, we recognize that they play a strong role in exacerbating the NCD crisis, contributing 282 million DALYs globally. For example, research shows that neurological disorders such as Parkinson's disease increase the risk of cardiovascular events. This is primarily due to autonomic nervous system dysregulation, which can lead to stroke and heart failure. Scaling interventions targeted towards neurological disorders by 2050 could reduce DALYs from neurological diseases by approximately 20 percent, as estimated in the Prioritizing Brain Health model (see technical appendix for more details).

<sup>&</sup>lt;sup>2</sup> Tjalf Ziemssen and Heinz Reichmann, "Cardiovascular autonomic dysfunction in Parkinson's disease," *Journal of the Neurological Sciences*, February 15, 2010, Volume 289, Issue 1-2.

#### What is the 'brain economy?'

**The 'brain economy'** is an economic paradigm that recognizes cognitive, emotional, and social capabilities as critical assets for individuals navigating an increasingly complex and knowledge-driven world.<sup>3</sup> This framework prioritizes "brain capital"—comprising brain health and brain skills—as the cornerstone for sustainable economic growth.

#### What is brain capital?

Brain capital is a form of human capital that combines brain health with brain skills. Brain health focuses on preventing and treating mental, substance use, and neurological disorders and promoting optimal brain function. Brain skills include cognitive, emotional, and social abilities such as analytical thinking, adaptability, creativity, and empathy—key drivers of productivity and innovation in the modern workforce.

#### How can investing in brain capital drive economic growth?

As workforce demands evolve and the global burden of brain-related conditions grows, strengthening brain capital is essential for fostering resilience and long-term prosperity. Investments in evidence-based brain health interventions, beginning in early childhood, can enhance individual well-being, boost productivity, and drive sustainable economic growth.

<sup>&</sup>lt;sup>3</sup> The "brain economy" is an economic paradigm that prioritizes "brain capital" as its core asset, responding to the growing demand for brain skills in the modern workforce. Brain capital is a form of human capital that combines brain health with essential cognitive, emotional, and social skills such as analytical thinking, creativity, adaptability, and empathy. Based on "Brain gain: How improving brain health benefits the economy," World Economic Forum, September 9, 2024.