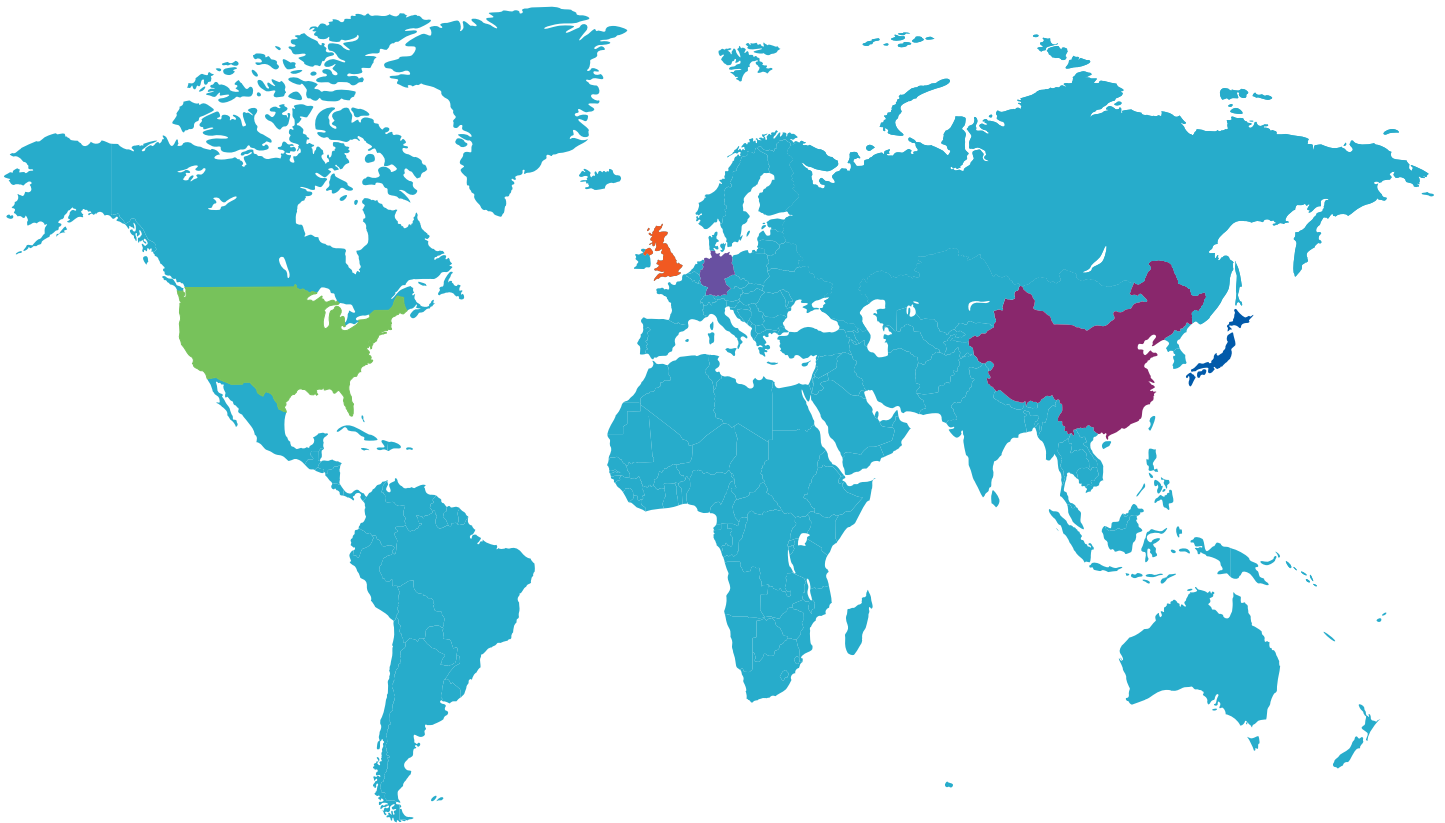# The Burden of Mental Health Conditions Versus Financing in the Global and National Context

with a focus on the United States, United Kingdom, Germany, China, and Japan

Andrea B Feigl*, Tanya Jain, Ed Lee, Jake Lang

Health Finance Institute

Disclaimer

ABF conceived the analysis, analyzed the data, conducted several literature searches, communicated with other experts in the field, and wrote the main parts of the report. TJ conducted the economic burden data extraction and contributed to the China and Germany country analysis. JL conducted the US MEPS analysis, extracted the Institute for Health Metrics and Evaluation (IHME) and other expenditure data, conducted the US country economic burden and health system analysis, and contributed to the writing of the paper. EL supported the editing of the paper, analyzed the currency conversions and contributed to crafting the policy recommendations.

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*Corresponding author. Direct inquiries to **andrea@healthfinanceinstitute.org**
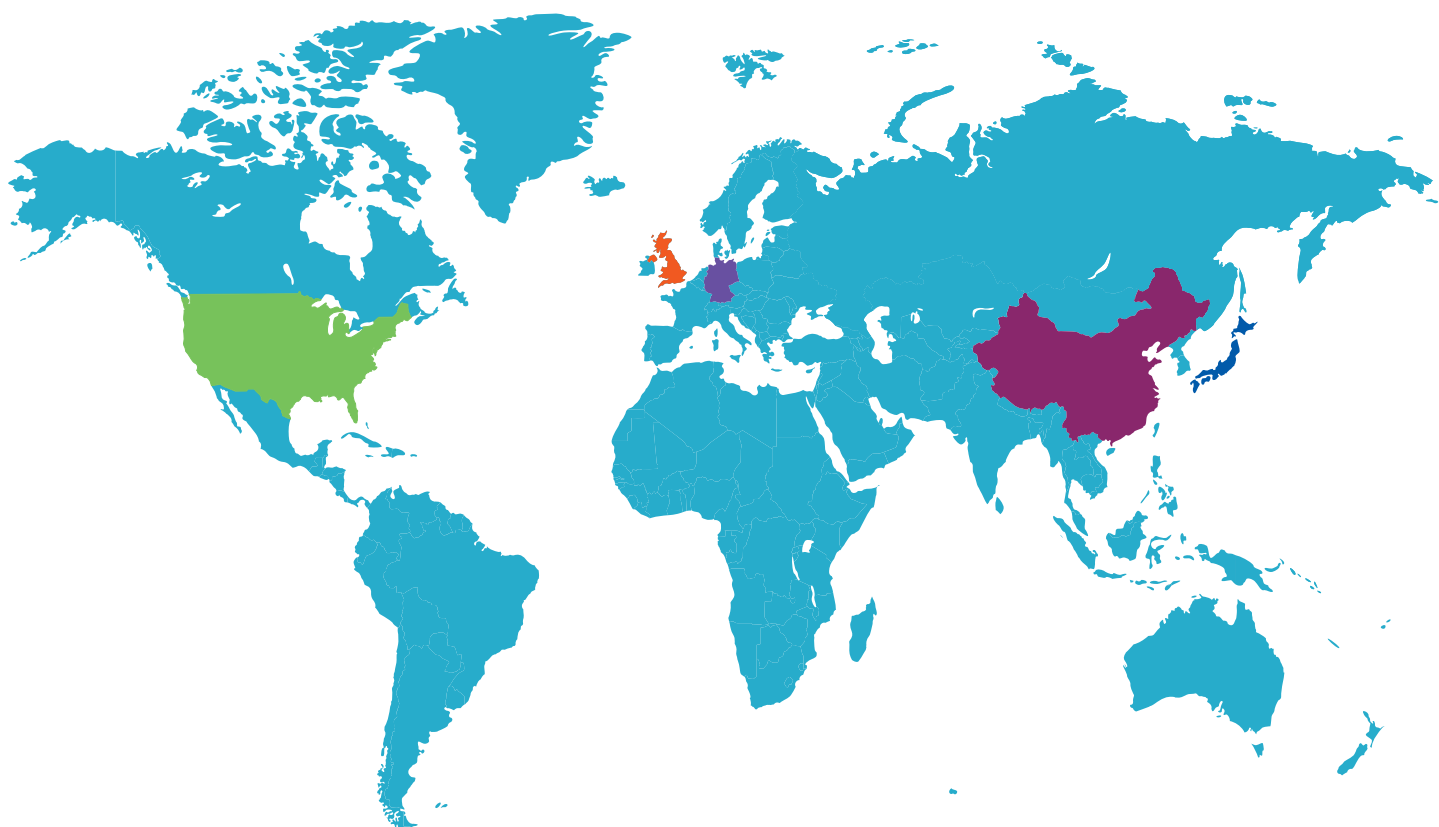
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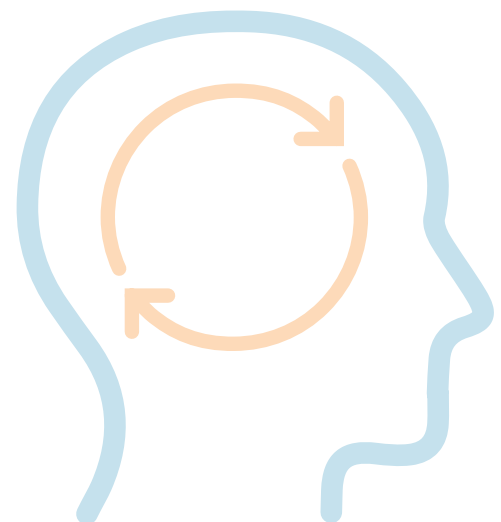
Abstract

Mental health conditions are critical components of individual and collective well-being, public health, and sustainable development. However, they often receive insufficient attention and funding compared to other health issues. This paper analyzes mental health financing in the context of five countries: the United States, the United Kingdom, Germany, China, and Japan, aiming to understand the alignment between burden, financial allocations, and health system capacity. The analysis explores avenues for more efficient resource allocation and advocates for integrating mental health financing priorities within the broader non-communicable diseases (NCD) agenda, both nationally and globally. Using comprehensive data from global databases and literature, this report provides actionable recommendations for policymakers and stakeholders to strengthen mental health financing strategies and improve data tracking and coordination to address the rising burden of mental health conditions and general mental health conditions.

Contents

Abbreviations

ACA	Affordable Care Act
AUD	Alcohol Use Disorder
ADHD	Attention Deficit Hyperactivity Disorder
BMBF	Federal Ministry of Education and Research
CBT	Cognitive Behavioral Therapy
DALY	Disability-Adjusted Life Year
EHI	Employee's Health Insurance
GBD	Global Burden of Disease
GDP	Gross Domestic Product
IHME	Institute of Health Metric and Evaluation
IN FORM	National Action Plan to Promote Healthy Diets and Physical Activity
LMICs	Low and Middle-income Countries
MDD	Major Depressive Disorder
MHPAEA	Mental Health Parity and Addiction Equity Act
MNSS	Mental, Neurological, and Substance Use Disorders
NCD	Noncommunicable Disease
NHI	National Health Insurance
NHS	National Health Service
OECD	Organization of Economic Cooperation and Development
OOP	Out-of-Pocket
PPP	Purchasing Power Parity
RR	Rapid Review
SHI	Statutory Health Insurance
SAMHSA	Substance Abuse and Mental Health Services Administration
SMI	Severe/Serious Mental Illness
WHO	World Health Organization
YLD	Years Lived with Disability

Introduction

Mental health conditions* pose a significant global health challenge, with conditions such as depression, anxiety, bipolar disorder, schizophrenia, and substance use disorders contributing substantially to the global burden of disease (GBD). Despite increased social and political attention toward mental health, financial allocations often fall short of demonstrated need. This paper aims to analyze mental health financing landscapes in the United States, the United Kingdom, Germany, China, and Japan, focusing on national disease burden estimates, financial allocations, and health system capacities.

Recent data highlight that mental health conditions and substance use disorders accounted for close to over 6.5% of the total GBD, measured in disability-adjusted life years (DALYs), in 2021 (IHME, 2024, the authors' analysis). Depression alone contributes 4.4% to the global burden. For this report, the conditions of focus are overall mental health, major depressive disorder (MDD), alcohol use disorder (AUD), bipolar disorder, schizophrenia, and substance use disorders. Together, they constitute more than two-thirds of the mental health and substance use burden in the countries and income regions analyzed herein (IHME, 2021).

Mental health conditions and their economic burden on health systems are disproportionately larger than initial burden numbers would suggest, constituting a major motivation for this analysis.

Additionally, the economic burden of mental conditions tends to increase with co- and multi-morbidity. Exacerbated by stigma and lack of access, mental health services are often seen as the "poor cousin" of other health systems.

The World Health Organization (WHO) has consistently emphasized the need for increased investment in mental health services. **The WHO's Mental Health Atlas 2020 reports that while some progress has been made, most countries allocate less than 2% of their health budgets to mental health (World Health Organization, 2020).** This underfunding is particularly acute in low and middle-income countries (LMICs). Patel et al. (2018) highlighted that mental health financing is often deprioritized, leading to inadequate service provision and poor health outcomes.

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* *For this paper, mental health conditions refer to a set of conditions such as depression, anxiety, bipolar disorder, etc; while both the term disorders and conditions may be used in the scientific literature, the authors herein will use the term 'mental health conditions' or 'conditions' to refer to the sum of mental health and substance use disorders under the GBD classification.*
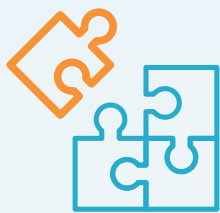
Integrating mental health into the broader NCD agenda requires aligning mental health financing with broader health and development priorities, such as cardiovascular diseases, diabetes, and respiratory conditions.

Lund et al. (2012) emphasized that incorporating mental health into primary care and other NCD programs can enhance access to care and help reduce stigma (Lund et al., 2012).

It is also crucial to integrate mental health into UHC (Universal Health Coverage), SDGs (Sustainable Development Goals), and other health programs like HIV/TB, maternal health, adolescent health, and emergency preparedness. Addressing mental health within these programs lead to a more holistic and comprehensive approach to achieving overall health and well-being, also ensuring that mental health is not sidelined and receives adequate funding and attention.

Despite recognition of mental health's significance, based on an internal review of the literature and consultation with experts, the literature base lacks detailed analyses of mental-health-specific financial allocations and their impact across different countries.

Further, few comprehensive studies link mental health financing with health outcomes and economic productivity.

Notwithstanding a nascent global focus on preventing and treating mental conditions, less attention is paid to the severity distributions among various mental health conditions. Yet, 9.3% of individuals with depression manage a severe form of the condition (Burstein et al., 2015). Taken together, the health, economic, and societal burden of mental conditions tends to concentrate more heavily on those with serious disease.

Focusing on those who live with serious mental health conditions can advance the global policy discourse and inform equity-oriented interventions.

Key definitions

Mental Health
A state of mental well-being that "enables people to cope with the stresses of life, to realize their abilities, to learn well and work well, and to contribute to their communities. Mental health is an integral component of health and well-being and is more than the absence of mental disorder." (World Health Organization, 2022c)

NCD Agenda
Global and national priorities and strategies related to NCDs, which include chronic conditions such as cardiovascular diseases (CVDs), cancer, diabetes, respiratory diseases, and mental disorders. Overall, NCDs comprise the full set of Type II of diseases under the GBD classification. At 'Level 2' of classification, this comprises Chronic obstructive pulmonary disease (COPD), CVDs, diabetes and kidney diseases, mental disorders, musculoskeletal disorders, neoplasms, neurological disorders, sense organ diseases, skin and subcutaneous diseases, substance use disorders, and other NCDs. Despite their classification alongside other NCDs, mental health conditions are often left out of the NCD agenda – as evidenced when examining prominent international documents and studies that reference NCDs but leave out mental health conditions. However, this report uses the GBD definition and views mental health conditions disorders and substance use disorders as fully integral components of the NCD agenda. We posit that without the integration of mental health care and financing into the general NCD policy agenda, health system planning remains inadequate.

Economic Burden of Health
Financial impact of health conditions on individuals, households, healthcare systems, and society, including direct costs (e.g., healthcare expenditures) and indirect costs (e.g., productivity losses).

Serious Mental Illness (SMI)
Herein, the phrase serious mental illness refers to a subset of mental illnesses. According to the National Institute for Mental Health (NIMH), "SMI is defined as one or more mental, behavioral, or emotional disorder(s) resulting in serious functional impairment, which substantially interferes with or limits, one or more major life activities. SMI includes major depression, schizophrenia, bipolar disorder, obsessive compulsive disorder (OCD), panic disorder, post-traumatic stress (PTSD) and borderline personality disorder" (National Institute of Mental Health, 2023). Notably, whereas the term 'Serious' is utilized in US English, 'Severe' is more common in the British context; however, for definitional purposes, severe and serious can be used interchangeably according to the authors' best knowledge (National Mental Health Intelligence Network, 2018).

How does this Analysis Contribute to the Literature and Dialogue on Mental Health Financing?

This analysis initially aimed to combine economic burden, health financing, and disease burden data to assess gaps between resource allocations and demonstrated need. Most often, research only addresses either one of these components. By aiming to combine evidence on the health and economic burden with system readiness and financing data, this report helps to make the case for evidence-based and cost-effective financing strategies, particularly for a specific subset of SMIs.

Owing to data availability and consistency issues, a comprehensive 'gap' analysis and quantitative cross-country comparison (e.g. utilizing metrics such as $/DALY spent, comparison of under/overfinancing, and unmet need) were not feasible.

Therefore, what emerges is a strong call for better data collection and organization with a view toward evidence and value-based system analysis and planning. Financing recommendations for (serious) mental illness need to be feasible at the national and sub-national level; hence the determination of the burden vs. financial access gap needs to occur at this level, notwithstanding in dialogue with the international community and leadership to enhance national efforts with international expert guidance.

Overall, this report contributes to the international dialogue on NCDs and Mental Health by:

1. Conveying results of a comprehensive analysis of the economic burden of SMIs in China, Germany, Japan, United Kingdom, and the United States, and presenting these findings via a unified metric ($/DALY spent)

2. Underscoring the growing mental health disease burden, especially for MDD in higher-income countries

3. Highlighting the urgent data and reporting needs to formulate coherent sub-national, national, and international arguments for the investment in early detection and treatment of mental conditions, particularly SMIs

4. Making the case for greater investments in mental health treatments by offering country-specific policy options to address this growing demand

Results:

Global Burden and Country Comparative Review

Results – Data Availability

While mental health condition data were available for all five countries, data on health care spending and the economic impact broken down by disease categories and severity were not widely available. Therefore, while a comparative analysis of disease burden was feasible, conclusions on resource availability per DALY presented herein will need to be interpreted with caution, as varying methodologies and data sources were utilized to determine these numbers. Any assumptions and modifications to the published data, herein referenced, are listed in the methodology section and under the respective tables and graphs.

Table 1: Heat Map Representing Data Availability for the Set of Variables for the Health Financing Analysis

Green represents complete data availability; orange represents data available for a subset of conditions or at the subnational level; red indicates the lack of identified data. Analysis by HFI.

🟩 Good Data Availability   🟧 Average Data Availability   🟥 Poor Data Availability

	China	Germany	Japan	UK	USA
(A) Demographic Population Data	🟩	🟩	🟩	🟩	🟩
(A) Gross Domestic Product per capita	🟩	🟩	🟩	🟩	🟩
(A) Disease Burden of Mental Disorders	🟩	🟩	🟩	🟩	🟩
(A) Disorder-specific Prevalence Rates	🟩	🟩	🟩	🟩	🟩
(A) Disorder-specific Prevalence Rates	🟩	🟩	🟩	🟩	🟩
(A) Disorder-specific Disability-Adjusted Life Years (DALYs) Rates	🟩	🟩	🟩	🟩	🟩
(A) Disorder-specific Mortality Rates	🟩	🟩	🟩	🟩	🟩
(A) Disorder-specific Severity Split	🟥	🟥	🟥	🟥	🟥
(B) Infrastructure for Mental Healthcare Services, including Hospital Facilities and Hospitalization Rates	🟧	🟧	🟧	🟥	🟥
(B) Mental Healthcare Workforce Statistics	🟧	🟧	🟧	🟧	🟧
(B) Accessibility of Mental Healthcare Services	🟧	🟧	🟧	🟧	🟥
(C) Economic burden of Mental Disorders	🟧	🟥	🟥	🟧	🟧
(C) Disorder-specific Economic Burden	🟧	🟥	🟥	🟧	🟧
(D) Financing and Resource Deficits in Mental Healthcare Delivery	🟥	🟥	🟥	🟥	🟥
(E) Overall Healthcare Expenditures by Source: PP Insurance and OOP Expenses	🟩	🟩	🟩	🟩	🟩
(E) Mental Healthcare Expenditures by Source: PP Insurance and OOP Expenses	🟥	🟧	🟧	🟥	🟥

The Heat Map in Table 1 presents a comprehensive overview of data availability for health financing analysis, with distinct color coding to indicate the completeness of data. Green areas represent fully available datasets, covering all necessary variables for a robust analysis. Orange areas indicate partial data availability, either limited to a subset of conditions or only available at the subnational level, suggesting potential gaps that could hinder comprehensive analysis. Red areas highlight the absence of data, signaling critical gaps that may pose challenges to deriving conclusive insights or making informed decisions.

Examples of sparse data are evident in the orange and red zones of the heat map. For instance, data on certain health conditions are only available at the subnational level, which may not be sufficient for a comprehensive national analysis. Additionally, the absence of data on specific health outcomes or financing categories, poses significant barriers to conducting a full-scale analysis. These gaps highlight the necessity for enhanced data collection efforts and the development of alternative methodologies to ensure that health financing decisions are based on the most accurate and complete information available.

Disease Burden Review

Disease burden data (prevalence, incidence, DALYs) were retrieved from the IHME GBD database for the years 2012 to 2021 (latest year of data available). Data were retrieved for the following conditions: all mental disorders, substance use disorders (drug and alcohol use disorders) bipolar disorder, MDD, and schizophrenia. Additionally, available severity splits were retrieved from Burstein et al. (2015) and Santomauro et al. (2023).

Global and Cross-Country Comparison of Mental Health Burden

The global burden of mental health conditions and substance used disorders is substantial, with 187.9 million DALYs (6.51% of global total) (IHME 2023). For high-income regions, this number was just shy of eleven percent in 2021; upper middle-income countries had a combined burden of 7.21% of DALYs (See Appendix Figure A1). Notably, the listed combined measures of the mental health disease burdens by world income groups is based on the IHME's current reporting convention.

Other attempts at quantifying the global burden of mental health conditions have included a wider range of conditions, based on assumptions of mental health comorbidities: (Arias et al., 2022) have shown the mental disorders burden to comprise as much as 12 percent of the global burden of disease globally, and over 20 percent in high-income countries. Based on these reallocation approaches, the global economic impact of disease was estimated at over 5 trillion USD annually. While this approach assumed the proportionality of the economic burden of mental disorders and GDPpc – it stopped short of considering the proportion of more serious vs less serious mental health conditions – assuming a cost distribution that aligns with the DALY distribution. This assumption may not hold (e.g. a country with an overall lower burden may still have a skewed distribution towards more severe conditions, thus exhibiting a higher economic and cost burden than vice versa).

While it is important to note these additional approaches of mental disorder burden quantification, herein, the country comparisons are based on more conservative estimates of IHME figures.

The data for 2021 illustrate the distribution of this burden across five countries: the United States, the United Kingdom, Germany, China, and Japan, highlighting the disparities and commonalities in mental health and substance use disorder burdens (Table 2).

Table 2: Mental Health and Substance Use DALYs and DALY Percentages in Five Countries
Source: IHME, 2024.

2021 Data	USA	UK	Germany	China	Japan
Mental Health DALYs per 100,000	**2,783.16** ~7.3% of total DALYs	**2,540.60** ~7.90% of total DALYs	**2,461.47** ~7.11% of total DALYs	**1,631.28** ~5.7% of total DALYs	**1,671.43** ~5.40% of total DALYs
Substance Use DALYs per 100,000	**2,157.08** ~5.6% of total DALYs	**931.13** ~2.90% of total DALYs	**653.22** ~1.9% of total DALYs	**304.74** ~1.07% of total DALYs	**140.56** ~0.45% of total DALYs

In 2021, the United States had the highest rates of both substance use and mental health DALYs per 100,000 population, with 2,157.08 and 7,238.16 respectively. Substance use disorders accounted for 5.6% of total DALYs in the United States, while mental conditions contributed to 20.4% of total DALYs. The United Kingdom's figures were lower but still substantial, with substance use disorders at 931.13 DALYs per 100,000 (2.9% of total DALYs) and mental disorders at 2,540.60 DALYs per 100,000 (7.9% of total DALYs). These figures indicate that both countries face considerable challenges in addressing mental health and substance use issues, reflecting a need for targeted interventions and increased funding (Figure 1).

Figure 1: Comparative Rate of DALYs per 100,000 in 2021 across China, Germany, Japan, United Kingdom, and the United States

Source: IHME, 2024. IHME, 2021 Global Burden of Disease.
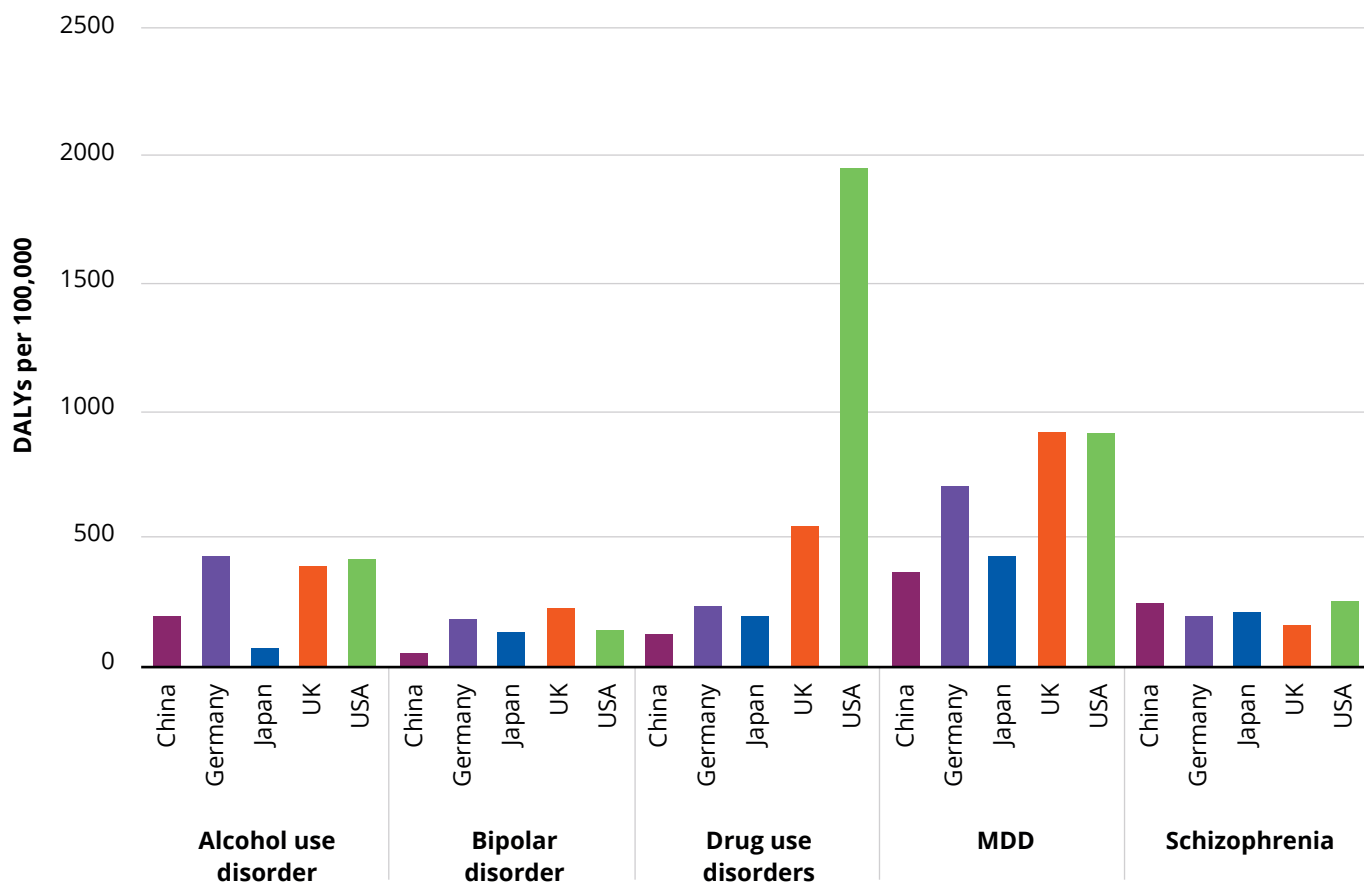
Germany, China, and Japan each presented different patterns of mental health burden. Germany reported 653.22 DALYs per 100,000 for substance use (1.9% of total DALYs) and 2,461.47 for mental health (7.1% of total DALYs), while China and Japan had much lower substance use burdens, with 304.74 (1.07% of total DALYs) and 140.56 (0.45% of total DALYs) DALYs per 100,000 respectively. The totality of mental disorders in China comprised 1,831.38 DALYs per 100,000 (5.7% of total DALYs) and Japan at 1,671.43 DALYs per 100,000 (5.0% of total DALYs). These variations pointed toward the importance of culturally and contextually appropriate mental health policies and programs to effectively address unique challenges faced by different country.

Overall, the data revealed the pervasiveness of mental health and substance use disorders globally. The findings call for comprehensive strategies to reduce this burden, including increased investment in mental health services, greater emphasis on preventive measures, and efforts to reduce the stigma associated with these conditions.

Comparison of Economic Burden of Mental Health Conditions

Significant disparities in mental health expenditure relative to disease burden was present across the Americas in 2015 (Vigo et al., 2019), indicating that it is not a challenge unique to the United States. Mental, neurological, and substance use disorders (MNSS) accounted for 19% of total DALYs. Median government health spending on mental health was 2.4%, with 80% of this allocation directed towards psychiatric hospitals. The imbalances between disease burden and spending efficiency varied dramatically across the Western hemisphere, ranging from a ratio of 3:1 in Canada and the United States, to 435:1 in Haiti, with a median ratio of 32:1. Higher real GDP was positively correlated with mental health expenditure (β=0.68, p=0.0036 but negatively correlated with the proportion of spending on psychiatric hospitals (β=-0.5, p=0.0012) and the imbalance in spending (β=-1.38, p=0.0001) (Vigo et al., 2019).

Globally, mental health spending represented about 2% of government health budgets. While MNSS contributed to 12% of DALYs and 35% of years lived with disability (YLDs), the Americas showed a median mental health expenditure of 2.4%, contrasting with a 19% burden of DALYs and 34% YLDs due to MNSS. The WHO advocated for effective health spending proportionate to disease burden, ensuring parity between mental and physical health care. This disparity likely exacerbated treatment gaps in low-income countries, leading to increased out-of-pocket spending on mental health services. The three to one imbalance in Canada and the United States mirrored a treatment gap for MDD, with only 22.4% of patients in high-income countries receiving minimally adequate treatment (Vigo et al., 2019; World Health Organization, 2020).

Representing economic burden as a percentage of GDP provided a comprehensive means of evaluating across global regions. In this approach, high-income nations in North America, such as the United States, showed a significant economic burden of 7.9% of GDP (Arias et al., 2022). This was one of the highest percentages reported, which indicated the substantial impact of mental disorders on the economy. The high percentage burden pointed to the extensive impact of mental health issues, demanding enhanced mental health policies, increased funding, and comprehensive strategies to address and mitigate the negative economic effects of mental disorders.

From Financing to the Direct and Indirect Economic Burden

Table 3 provides a detailed analysis of the economic impact of mental disorders across three countries: the United States, China, and the United Kingdom. The data highlighted the direct and indirect economic burdens measured in terms of health care costs and time costs per DALY. The health expenditure data for the year 2021 offered insights into the financial implications of mental health issues in these countries.

The analysis of the economic burden across the five geographies revealed that in the United States, the indirect burden of mental health ranges from $12,529.7 to $31,540.3 health care costs per DALY, as reported by Dawes et al., (2024) and Abramson et al. (2024). Schizophrenia presented significant economic challenges with an indirect burden of $306,409.59 lost productivity cost per DALY and a direct burden of $118,355.11 health care cost per DALY (Kadakia et al., 2022). The total economic burden of MDD was particularly notable, amounting to $140,729.32 health care cost per DALY (Greenberg et al., 2021).

While only a few studies reported data in a high quality and comparable manner, the reviewed data indicated a substantive and mounting economic burden due to mental illnesses.

Table 3: Analysis of the Economic Impact of Mental Disorders Across Three Countries

A comprehensive literature review was performed to gather data on the economic burden associated with various countries and disorders examined in this paper. The economic burden was subsequently converted into billions of US dollars. Additionally, DALYs related to mental health or specific disorders (if emphasized) were calculated in billions. The economic burden was then divided by the DALYs to determine the economic burden per DALY. The data for both measures correspond to the years specified in the table.

Country	Type	Year for Economic Burden Reported	Year for DALYs	Economic Burden per Daly	References
USA	Indirect Burden – MH	2024	2021	12,530 – 31,540	Dawes et al., 2024 Cummings, 2024
	Indirect Burden – Schizphrenia	2019	2019	306,410	Kadakia et al., 2022
	Direct Burden – Schizophrenia	2019	2019	118,355	Kadakia et al., 2022
	Total Burden – MDD	2020	2018	140,729	Greenberg et al., 2021
China	Indirect Burden – MH	2017	2017	2,163	Lizheng et al., 2019
	Direct Burden – MH	2017	2017	26	Lizheng et al., 2019
	Overall Burden – MH	2013	2013	237	Xu et al., 2016
UK	Indirect Burden – MH	2019	2019	71,518	LSE, 2019

In Focus:
United States

The **United States** experienced the highest burden from mental health conditions among the countries assessed, with the rate of DALYs per 100,000 population at 4,940.23 and a prevalence of 24,389.42 per 100,000. In 2021, more than 22.8 percent of adults lived with mental illness, and approximately 5.5 percent experienced serious mental illness (SAMHSA, 2022).

Substance use disorders, including alcohol (DALYs 415.62 per 100,000) and drug use (DALYs 1,949.44), along with MDD (DALYs 905.47 per 100,000), represent key drivers of this burden. (IHME, 2023)

## **A** Disease Burden Review

Figure 2 depicts the rate of DALYs for five key mental disorders from 2012 to 2021: alcohol use disorder, drug use disorder, bipolar disorder, MDD, and schizophrenia. This visualization highlight upward trends in the burden of these conditions over the past decade, underscoring areas of concern and potential focus areas for public health interventions.

The rate of DALYs for alcohol use disorder in the United States showed a gradual increase from 2012 to 2021, starting at approximately 400 and rising slightly over the period, reaching around 450 by 2021. This consistent upward trend suggests a need for enhanced public health strategies and interventions to address alcohol use and its associated harms (Figure 2).

The rate of DALYs for drug use disorder exhibited a more pronounced increase over the same period. Beginning at around 1,000 in 2012, the rate steadily climbed to approximately 2,000 by 2021. This sharp rise underscored the escalating crisis of drug use in the United States, reflecting the growing prevalence and severity of drug-related health problems. Thus, there is an urgent need for comprehensive drug prevention and treatment programs, as well as policy measures to mitigate the devastating impact of the opioid epidemic and other substance use issues (Figure 2).

Figure 2: United States Mental Health Burden

Source: Global Disease Burden 2021 and IHME 2022; where the rate of DALYs is expressed as a rate per 100,000 population.
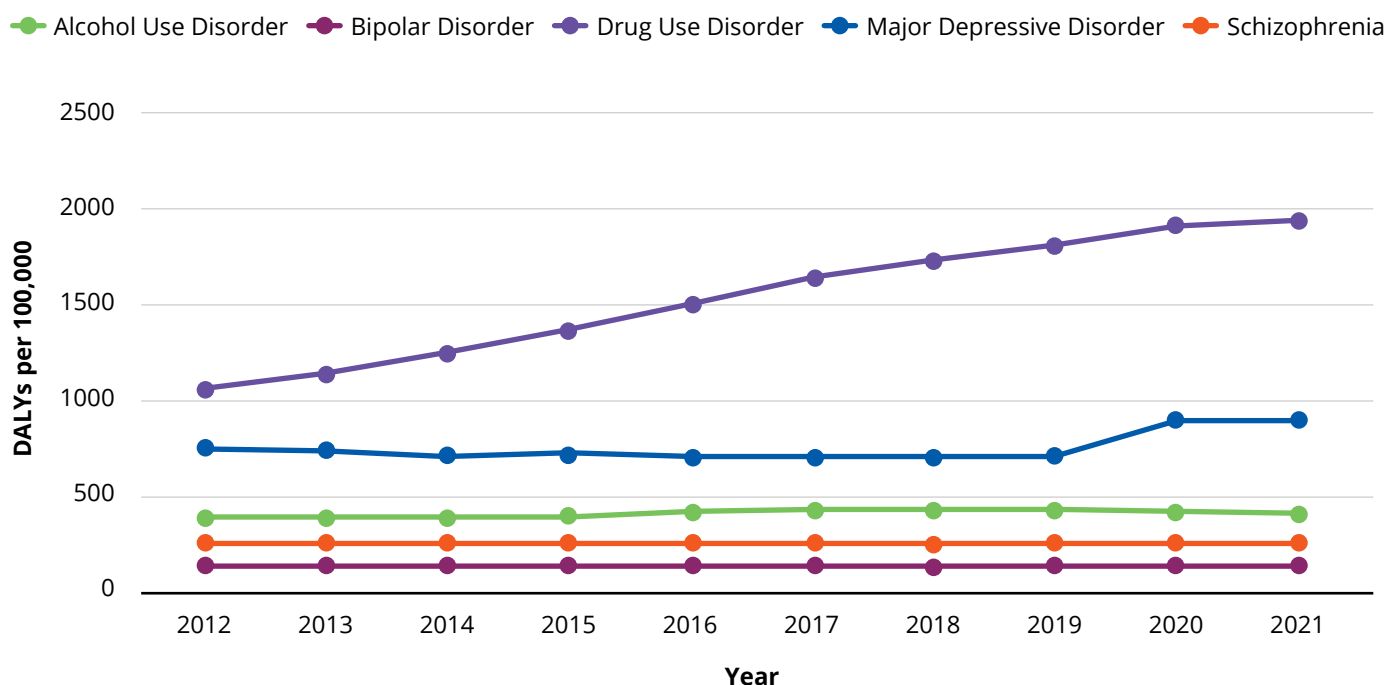
The rate of DALYs for MDD showed a steady trend with a notable increase around 2020. Starting at approximately 800 in 2012, the rate fluctuated slightly but rose to around 1,000 by 2021 (Figure 2). This increase reflected the growing recognition and diagnoses of depression, as well as the impact of external factors such as the COVID-19 pandemic, which had exacerbated mental health issues globally.

Bipolar Disorder's rate of DALYs has remained relatively stable throughout the decade, fluctuating slightly around 100. This stability suggests that the burden of bipolar disorder has not seen the same dramatic increase as other mental health conditions, possibly indicating effective management and treatment strategies for those diagnosed with this disorder. Nevertheless, the consistent rate also underscored the ongoing need for sustained support and resources to ensure individuals with bipolar disorder receive adequate care and treatment (Figure 2).

Overall, the cumulative burden of bipolar disorder, anxiety disorders, AUD, other substance use disorders, MDD, and schizophrenia accounted for 90% of the total mental health and substance use disorder DALYs. This significant proportion emphasized the necessity for integrated and comprehensive mental health policies and resources to address these conditions. Addressing these conditions through coordinated healthcare strategies and targeted interventions could significantly reduce their pervasive impact on individuals and society.

B Health System Review

Currently, in the United States, mental health services can be unevenly distributed across the country, with rural areas or underserved communities often facing significant access challenges. Additionally, insurance coverage for mental health varies, with some insurers providing more comprehensive benefits than others, further fragmenting the care patients receive.

Federal and state governments often approach mental health from different policy angles, which can lead to competing priorities or duplication of efforts. Overall, both in mental health services and psychotropic medications, individuals accessing care paid more than 20% OOPs (World Health Organization, 2020c).

Generally, 'universal financial coverage' predicates that less than 25% of health spending be out of pocket; further, health spending greater than 30% of household income is seen as catastrophic. Taken together, these two figures suggest that for those suffering from severe mental health conditions, catastrophic spending is a near or distinct reality.

Community-based health initiatives in the U.S. between 2012 and 2021 saw significant growth and evolution, driven by increasing recognition of the importance of addressing health disparities and improving public health outcomes. During this period, there was a notable emphasis on integrating social determinants of health into community health programs.

Initiatives often focused on improving access to care, promoting preventive services, and addressing chronic conditions such as diabetes and hypertension through local resources and partnerships. Programs like community health worker training, mobile health clinics, and neighborhood wellness centers became more prevalent. Additionally, the Affordable Care Act's expansion of Medicaid and emphasis on value-based care further supported these initiatives (Sullivan, 2021). These efforts led to measurable improvements in health outcomes, including increased rates of preventive screenings and better management of chronic diseases. However, the number of inpatient and outpatient visits dropped from 133 to 28 per 100,000 in the United States (World Health Organization, 2020c).

Recently, under the Biden-Harris administration, SAMHSA has expanded its efforts with $81.3 million in grant awards dedicated to enhancing the integration and improvement of various community health initiatives, alongside a $1.5 billion commitment to tackling the opioid crisis across all states and territories (SAHMSA, 2024; The White House, 2024). Ongoing collaborative efforts involving local governments, non-profits, and private sectors aim to foster more inclusive and effective health solutions tailored to diverse populations. The COVID-19 pandemic further highlighted the need for community resilience and adaptive strategies to ensure equitable health support, leading to increased innovation and urgency in community health responses.

In regard to mental health prevention and treatment promotion, several programs exist at the national and regional levels. This includes a mental health disaster preparedness crisis line, the CDC Suicide prevention program, and both parental and maternal mental health awareness and promotion, amongst others (World Health Organization, 2020c).

Since health insurance systems and health plans are governed by different rules at the individual state level, an analysis looking at the specific states (versus the country) would likely yield more conclusive and insightful results than the search for national-level comparisons to the United States.

For children and adolescents, a stand-alone policy for mental health has been in place since 2018. Similarly, for suicide prevention, a national policy has been operational since 2012.

For the first time in 2022, the United States via the Biden-Harris Administration, announced a comprehensive plan to address the ongoing mental health crisis in the United States, emphasizing the need for increased access to mental health services and support. This initiative included several key actions, such as expanding access to behavioral health services through the Affordable Care Act (ACA), mandating that insurance companies cover mental health and substance use disorder services, and integrating mental health care into primary care settings. The administration has also focused on increasing the mental health workforce, with investments aimed at training 13,000 behavioral health providers and expanding the number of school-based mental health professionals. Furthermore, the initiative sought to enhance crisis response services by supporting the 988 Suicide & Crisis Lifeline and improving the availability of mobile crisis intervention teams.

To address the youth mental health crisis, the administration has invested in programs that promote mental wellness in schools and communities. This included expanding funding for the Substance Abuse and Mental Health Services Administration (SAMHSA) and the Department of Education's Project AWARE, which focused on mental health awareness training for school staff. Additionally, the plan included measures to combat the mental health impacts of social media on young people, with efforts to promote responsible use and provide resources for parents and guardians. Overall, these actions reflected a commitment to building a stronger mental health infrastructure and ensuring that all Americans have access to the care and support they need.

Recommendations

The United States could benefit from increased coordination of health financing to address care gaps and improve outcomes. This includes increasing government investment, reducing OOP costs, and enhancing insurance coverage. A coordinated approach to mental health financing can help bridge the gap between commitments and actual service provision.

C Economic Burden

Mental Health Spending

The United States healthcare system faces significant challenges in mental health service delivery, including high OOP costs and insurance barriers. The mental health workforce is unevenly distributed, with shortages in rural and other traditionally underserved areas. The Substance Abuse and Mental Health Services Administration (2020) highlighted that mental health services in the United States were often fragmented and under-resourced, leading to poor access and quality of care. Mental disorders imposed substantial economic costs on the US. Insel (2008) estimated that serious mental illness cost the United States economy $317 billion annually in direct and indirect costs. This included healthcare expenditures, loss of earnings, and disability benefits – the estimate excluded cost of homelessness, incarceration, comorbidity, and early mortality.

While relying on self-reporting, the authors were able to ascertain spending trends for mental health in the United States from 2012 to 2021 (Agency for Healthcare Research and Quality, n.d.).

Figure 3 illustrates the trends and distribution of mental health expenditures in the United States over a decade, segmented by various sources of payment. The sources of payment includes OOP, Medicare, Medicaid,[1] Private, and Other. This detailed breakdown provides a comprehensive view of how mental health services are funded and highlights significant changes in expenditure patterns over time.

From 2011 to 2021, there has been a notable increase in total mental health expenditures. In 2011, the total expenditure was approximately $75 billion, which steadily rose to over $175 billion by 2021 (Figure 4). This upward trend reflect an increasing financial commitment to mental health services, likely driven by rising awareness, increased demand for services, and inflationary pressures.

Examining the sources of payment, Medicaid consistently represented a substantial portion of the total expenditure, growing significantly from around $25 billion in 2011 to over $60 billion in 2021. This indicates a strong reliance on Medicaid for mental health funding. Medicare and private insurance also showed substantial contributions, with Medicare's share rising from $15 billion to approximately $35 billion, and private insurance from $20 billion to $50 billion over the same period (Figure 4).

OOP expenditures and other sources, though smaller in comparison, also exhibited growth. OOPs increased from ~ $10 billion to over $30 billion, suggesting that individuals were bearing a greater financial burden for mental health services.

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[1] *Medicare is a federal health insurance program in the United States primarily for individuals aged 65 and older, but it also covers some younger people with disabilities and those with End-Stage Renal Disease. Medicaid is a joint federal and state program that provides health coverage for low-income individuals and families, with eligibility and benefits varying by state. Both programs aim to ensure access to healthcare for vulnerable populations but differ significantly in their funding, eligibility criteria, and scope of coverage.*

The "other" category, which included various less-common funding sources, increased slightly, highlighting the diverse and multifaceted nature of mental health financing in the U.S (Figure 4). Overall, the data pointed to the expanding investment in mental health and the critical role of diverse funding sources in supporting this essential aspect of healthcare.

Figure 3: Analysis of US Medical Expenditure Panel Survey Data

Retrieved June 2024; Analysis by HFI. Currency in USD million. Source: Agency for Healthcare Research and Quality (n.d.).
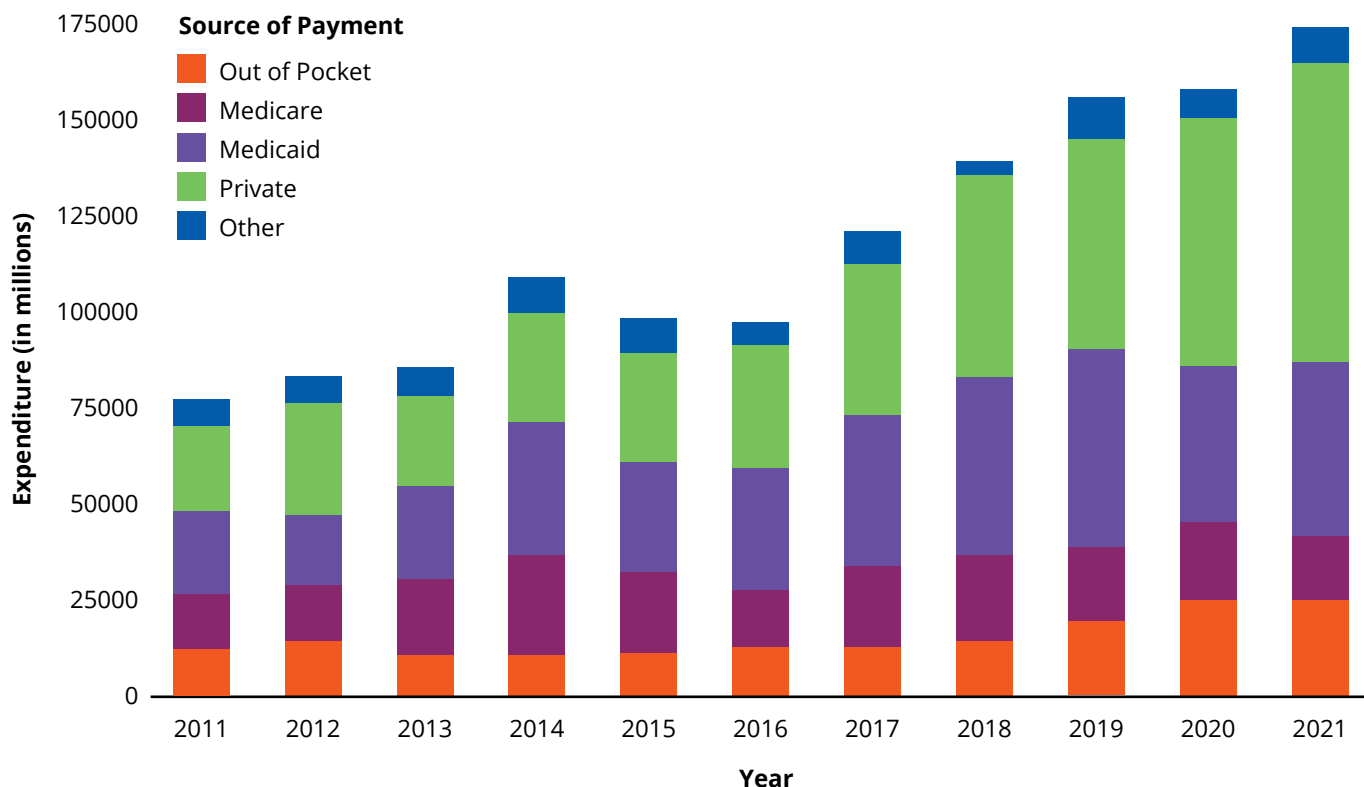

Figure 4 provides an intricate overview of expenditures on mental health categorized by specific disorders, including attention deficit disorder (ADD), ADHD and other neurodevelopmental disorders, anxiety, depression, all mental and substance use disorders,[2] and other mental and substance use disorders. Additionally, it tracks the percentage of total health expenditure allocated to mental health, represented by the red dotted line. These data spanned a critical decade in mental health funding, reflecting broader societal, and healthcare system trends.

The sharp increase in both and relative and total mental health expenditures from 2012 to 2021 may signal a growing recognition of the importance of mental health services. (The percentage of total health expenditure devoted to mental health rose from about 2.6% in 2012 to approximately 4.0% in 2021, marking a significant shift in prioritization within the healthcare budget (Figure 4)).

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[2] *Notably the list of diseases is slightly different from the one in IHME.*

Figure 4: Analysis of US Medical Expenditure Panel Survey Data

*Retrieved June 2024; Analysis by HFI. Source: Agency for Healthcare Research and Quality.*
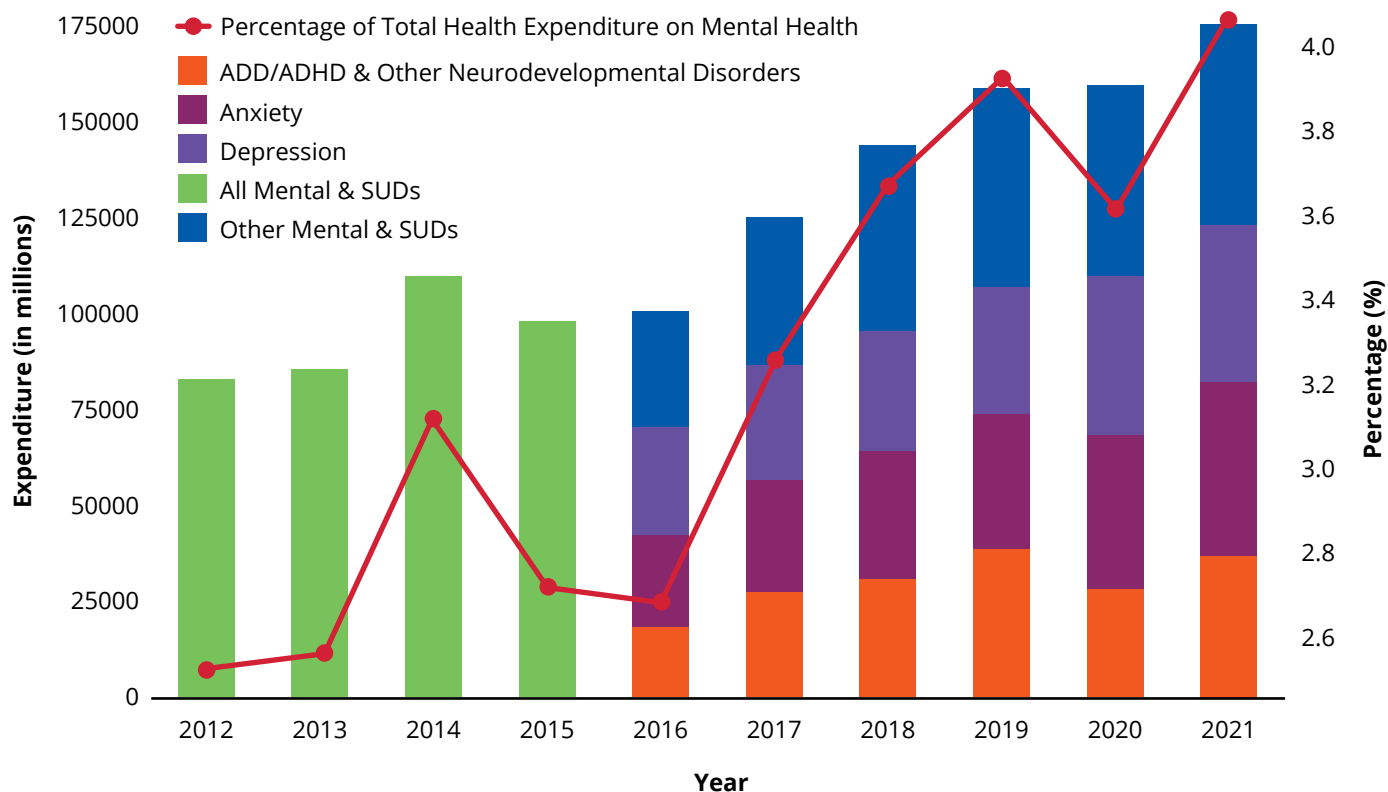
Focusing on specific conditions, expenditures for all mental and substance use disorders consistently dominated the spending landscape; among those,on depression experienced one of the most notable increases. This was likely driven by several factors, including heightened awareness, improved diagnostic practices, and the growing prevalence of depression.

According to the NIMH, depression affects an estimated 17.3 million adults in the United States, representing 7.1% of all U.S. adults. This prevalence has led to increased pressure on healthcare systems to allocate more resources to effectively manage and treat depression (National Institute of Mental Health, 2023).

The increased expenditure on depression also correlates with the broader societal understanding of mental health and its impacts. Depression is not only a leading cause of disability worldwide but also significantly affects economic productivity. It has been estimated that depression and anxiety disorders cost the global economy $1 trillion each year in lost productivity (Chisholm et al., 2016).

D ## Resource Assessment
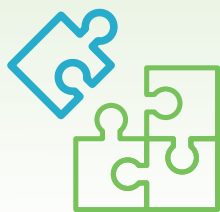
Mental health service availability and uptake in the U.S. continued to face significant barriers, with a large portion of the population unable to access the care they needed. Over three-quarters (76.9%) of adults with a substance use disorder (SUD) did not receive treatment, with the majority (75.4%) believing they should handle their substance use on their own (Reinert et al., 2023). Additionally, many cited reasons existed, such as not being ready to start treatment (58.6%), uncertainty on where to seek help (47.3%), and concerns over costs (47.7%).

The financial burden of care remained a critical barrier: 58.9% of adults with a mental illness who sought treatment reported they did not pursue care because they believed it would cost too much. Similarly, 24.58% of adults experiencing 14 or more mentally unhealthy days each month were unable to see a doctor due to costs – a 2% increase from previous data. In 2022, nearly 10.2% of adults with private health insurance lacked coverage for mental health problems. Youth mental health services were also lagging, with 56.1% of young people experiencing major depression not receiving treatment, and 48.3% reporting unmet needs. Further compounding these issues, a shortage of providers limited access, with one mental health provider for every 340 individuals. Addressing these gaps in service availability, particularly in lower-income and non-Medicaid expansion states, is essential for improving mental health outcomes in the U.S.

E ## Policy Options

Future Directions:
Mental Health Financing in the United States

Several actions at the federal and/or Medicare/Medicaid level can enhance financial access.

For example, this may include:

1. **Strengthening Enforcement of Parity Laws**

   Ensuring that the Mental Health Parity and Addiction Equity Act (MHPAEA) is fully enforced, requiring insurers to provide equal coverage for mental health and substance use disorders as for physical health conditions. This includes addressing gaps in coverage and reducing OOP costs.

2. **Expanding Access to Telehealth Services**

   Making the expanded telehealth services permanent, particularly for mental health care, to increase access in underserved and rural areas. This includes improving reimbursement rates for telehealth services and ensuring privacy protections are in place.

3. **Increasing Funding for Community-Based Mental Health Services**

   Redirecting resources from institutional care to community-based services, such as Certified Community Behavioral Health Clinics (CCBHCs), which provide comprehensive mental health and substance use services. Increasing federal funding through grants and support for expanding these services, such as the Substance Abuse and Mental Health Services Administration (SAMHSA).

4. **Integrating Mental Health into Primary Care**

   Promoting integration of mental health services into primary care settings by providing additional funding and training for primary care providers. This integration can help improve early diagnosis and treatment of mental health conditions.

5. **Strengthening Workforce Development**

   Increasing investment in training and education programs for mental health professionals to address workforce shortages. Provide loan forgiveness or other financial incentives for professionals who work in underserved areas.

6. **Improving Data Collection and Reporting**

   Enhancing data collection and reporting mechanisms to better track mental health expenditures, treatment outcomes, and access disparities. This will support evidence-based policymaking and resource allocation.

7. **Addressing Social Determinants of Mental Health**

   Implementing policies that address the social determinants of mental health, such as housing, employment, and social services, to reduce the economic burden of mental health conditions.

8. **Promoting Public Awareness and Reducing Stigma**

   Launching national campaigns to reduce stigma associated with mental health conditions and promote mental wellness. Encouraging early intervention and support seeking behavior.

In Focus:
China

A Disease Burden Review

The first national survey of mental conditions in China, from 2013–15, showed that the lifetime prevalence of mental health conditions in adults was 16.6% (Huang et al., 2019).

As per the Global Burden of Disease Study conducted in 2021 mental conditions in China had a substantial impact on DALYs (1,631.27) [rate per 100,000 population] (IHME, 2021). Bipolar disorder, alcohol use disorders, and MDD all contribute significantly to the burden, with alcohol use disorders presenting notable DALYs (187.99 (per 100,000)) and prevalence (1,365.65 rate per 100,000). These disorders, in addition to alcohol and drug use disorders and schizophrenia, played a role in contributing to an overall total of 58.5% of mental condition DALYs (IHME, 2021).

Examining the past decade of China's mental health burden, the following trends emerged: Figure 5 illustrates the rate of DALYs attributable to alcohol use disorder from 2012 to 2021. Over this period, the rate remained relatively stable, fluctuating slightly around 200 DALYs per 100,000 population. This suggests that while alcohol use continued to be a substantial public health issue, the efforts in prevention and treatment have maintained a steady state without significant improvement or deterioration.

Drug use had also remained relatively stable over the past decade, as evidenced by a consistent rate of around 115 DALYs from 2012 to 2021. This trend indicated that China had not yet been affected by the growing impact of drug use disorders on global public health (Figure 5). The trend suggested a need for preemptive drug prevention and treatment programs to prevent a possible escalation.

The rate of DALYs for bipolar disorder shows a relatively stable trend over the same period, with DALYs per 100,000 population remaining around 50. This indicates that the burden of bipolar disorder has not fluctuated significantly over the decade. The consistent rate suggests that existing treatment and management strategies may be effectively maintaining the condition's impact at a steady level, though it also points to the necessity for continued support and resources to ensure adequate care for individuals affected by bipolar disorder (Figure 5).

The burden of MDD increased in 2020, with rates rising from approximately 340 DALYs per 100,000 population in 2012 to about 400 by 2021. This increase may reflect heightened recognition and diagnosis of depression, as well as external factors such as the COVID-19 pandemic exacerbating mental health issues. The rising trend in DALYs for depression highlights the critical need for enhanced mental health services and increased access to care to manage this growing public health concern (Figure 5).

The standardized schizophrenia burden showed a relatively stable rate of around 250 DALYs per 100,000 population from 2012 to 2021, indicating that efforts in treatment and management had prevented any substantial improvement.

Figure 5: Mental Health Burden in China

Source: Global Disease Burden 2021 and IHME 2022; where the rate of DALYs is expressed as a rate per 100,000 in the population.
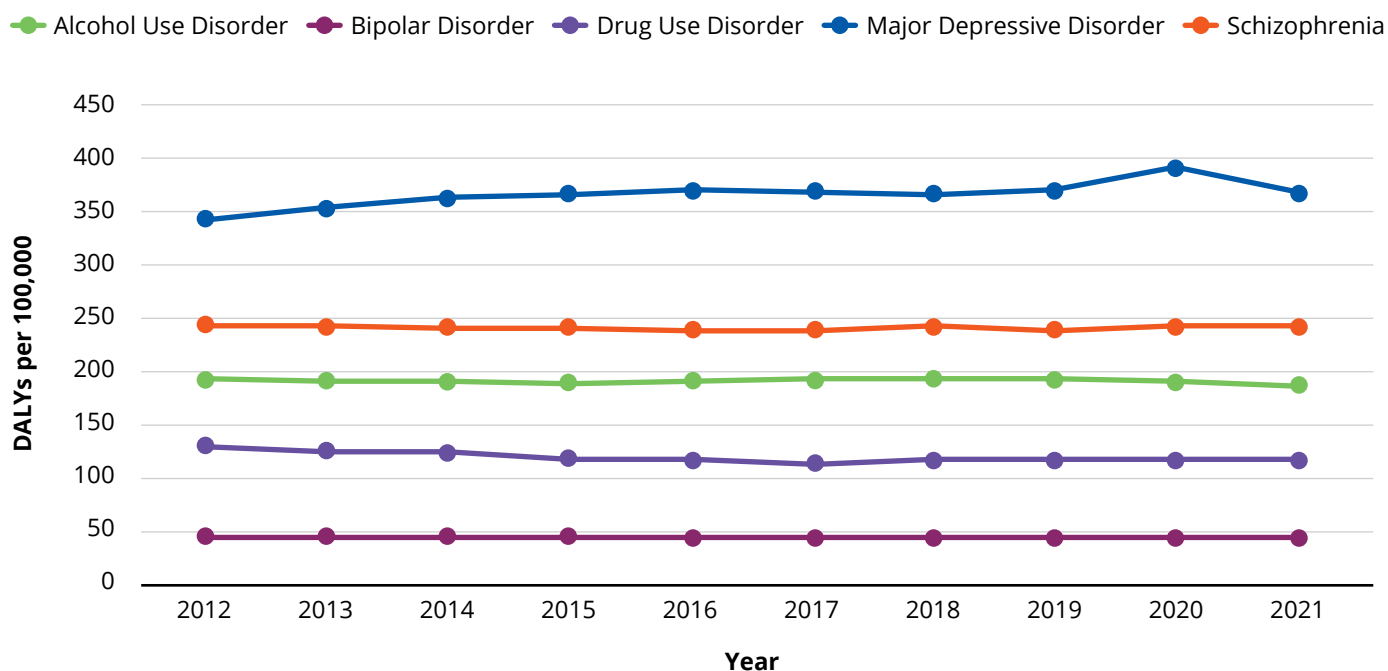
B Health System Review

China's healthcare system involves a three-tier hospital classification system that designates hospitals as primary, secondary, or tertiary based on their ability to provide medical care, education, and research (Huang et. al., 2019). The healthcare insurance system covered almost 96% of the population, benefiting over 1.36 billion people. This system includes government-provided basic medical insurance and commercial health insurance offered by various companies. Additionally, urban-rural medical aid funds assisted economically disadvantaged individuals with serious illnesses (Li et al., 2017). Despite increases in health budgets, there were issues such as insufficient medical insurance funds, non-uniform insurance reimbursement policies, and uneven distribution of medical resources, particularly in rural areas (Li et al., 2017; Zhang et al., 2019).

C # Economic Burden

Official data for public and private mental health expenditures in China were not generally available or have not been reported, a finding confirmed through correspondence with leading mental health scholars and WHO leadership. From the available research data, it was evident that the total economic burden of mental health in China was less than that of the United States and the United Kingdom. This observation, however, did not consider purchasing power parity (PPP) adjustments, nor did it account for variations in healthcare costs and economic conditions between countries. A comprehensive understanding requires context-specific data, which remained a significant gap in the literature (Dawes et al., 2024b; Kadakia et al., 2022).

The economic burden of mental health conditions in China, as reported in specific studies, highlighted significant challenges. The indirect burden of mental health was reported to be CNY 2,163.14 per DALY in 2019 ($350.71 per DALY, USD 2021) (Lizheng et al., 2019). Direct burdens were substantially lower; for instance, the economic burden per DALY for severe mental illnesses was reported as CNY 26.01 in 2017 ($4.30 per DALY, USD 2021) (Lizheng et al., 2019). These figures indicated that while the overall financial impact of mental disorders was substantial, it remained less pronounced compared to high-income countries. For example, in the United States, the indirect burden of mental health was significantly higher, ranging from USD 12,529.7 to 31,540.3 per DALY (Dawes et al., 2024).

Wu et al., (2022) explored the significant economic burden associated with depressive symptoms amongst middle-aged and elderly individuals with chronic diseases in China. Utilizing data from the 2018 China Health and Retirement Longitudinal Study (CHARLS), the research examined the impact of depressive symptoms on healthcare utilization, healthcare costs, and productivity loss across twelve common chronic diseases. The findings indicated that depressive symptoms substantially increase healthcare costs, with total additional costs ranging from 3.1% to 85.0% depending on the chronic severity of the condition. Notably, individuals with cancer or malignant tumors faced the highest additional healthcare costs, averaging CNY 17,273.7 (2,2827.35 USD adjusted 2021) annually. Moreover, the study highlighted that depressive symptoms were associated with increased outpatient visits and self-medication, though the effect on hospitalization rates was less pronounced (Wu et al., 2022).

Productivity loss was another significant aspect of the economic burden linked to depressive symptoms. The productivity loss amongst individuals with depressive symptoms constituted between 1.6% and 90.1% compared to patients without depressive symptoms, varying by condition. The highest productivity loss was observed in patients with cancer or malignant tumors, amounting to an additional CNY 2,196.2 (359.47 USD adjusted 2021) annually. This economic loss was primarily driven by absenteeism and reduced work efficiency, particularly in agricultural labor. The study found that while depressive symptoms increase the productivity loss for individuals with chronic conditions, this effect did not necessarily escalate with the number of chronic diseases, suggesting that the binary existence of a chronic conditions played a more critical role than the total number (Wu et al., 2022).

Xu et al., (2016) provide a detailed analysis of the economic impact of mental health conditions in China over eight years. Using a prevalence-based, bottom-up approach, the researchers estimated the total economic burden, including direct medical costs, direct non-medical costs, and indirect costs associated with mental health conditions. The study revealed that the total annual costs of mental disorders increased significantly from $21.0 billion in 2005 to $88.8 billion in 2013, accounting for more than 15% of the total health expenditure in China and 1.1% of the nation's GDP. The findings underscore the substantial financial impact of mental disorders on both individuals and society, emphasizing the need for enhanced mental health policies and interventions (Xu et al., 2016).

The analysis indicated that direct medical costs represented a significant portion of the economic burden, with hospitalization costs constituting the largest share. The study found that these costs had a greater impact on rural populations, due to lower income levels and higher prevalence of mental disorders in rural regions. Additionally, the study noted that indirect costs, primarily due to disability and productivity loss, were considerable, further exacerbating the financial strain on affected individuals and their families (Xu et al., 2016).

Overall, addressing depression and its comorbidities remains crucial for reducing the overall economic burden of mental health conditions. Effective management and treatment strategies could focus on comprehensive care that includes mental health as a core component of chronic disease management. This approach could mitigate the significant economic impacts observed and improve the overall quality of life for individuals with chronic and mental health conditions.

D Resource Assessment

China's mental healthcare system faces considerable challenges despite recent improvements. Approximately 130 million adults suffer from mental health conditions annually, but access to treatment and care remains limited, especially in rural and underdeveloped areas (Wang et al., 2020). In 2015, there were 2,936 mental health facilities, including psychiatric hospitals and units in general hospitals, with psychiatric beds increasing to 585,289 by 2019. Mental illnesses account for over 15% of healthcare expenditure and 1.1% of GDP. Public health insurance covers 50% of outpatient and 75% of inpatient mental healthcare costs, leaving a substantial financial burden on low-income individuals (Wang et al., 2020).

Human resources in China's mental health sector are inadequate, particularly in western regions and community mental health sectors. Psychiatrists (39.1%) and nurses (38.9%) are the main providers of psychotherapy in psychiatric hospitals, while clinical psychologists (6.9%) and counselors (5.0%) are significantly scarce (Zhou et al., 2018). From 2013 to 2020, both inpatient and outpatient admissions increased, with inpatient admissions rising from 86 to 142 per 100,000 and outpatient visits more than doubling from 1,814 to 3,732 per 100,000 (World Health Organization, 2020a).

Despite improvements, the mental health system requires better data on mental health expenditures and more equitable resource distribution to address the persistent disparities.

Notwithstanding the growing mental disorder burden, access to treatment was documented to be low. Research revealed that only 9.5% of persons with depressive disorders received treatment, and very rarely (0.5%) was treatment adequate (Ma et al., 2023). Mental health services were concentrated in large specialty hospitals rather than community and primary health care, which encouraged the long-established pattern in China of going directly to large hospitals for specialist treatment, rather than first seeing a general practitioner. Further, mental health had long been neglected in China, partly because of a deep-rooted cultural stigma. Discussing mental health remains taboo amongst many communities (Ma et al., 2023).

In addition to the stigma-related access barriers, financial access barriers continued to persist. According to a recent study examining the impact of various medical policies on the economic burden of patients with severe mental disorders (SMDs) in Beijing, China, among 4940 participants, the average outpatient expenses of patients with SMD who incurred medical expenses were CNY 8373.61 (1,357.61 USD adjusted 2021) and the average hospitalization expenses were 81,594.05 Yuan (13,228.84 USD adj. 2021) (Xin et al., 2024). The OOP expenses were 29.22% of outpatient expenses and 8.13% of inpatient expenses. For context, the per capita healthcare expenses in Beijing were 3,475.8 Yuan (563.53 USD adjusted 2021), and the per capita hospitalization cost was 23,426.5 Yuan (3,798.14 USD adjusted 2021). Despite the existence of medical policies designed to subsidize these costs, the study demonstrated that patients with SMD continued to experience a substantial economic burden, highlighting the need for further policy improvements to address these challenges more effectively (Xin et al., 2024).

E Policy Options

Given the lack of comprehensive data, it is challenging to provide specific recommendations or strategies for the treatment of SMI and its financing. Considerations for future policies should include ensuring equity in access to mental health services, establishing a standard set of care for both urban and rural populations, addressing stigmatization, and improving financial access to care. These elements are critical to creating a more inclusive and effective mental health care system. Additionally, understanding of the post-COVID-19 trends in mental health, particularly the exacerbation of mental health conditions due to the pandemic, is essential for formulating responsive policies (Wu et al., 2022). The significant increases in healthcare costs and productivity losses associated with depressive symptoms called for policy interventions to address mental health as a critical component of chronic disease management. Wu et al. advocated for the implementation of effective care models that integrate psychiatric and primary care services to improve health outcomes and reduce the economic burden on both individuals and the healthcare system. Given the rising prevalence of depressive symptoms among the elderly with chronic conditions, especially in rural areas, addressing these mental health challenges is crucial for mitigating the broader socio-economic impacts (Wu et al., 2022).

General recommendations could take on many forms, including:

1. **Increasing Mental Health Funding**

   Allocating more funding for mental health services, particularly in rural and underserved areas. Ensuring that mental health spending is proportional to the burden of mental health conditions.

2. **Expanding Access to Community-Based Mental Health Services**

   Developing community-based mental health services to reduce the reliance on large psychiatric hospitals. Training primary care providers in mental health care to improve early detection and intervention.

3. **Strengthening Mental Health Workforce**

   Increasing the number of trained mental health professionals, including psychiatrists, psychologists, and social workers. Providing incentives for professionals to work in rural and underserved regions.

4. **Implementing National Mental Health Awareness Campaigns**

   Launching nationwide campaigns to reduce stigma associated with mental health issues and promote mental wellness. Focusing on increasing public awareness and understanding of mental health.

5. **Integrating Mental Health into Primary Care**

   Strengthening the integration of mental health services into primary care settings. Training primary care providers to recognize and treat common mental health conditions.

6. **Improving Data Collection and Research**

   Enhancing data collection and research on mental health conditions, expenditures, and outcomes to inform evidence-based policy decisions. Developing standardized data reporting mechanisms across regions.

7. **Expanding Coverage Under Public Health Insurance**

   Ensuring that mental health services, including outpatient and inpatient care, are adequately covered under public health insurance schemes. Reducing out-of-pocket expenses for mental health care.

8. **Focusing on Vulnerable Populations**

   Developing targeted programs for vulnerable populations, including children, adolescents, the elderly, and individuals with severe mental illnesses. Ensuring these groups have access to appropriate care and support.

In Focus:
Germany

(A) Disease Burden Review

Germany faced a high burden of mental disorders, with mental and substance use disorders accounting for 9.23% of total DALYs, according to IHME, (2021). Schizophrenia and drug use disorders constituted 54% of the total DALYs from mental disorders.

Figure 6 further demonstrates the trend of the burden and impact of the most severe mental health conditions in Germany. Figure 6 provides a detailed look at the burden of alcohol use disorder, drug use disorder, bipolar disorder, and major depressive disorder in Germany (2012 – 2021).

The burden of Alcohol Use Disorder shows a relatively stable trend around 400 DALYs per 100,000 population throughout the ten years. For Drug Use Disorder, the graph reveals a consistent pattern with rates fluctuating around 250 DALYs per 100,000 population. This stability, similar to alcohol use disorder, points to ongoing challenges in addressing drug-related health issues pointing to a need for possibly enhanced public health strategies to mitigate the impact of drug use disorders in Germany.

Figure 6: Mental Health Burden in Germany

Source: Global Disease Burden 2021 and IHME 2022; where the rate of DALYs is expressed as a rate per 100,000 in the population.
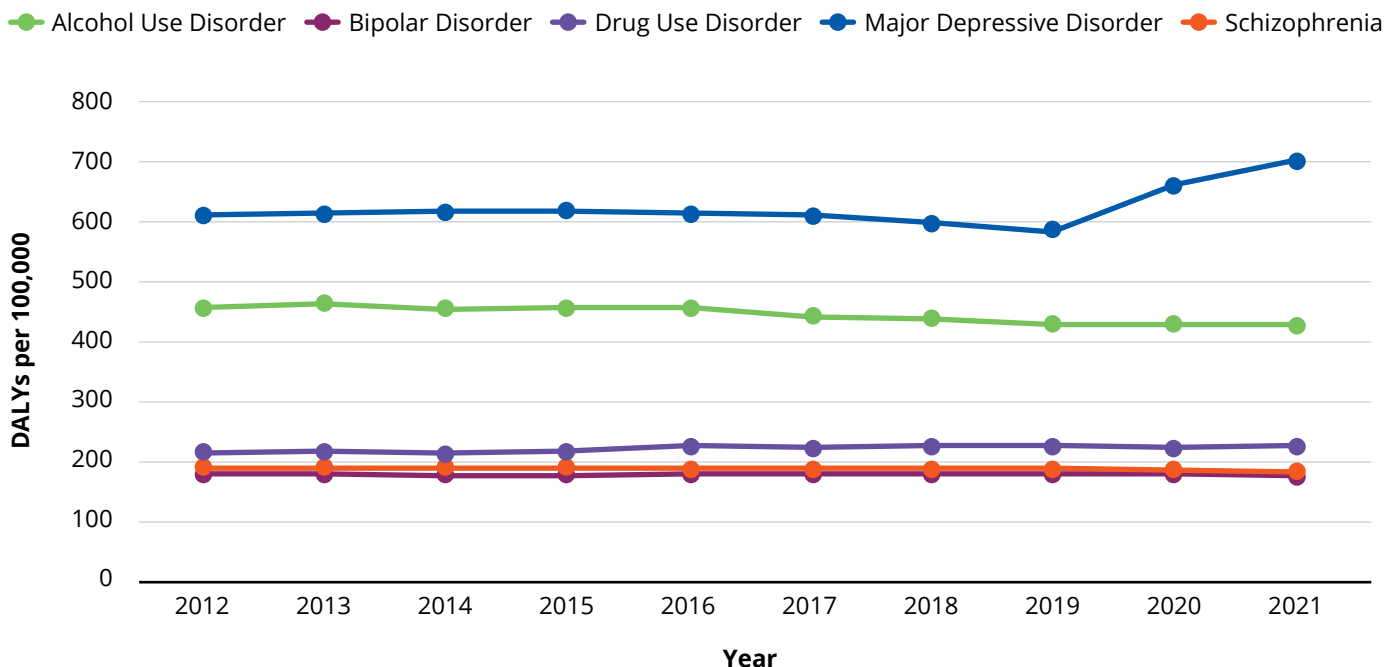
The trendline for bipolar disorder reveals a burden of 180 DALYs per 100,000 population from 2012 to 2021. In contrast to the relatively stable burden of bipolar disorder, the rate of DALYs for Major Depressive Disorder shows a notable increase, particularly from 2018 onwards, rising from about 800 to 1,000 DALYs per 100,000 population by 2021. This increase may be attributed to heightened recognition and diagnosis of depression, as well as the exacerbation of mental health issues due to external factors such as the COVID-19 pandemic. The rising trend emphasizes the urgent need for expanded mental health services, improved access to care, and targeted interventions to address the growing burden of depression in Germany.

Overall, Figure 6 depicts the persistent and growing challenges of mental health disorders in Germany. The stable trends for alcohol use, drug use, and bipolar disorders suggest that while the current interventions are preventing increases, more efforts are needed to achieve significant reductions. The rising burden of major depressive disorder underscores the critical need for enhanced mental health resources and policies to address the increasing prevalence and impact of depression.

B   Health System Review

While Germany has a well-established mental healthcare system, gaps remain in service provision and access. The mental health workforce is relatively well-distributed, but there are regional disparities in service availability with access to care limited in rural areas (Jacobi et al., 2014).

Germany has a statutory health insurance (SHI) system. Mental health services (both treatment and pharmacological care) are covered by insurance; this includes treatments for MDD, bipolar disorder and schizophrenia. For all of these conditions a range of treatments are covered such as mood stabilizers and antipsychotic medications being commonly prescribed and reimbursed for bipolar disorder and antipsychotic medications for schizophrenia.

The treatment approach for schizophrenia also included psychosocial interventions and rehabilitation services aimed at improving patient outcomes and quality of life. The financing system supported these treatments, although OOPs could still pose a burden for some patients, especially for non-reimbursed medications or additional therapeutic services (OECD, 2020).

Government expenditures on mental health comprised 13 percent of the country's total mental health expenditure (at 531.3 EUR per person per year; 645.12 USD adjusted 2021); data on the spending at the disease- and severity-specific level were not identified in the academic literature (at the national level) (World Health Organization, 2020b).

Furthermore, the stigma associated with mental health issues continued to be a barrier to seeking care. Financial access remained another critical consideration, as OOPs could be significant for low-income individuals, highlighting the need for more comprehensive coverage and support mechanisms.

C Economic Burden

Despite the robust financing system, there were challenges in ensuring equitable access to mental health services across different regions, particularly in rural areas. The distribution of high-quality mental health resources remained uneven, concentrated in larger urban centers. This disparity necessitated policies aimed at improving access and resource allocation in underserved areas (Zhou et al., 2018).

Very few studies have investigated how direct and indirect costs on health conditions varied by condition severity level. Among the studies identified in our research, only one estimated the direct and indirect excess costs of mental health conditions in Germany by severity level.

The economic burden of schizophrenia in Germany was substantial, with an annual cost per patient amounting to €11,304 from the payers' perspective and €20,609 from the societal perspective (between 15,929 – 29,041 USD adjusted 2021) (Frey, 2014). Schizophrenia patients utilized significantly more healthcare resources than the general population, with higher rates of inpatient treatment, outpatient visits, and drug prescriptions. The costs varied by age, with the highest direct medical expenses seen in patients over 65 years due to increased nursing care costs, while younger patients incurred higher non-medical costs due to lost productivity (Frey, 2014). The total annual burden of schizophrenia on German society ranged between €9.63 billion and €13.52 billion (between 13.57b – 19.05b USD adjusted 2021), reflecting its significant impact on both direct and indirect costs, including informal care and lost productivity (Frey, 2014). Despite the comprehensive healthcare system in Germany, schizophrenia remained a high-cost disease requiring targeted interventions to reduce its economic impact effectively.
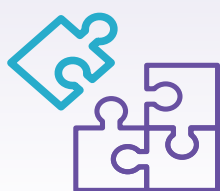
D Resource Assessment

Medication and Treatment Costs

Germany's approach to mental health treatment included a combination of pharmacological and non-pharmacological therapies. These treatments were generally covered under the SHI system, which reduced the financial burden on patients. However, OOP payments still existed for non-reimbursed medications and additional services; OOP payments could be significant, particularly for therapies not covered by insurance, highlighting a potential area for policy improvement to ensure comprehensive coverage.

Mental Health Financing for Major Disorders

Germany's financing for mental health, particularly for MDD, bipolar disorder, and schizophrenia, included comprehensive coverage through its SHI system, which covered the majority of the population. The SHI ensured access to both pharmacological treatments and therapeutic interventions. For MDD, treatments typically included a combination of psychotherapy and antidepressant medications, which were fully or

partially reimbursed under SHI. Similar coverage was provided for bipolar disorder, with mood stabilizers and antipsychotic medications being commonly prescribed and reimbursed (Federal Ministry of Health, 2023).

Schizophrenia

Schizophrenia treatment in Germany involved antipsychotic medications, which were largely covered by SHI. The treatment approach for schizophrenia also included psychosocial interventions and rehabilitation services aimed at improving patient outcomes and quality of life. The financing system supported these treatments, although out-of-pocket expenditures could still pose a burden for some patients, especially for non-reimbursed medications or additional therapeutic services (OECD, 2020).

Inpatient and Outpatient Care Costs – MDD in Germany

In Germany, the costs associated with mental disorders, particularly inpatient and outpatient care, were substantial yet well-funded. A study in Kiel reported the annual cost of inpatient care for depression at approximately EUR 2.85 million in 2016 (3.67m USD adjusted 2021), averaging EUR 8,844.69 per patient (11,377.08 USD adjusted 2021) (Zaprutko et al., 2018). This indicates that, unlike some countries, outpatient admissions have also seen significant increases withrobust usage of available services.

E Policy Options

Germany faces ongoing challenges in ensuring equitable access to mental health services across different regions, particularly in rural areas. The distribution of high-quality mental health resources was uneven, with a concentration in larger cities. This disparity necessitates policies aimed at improving access and resource allocation in underserved areas. Although SHI covered both pharmacological and therapeutic treatments, the actual uptake of these services was impacted by regional availability and the presence of trained mental health professionals. There was a pressing need for policies that incentivize the distribution of mental health resources to underserved areas, including financial incentives for professionals willing to work in rural settings and the expansion of telepsychiatry services to bridge the gap in access.

There was a need for more comprehensive data on the economic costs associated with these conditions, particularly regarding indirect costs like absenteeism, presenteeism, and the broader impact on family members who may provide care. Additionally, further research is required to understand how these costs vary by severity level and across different regions, as this would inform a more targeted and efficient allocation of resources.

The stigma associated with mental health issues continued to be a barrier to seeking care. Efforts to destigmatize mental health through public awareness campaigns and education are crucial for encouraging individuals to seek help. Financial access remained another critical consideration, as OOP costs can be significant for low-income individuals, highlighting the need for more comprehensive coverage and support mechanisms (Federal Centre for Health Education, 2023).

General recommendations can include:

1. **Reducing Regional Disparities**
   Developing targeted policies to reduce regional disparities in mental health service provision, particularly in rural areas. Providing financial incentives for mental health professionals to work in underserved regions.

2. **Increasing Funding for Mental Health Research**
   Allocating additional resources for mental health research to better understand the burden of mental health conditions and developing effective treatment and prevention strategies.

3. **Promoting Community-Based Mental Health Care**
   Shifting the focus from hospital-based care to community-based mental health services. Increase funding for outpatient care and community mental health centers to provide accessible, integrated care.

4. **Enhancing Training and Education**
   Investing in the training and education of mental health professionals, particularly in the areas of early intervention, child and adolescent psychiatry, and geriatric psychiatry.

5. **Improving Coordination Between Health and Social Services**
   Strengthening coordination between health and social services to provide comprehensive care for individuals with mental health conditions, including support for housing, employment, and social integration.

6. **Expanding Digital Health Solution**
   Promoting the use of digital health solutions, such as telepsychiatry and digital mental health platforms, to improve access to care, particularly in underserved areas.

7. **Addressing Stigma and Promote Mental Health Literacy**
   Implementing public awareness campaigns to reduce stigma and promote mental health literacy. Encouraging community engagement and support networks to improve mental health outcomes.

8. **Ensuring Equitable Access to Care**
   Reviewing and adjusting co-payment policies to reduce financial barriers to accessing mental health care, ensuring that vulnerable populations have equitable access to necessary services.

In Focus:

Japan

A   Disease Burden Review

Figure 7 provides a comprehensive overview of the DALYs for various mental health conditions from 2012 to 2021. These conditions include alcohol use disorder, drug use disorder, bipolar disorder, MDD, and schizophrenia. The graph highlights the trends in the burden of these conditions, expressed per 100,000 population, over the decade.

For alcohol use disorder, the rate of DALYs per 100,000 population in Japan remained relatively stable around 100 DALYs throughout the period. This stability indicates that the burden of alcohol use disorder had not significantly fluctuated, suggesting consistent levels of alcohol-related health issues. This could reflect steady state conditions in terms of alcohol consumption patterns and the effectiveness of public health interventions.

The rate of DALYs for drug use disorder showed a slight but steady decline from about 100 DALYs per 100,000 population in 2012 to approximately 60 by 2021. This downward trend pointed to some success in reducing the health impact of drug use disorders, potentially due to effective public health measures and increased access to treatment options. This decline is a positive indicator of the progress made in managing and mitigating the effects of drug use.

For bipolar disorder, the rate of DALYs remained relatively stable around 100 DALYs per 100,000 population over the ten-year period. This suggested that the burden of bipolar disorder has not seen significant changes, indicating that current treatment and management strategies may be effectively maintaining its impact at a steady level. However, it also underscored the need for ongoing support and resources.

The rate of DALYs for MDD showed a notable increase around 2020, rising from about 400 DALYs per 100,000 population in 2012 to approximately 500 by 2021. This increase, particularly in the latter half of the 2010s, reflected heightened recognition and diagnoses of depression, as well as the impact of external factors such as the COVID-19 pandemic exacerbating mental health issues. The rate of DALYs for schizophrenia remained stable around 250 DALYs per 100,000 population, suggesting that while the prevalence remained significant, treatment and management efforts have not curbed the overall burden. Continued investment in mental health services is crucial to maintaining and ideally reducing the burden of schizophrenia – ultimately improving outcomes for those affected by the disorder.

Figure 7: Japan Mental Health Burden in DALYS per 100,000

Data from IHME, 2024. Health System Review.
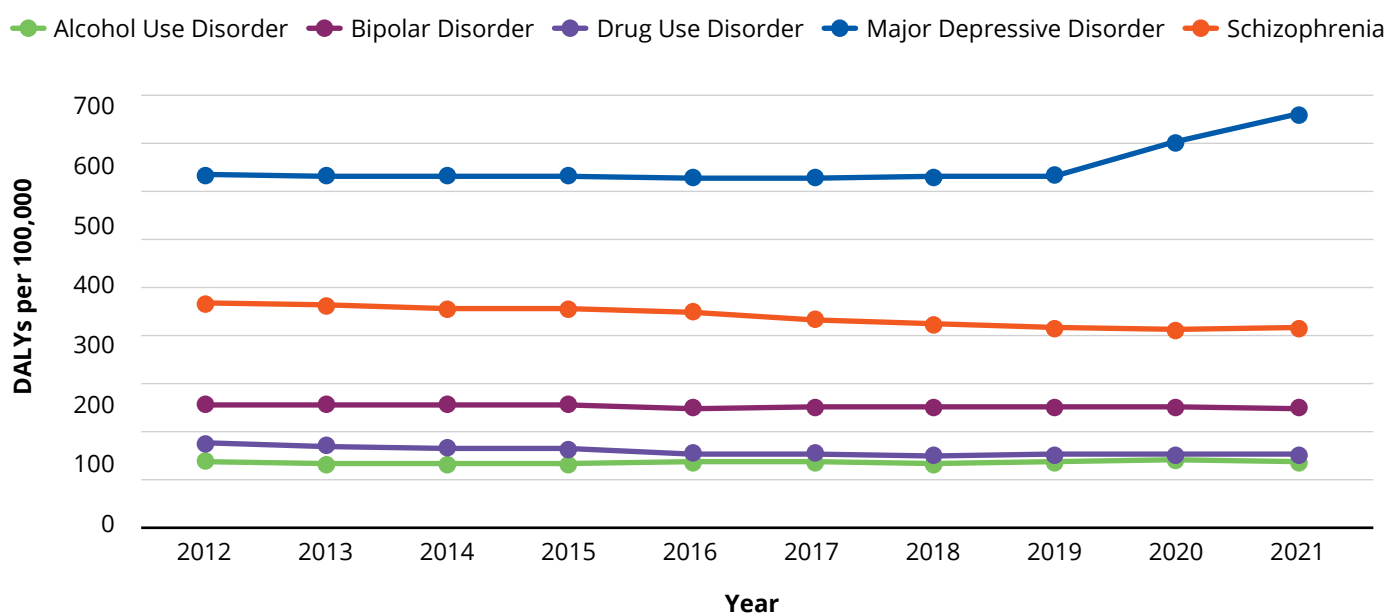

B Health System Review

Financing Structure

Japan's mental health financing is primarily supported by its universal health insurance system, which includes the National Health Insurance (NHI) and Employee's Health Insurance (EHI). These schemes ensure that nearly all residents have access to healthcare services, including mental health care. The system provides significant reimbursement for mental health services, although OOP payments still exist, particularly for non-covered treatments or high-cost medications. Despite the comprehensive coverage, OOP expenses impose a financial burden on patients, particularly for those requiring long-term or intensive care.

C Economic Burden

Severe mental health conditions such as schizophrenia, MDD, and bipolar disorder impose a substantial economic burden on Japan's healthcare system. Schizophrenia, for instance, incur direct medical costs estimated at approximately ¥275 billion annually ($2.55 billion, USD 2021), primarily due to the high costs associated with inpatient care and long hospital stays (Ministry of Health, Labour and Welfare, Sado et al., 2018). The economic burden of depression and bipolar disorder similarly included significant costs related to medications, hospitalizations, and lost productivity (Japan Health Policy NOW, 2021).

D Resource Assessment
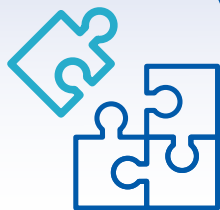
Japan's universal health insurance system provides extensive coverage for mental health services, yet the system faces significant challenges, particularly concerning the treatment of severe mental health conditions like schizophrenia and MDD. While the Integrated Community Care System for Mental Disorders represents a significant shift towards community-based care, the implementation of this system has been uneven, with some regions lacking the necessary infrastructure and resources to support community-based mental health services.

Moreover, Japan's aging population presents a challenge for its mental health system. The prevalence of mental health conditions like dementia and depression is expected to increase as the population ages, placing additional strain on the healthcare system. There is a pressing need for policies that address the mental health needs of the elderly, including the expansion of geriatric mental health services and support for caregivers.

E Policy Options

Japan's mental health care policies emphasize a shift from hospital-based care to community-based services. The Integrated Community Care System for Mental Disorders aims to reduce reliance on long-term hospitalizations by enhancing outpatient services and expanding non-pharmacological treatments such as cognitive behavioral therapy (CBT). This strategy also involves improving support systems for patients transitioning from inpatient to community settings, thereby promoting more sustainable and effective care models (Japan Health Policy NOW, 2021).

To address regional disparities and improve mental health literacy, the Japanese government is working on policies that support equitable access to mental health services across different regions. Efforts are also being made to enhance data collection and analysis to support evidence-based policymaking. These initiatives aim to optimize resource allocation and improve the overall quality of mental health care in Japan, ensuring that the healthcare system can effectively address the needs of its aging population and the growing prevalence of mental health conditions (Japan Health Policy NOW, 2021).

Future policies could include:

1. **Expanding Community-Based Mental Health Services**
   Transitioning from a hospital-based model to a community-based care approach.
   Strengthening community mental health centers and support services to provide accessible,
   integrated care.

2. **Increasing Funding for Mental Health Services**
   Allocating additional funding to mental health services to address the growing burden
   of mental health conditions, particularly due to an aging population.

3. **Promoting Integration of Care Services**
   Enhancing the integration of mental health services with primary care and other sectors,
   such as social services and long-term care, to provide holistic care for individuals with
   mental health conditions.

4. **Enhancing Workforce Training and Retention**
   Developing targeted training programs for mental health professionals, including geriatric
   psychiatry and community mental health. Providing incentives to retain professionals
   in underserved areas.

5. **Strengthening Digital Mental Health Services**
   Promoting the use of digital mental health services, such as telepsychiatry, to improve access
   to care, especially in rural and underserved areas. Ensuring that these services are covered
   under health insurance schemes.

6. **Improving Mental Health Literacy and Reducing Stigma**
   Implementing public awareness campaigns to increase mental health literacy and reduce
   stigma associated with mental health conditions. Encouraging early intervention and
   support-seeking behavior.

7. **Developing Policies for Elderly Mental Health Care**
   Developing specific policies and
   programs to address the mental health needs of the elderly, particularly for conditions such
   as depression and dementia. Increasing support for caregivers and family members.

8. **Improving Data Collection and Policy Research**
   Enhancing data collection and research on mental health conditions, expenditures, and
   service outcomes to support evidence-based policymaking and improve resource allocation.

In Focus:

# United Kingdom

(A) Disease Burden Review

Figure 8 provides an in-depth look at the burden of alcohol use disorder, drug use disorder, bipolar disorder, MDD, and schizophrenia. The burden of alcohol use disorder has remained relatively stable in the United Kingdom, fluctuating around 400 DALYs per 100,000 population. This consistency suggests that while alcohol-related health issues are persistent, there had not been significant improvements or deteriorations over the period. Maintaining this stability will require ongoing and effective public health strategies to address alcohol use.

The rate of DALYs for drug use disorder indicated a more dynamic trend, with an initial increase from around 600 DALYs per 100,000 in 2012 to a peak near 700 DALYs, followed by a decline to about 550 DALYs by 2021. This pattern reflected the complex nature of drug use disorders and the varying impacts of public health policies and other social factors. The recent decline is a positive signal, potentially indicating successful interventions and improved access to treatment.

Figure 8: United Kingdom Mental Disorder Burden in DALYs per 100,000

Source: Global Disease Burden 2021 and IHME 2022.
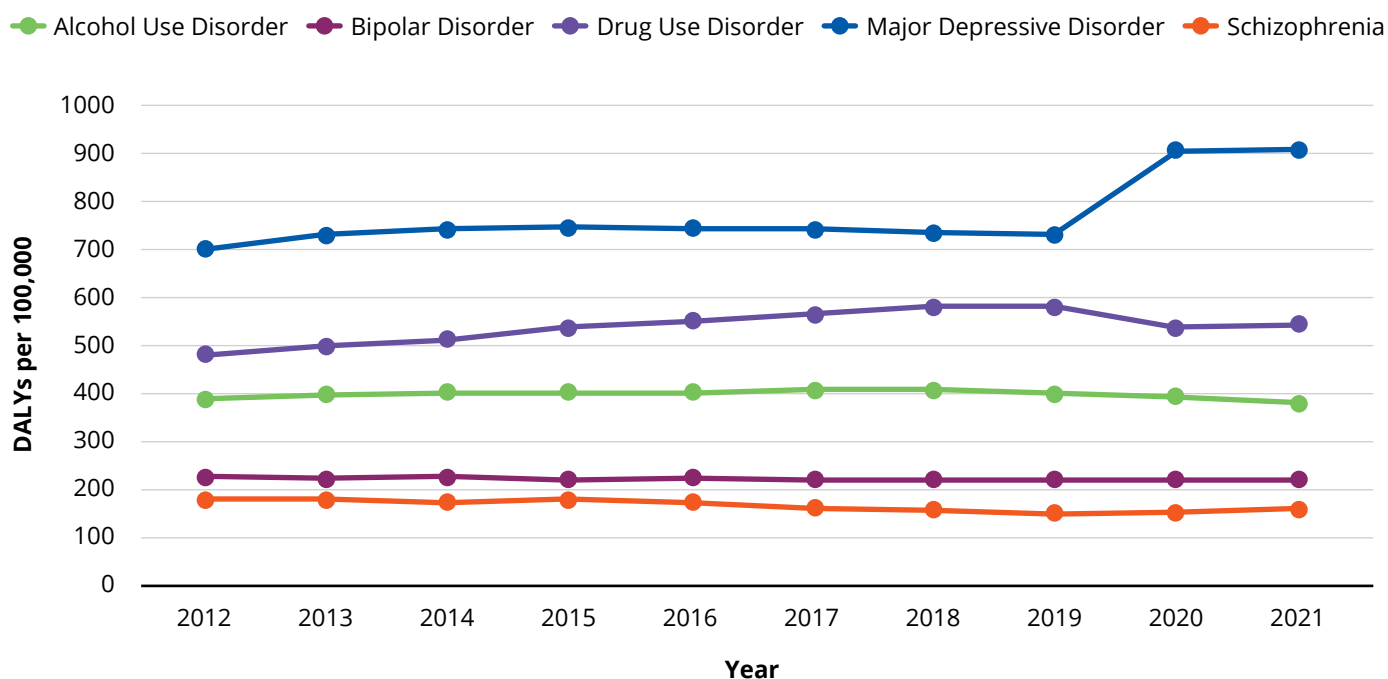
For bipolar disorder, the rate of DALYs remained stable at around 200 per 100,000 population throughout the decade, suggestive of consistent management and treatment outcomes. It also highlighted the need for continued resource management and support for individuals with bipolar disorder to maintain the stability.

Major Depressive Disorder showed a significant increase in DALYs starting around 2020, rising from approximately 800 to 1,000 DALYs per 100,000 population by 2021. This spike was likely influenced by the COVID-19 pandemic, which had exacerbated mental health issues globally. The rising trend emphasized the urgent need for expanded mental health services and interventions to address the growing burden of depression.

Schizophrenia showed a gradual decline from about 200 DALYs per 100,000 population in 2012 to around 150 by 2021. This decline suggests that there have been improvements in the management and treatment of schizophrenia, potentially due to advances in medical treatments and supportive services. The reduction in DALYs reflected positive progress but also underpinned the importance of continuing these efforts to further reduce the burden of schizophrenia on individuals and society.

B   Health System Review

Historically, funding for mental health services in the United Kingdom has been insufficient relative to the population's needs and the significant impact of mental illness on the GBD. Despite increases in funding, the demands on mental health services have outpaced these financial improvements, largely due to unforeseen factors such as the COVID-19 pandemic, increased demand for mental health care, and higher-than-expected inflation. The ambition to implement new waiting time targets and reforms to the Mental Health Act (1983) has introduced additional costs, though the timeline for these reforms remains indefinite (Mental Health Team (NHS Digital), 2021).

The British Medical Association and the Royal College of Psychiatrists had estimated that an additional £2.3 billion to £2.5 billion in funding would be required in 2023/24 to meet the growing demands on mental health services. This estimate reflected a significant financial shortfall that must be addressed to improve mental health care provision. A survey of mental health trust leaders indicated widespread concerns about the sufficiency of this investment. There was a prevailing belief that current methods for increasing investment did not ensure that funds were allocated effectively at a local level to the highest priority areas. Furthermore, there was a lack of transparency regarding the actual increase in frontline provider spending (Mental Health Team (NHS Digital), 2021).

Historically, financial constraints have had a tangible impact on mental health services. Recent surveys indicated these constraints limit providers' ability to deliver core services and expand the mental health workforce. The financial limitations were particularly problematic given the increasing demand for mental health services and the complex needs that arose from the pandemic and other economic pressures. As a result, the capacity to meet the mental health needs of the population was compromised, indicating a critical need for a more strategic and transparent allocation of resources (Mental Health Team (NHS Digital), 2021).

C Economic Burden

Specific data on the costs associated with severe mental health conditions underscored the economic burden. The annual cost of schizophrenia alone in the UK, including both direct medical costs and indirect costs such as lost productivity, was estimated to be around £11.8 billion (20.31b USD adjusted 2021). Bipolar disorder similarly incurred significant costs, with estimates suggesting an annual economic burden of approximately £5.2 billion (7.56b USD adjusted 2021). Anxiety disorders and MDD were also capital intensive, with MDD accounting for an estimated £7.5 billion annually (10.35b USD adjusted 2021). Substance use disorders added to the financial strain, with the costs of alcohol misuse disorders estimated at £3.5 billion annually (5.2b USD adjusted 2021). These figures highlighted the severe financial impacts of mental health conditions on the United Kingdom economy, necessitating substantial investment and efficient allocation of resources to manage these disorders effectively (Mental Health Team (NHS Digital), 2021; OECD, 2022)).
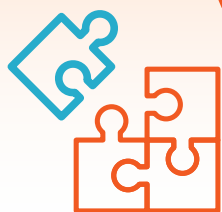
D Resource Assessment

While there have been increases in mental health funding in the United Kingdom, these have not kept pace with the growing and evolving demands. The additional financial requirements identified by leading medical organizations point to a substantial funding gap. Addressing this gap will require not only increased investment but also more effective and transparent allocation of resources to ensure that funds are directed appropriately to critical areas of need. The ongoing challenges underscore the importance of continued advocacy and policy efforts to achieve true parity between mental and physical health care, ultimately improving outcomes for individuals with mental health conditions (Mental Health Team (NHS Digital), 2021).

E Policy Options

While the National Health Service (NHS) provides extensive coverage for mental health services, the system faces significant challenges, particularly concerning the distribution of resources and workforce shortages. Recent surveys indicate that financial constraints are limiting the ability of providers to deliver core services and expand the mental health workforce, especially in underserved areas.

Policies that address these challenges include increased funding for mental health services and targeted investments in workforce development. Additionally, improving the transparency and efficiency of resource allocation within the NHS can ensure that funds are directed to the most critical areas of need. Expanding community-based care and reducing reliance on inpatient services could help to improve access to care and reduce overall costs.

Future policies could include:

1. **Increasing Mental Health Funding**
   Allocating additional funding specifically for mental health services to meet the growing demand, especially in light of increased mental health needs following the COVID-19 pandemic.

2. **Improving Access to Services**
   Expanding mental health services in underserved areas, including rural and deprived urban areas. Increasing the availability of community-based mental health services and ensure that all regions have sufficient mental health care providers.

3. **Establishing Clear Spending Mandates**
   Ensuring that funding for mental health services is ring-fenced and that local health authorities allocate these funds specifically to mental health. Improving transparency in how mental health funds are spent to ensure they reach frontline services.

4. **Enhancing Workforce Capacity**
   Expand training programs for mental health professionals, including psychologists, psychiatrists, and mental health nurses. Introduce retention incentives to reduce turnover and increase recruitment, especially in underserved areas.

5. **Implementing Preventive Measures**
   Developing comprehensive mental health prevention strategies, including school-based mental health programs and workplace wellness initiatives. Focusing on early intervention and support for at-risk groups.

6. **Promoting Integration of Services**
   Strengthening the integration of mental health services across different levels of care (primary, secondary, and tertiary) and with other sectors such as social care, housing, and employment services.

7. **Developing a National Mental Health Dashboard – Including Economic and Financing Data**
   Creating a centralized dashboard to monitor mental health indicators, track service provision, and measure outcomes across the country. Using this data to inform policy and resource allocation.

8. **Expanding Support for Youth Mental Health**
   Increasing funding for child and adolescent mental health services (CAMHS) to address rising demand. Implementing school-based mental health support programs and provide training for teachers to recognize early signs of mental health issues.

Limitations of this study

Data Availability and Completeness

The study acknowledges gaps in data availability, particularly in the economic burden and healthcare spending data by disease category and severity across the countries analyzed. These gaps limited the ability to conduct a fully comprehensive analysis and may result in conclusions that need to be interpreted with caution.

Variability in Methodologies of Cited and Integrated Studies

Different methodologies were used to collect and analyze data across the countries. This variability can introduce inconsistencies and make direct comparisons challenging. The study relied on various sources, some of which may have used different criteria or measures, potentially affecting the comparability of results.

Limited Scope of Mental Health Conditions

The study focused on specific mental health conditions, such as major depressive disorder, schizophrenia, bipolar disorder, and substance use disorders. While these are significant contributors to the global mental health burden, the exclusion of other conditions may limit the comprehensiveness of the analysis.

Assumptions in Economic Burden Estimations

The economic burden estimates, particularly those involving indirect costs like productivity loss, rely on assumptions that may not capture the full complexity of economic impacts. These assumptions might not fully account for factors such as comorbidities, regional economic differences, and the informal care burden.

Generalizability of Findings

The findings are based on data from high-income countries and one upper-middle-income country (China). The generalizability of these findings to other contexts, particularly low- and middle-income countries, may be limited due to differences in healthcare systems, economic conditions, and cultural factors affecting mental health care and policy.

Stigma and Cultural Differences

The study may not fully account for the role of stigma and cultural differences in mental health care access and utilization, particularly in countries like China and Japan, where stigma surrounding mental illness is more pronounced. This could affect the accuracy of reported data and the interpretation of findings.

Reliance on Secondary Data

Much of the analysis is based on secondary data sources, which can introduce biases depending on the original data collection methods and reporting standards. The study's conclusions are therefore contingent on the accuracy and completeness of these secondary sources.

Conclusion

The comprehensive analysis of mental health financing across high-income countries revealed significant disparities and challenges, particularly in the context of severe mental illnesses such as schizophrenia, MDD, bipolar disorder, anxiety, and substance use disorders. While existing research tended to focus on singular aspects of the overarching NCD and mental health agendas, this report seeks to bridge gaps by integrating data on economic impact, system readiness, and financing. The findings underscore the necessity for targeted interventions improved funding mechanisms, and evidence-based and cost-effective financing strategies targeted to specific conditions and to enhance mental health outcomes.

The lack of data on mental health financing at the country level (UK, China, Japan, Germany) and the lack of reporting and studies on the direct and indirect cost burden revealed a large implementation and health data coordination gap. To create evidence-based policies that are responsive to fiscal constraints and pre-empt the rising burden of SMI, global and national recommendations are needed to improve data availability on mental health costs, burden, and treatment access.

These recommendations are outlined below:

Recommendations for Improving Mental Health Cost, Burden, and Treatment Access Data

1. Standardization of Data Collection Methods

- Develop and implement standardized protocols for collecting data on mental health costs, disease burden, and treatment access across different countries and regions. These protocols could be guided by international institutions such as the WHO and the Organization for Economic Co-operation and Development (OECD) to ensure consistency and comparability. Although some data collection protocols like the OECD System of Health Accounts (SHA) are in place, reporting to global organizations remains inconsistent. Even in most high-income countries, mental health spending – particularly condition-specific spending – is often inadequately reported.

2. Enhanced Data Reporting by National Health Systems

- National health agencies could regularly report detailed data on mental health expenditures, including breakdowns by specific conditions, severity levels, and demographic groups. These reports would ideally include both direct medical costs (e.g., hospitalizations, medications) and indirect costs (e.g., lost productivity, social welfare).

3. Integration of Mental Health into Health Information Systems

- Integrate mental health data into broader national health information systems to ensure that mental health is tracked alongside other health conditions. This integration would include electronic health records (EHRs) that can provide real-time data on treatment access, outcomes, and costs.

- Use health information exchanges (HIEs) to facilitate data sharing between different healthcare providers and institutions, improving the continuity of care and the accuracy of data collected on mental health services.

4. Promotion of Data Collection in Low- and Middle-Income Countries

- Support the development of data collection infrastructure in LMICs through international funding and technical assistance. This includes capacity building for local researchers and healthcare providers to gather and analyze mental health data.

- Encourage global health organizations to invest in longitudinal studies and surveillance systems that track mental health financing trends over time in LMICs, helping to fill current data gaps.

5. Public-Private Partnerships for Data Sharing

- Establish partnerships between public health agencies, private healthcare providers, and pharmaceutical companies to share anonymized data on mental health treatment and outcomes. These partnerships can help pool resources and data, providing a more comprehensive understanding of mental health trends.

- Encourage private sector stakeholders, such as insurance companies, to contribute data on mental health claims and expenditures, which can provide insights into treatment access and cost trends.

6. Use of Technology and Big Data

- Leverage big data analytics and machine learning techniques to process large datasets from various sources, including social media, electronic health records, and insurance claims, to identify trends and gaps in mental health treatment access and burden.

- Promote the use of mobile health (mHealth) tools to collect data directly from individuals, especially in remote or underserved areas. These tools can gather information on mental health symptoms, treatment adherence, and outcomes, providing real-time insights into population-level mental health.

7. Improved Mental Health Surveys and Research

- Conduct regular, nationally representative mental health surveys that include questions on treatment access, barriers to care, the direct and indirect costs of care, and the financial impact of mental health conditions. These surveys should be designed to capture data across different population groups, including marginalized communities.

- Encourage academic and research institutions to focus on mental health economics, studying the relationship between mental health expenditures and health outcomes to identify cost-effective interventions and policies.

8. Global Collaboration and Data Sharing

- Foster global collaboration between countries, international organizations, and research institutions to share mental health data and best practices. This can include creating global databases that compile and harmonize data from different sources, providing a resource for researchers and policymakers.

- Support initiatives like the WHO's Mental Health Atlas and the GBD study, which aim to provide comprehensive data on mental health worldwide.

Key Country Financing and Policy Takeaways

United States

The United States faces a substantial public health challenge from mental health conditions, which account for approximately 14% of the global burden of disease in DALYs. The economic burden was significant, with schizophrenia alone costing around $155 billion annually and bipolar disorder adding an estimated $45 billion (Kadakia et al., 2022). Out-of-pocket expenses remain a concern, particularly for those without comprehensive insurance coverage. To address these issues, the U.S. should enforce mental health parity laws such as the Mental Health Parity and Addiction Equity Act (MHPAEA) and expand Medicaid to reduce financial barriers. Increasing the number of mental health professionals, estimated at 7,400 additional providers, is crucial to improving service access (National Alliance on Mental Illness, 2020; Substance Abuse and Mental Health Services Administration, 2021). Expanding telehealth, integrating mental health into primary care, enhancing funding for community-based services, and addressing social determinants of health can further reduce disparities. Additionally, improving data collection and promoting public awareness can enhance resource allocation and reduce stigma, fostering a supportive environment for individuals with mental health conditions.

China

China's mental healthcare system is evolving, with substantial efforts to improve coverage and access. The economic burden of mental health conditions, particularly schizophrenia and depression, was significant, accounting for approximately 1.1% of GDP in 2013 (Xu et al., 2016), with schizophrenia alone costing about $20.5 billion annually (Wu et al., 2022). However, stigma and limited access, especially in rural areas, likely lead to underreporting of the burden. Expanding community-based services and enhancing insurance coverage for mental health care could help address these challenges. Strengthening the mental health workforce, integrating mental health services into primary care, and conducting nationwide awareness campaigns to reduce stigma are critical steps. Improved data collection and research on mental health financing are needed to inform policy decisions and better allocate resources. Expanding public health insurance coverage can also help reduce financial barriers, improving access to care for vulnerable populations.

Germany

Germany's SHI system provides comprehensive coverage for mental health services, but the economic burden remains high. Schizophrenia alone imposes substantial costs, ranging between €9.63 billion and €13.52 billion annually ($13.57b – $19.05b, adjusted 2021), with total mental health costs representing 4.8% of the total health expenditure. Focusing on reducing regional disparities by incentivizing professionals to work in underserved areas and expanding community-based services, could assist in enhancing mental care. Strengthening outpatient services, reducing OOP expenses, and supporting psychosocial interventions and rehabilitation services are essential for improving access and equity (Jacobi et al., 2014; OECD, 2021). Increasing funding for mental health research, enhancing coordination between health and social services, and promoting digital health solutions can improve care continuity. Efforts to reduce stigma and promote mental health literacy are also necessary to encourage timely care and support.

Japan

Japan's universal health insurance system ensures significant reimbursement for mental health services, yet conditions like schizophrenia, MDD, and bipolar disorder pose a heavy economic burden. The direct medical costs for schizophrenia alone are about ¥275 billion annually ($2.55b, adjusted 2021). Japan's Integrated Community Care System for Mental Disorders aims to shift from hospital-based to community-based services, promoting sustainable care models. However, regional disparities and long wait times for specialized services remain significant challenges. Focusing on transitioning to a community-based care model, increasing funding for mental health services, and enhancing care integration across sectors could provide possible solutions. Expanding digital mental health solutions, strengthening workforce training and retention, and conducting public awareness campaigns are vital steps. Developing targeted policies for elderly mental health care and improving data collection and research will help address the growing burden of mental health conditions given the aging population (Shiraishi & Reilly, 2019; OECD, 2021).

🇬🇧 United Kingdom

In the United Kingdom, mental health conditions like MDD and anxiety contributed significantly to the economic burden, with MDD alone costing the economy about £7.5 billion annually ($10.35b, adjusted 2021). Despite extensive NHS coverage, regional disparities and long waiting times, especially for services related to bipolar disorder, remain significant challenges, costing the NHS approximately £5.2 billion annually ($7.55b, adjusted 2021). Increasing total dedicated mental health funding, particularly for underserved areas, and ensuring transparent allocation to frontline services could help alleviate these pressures. Expanding community-based care and investing in preventative measures, such as youth mental health services, are essential to reducing reliance on inpatient services (Centre for Mental Health, 2010; NHS Digital, 2021). Enhancing workforce capacity through training and retention programs and developing a national dashboard to monitor mental health indicators can provide valuable data for more effective resource management and policy adjustments.

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Appendix

Figure A1: Trends in Global Disease Burden for All Mental and Substance Use Disorders, Including Confidence Intervals

Source: IHME Global database, 2024. Data directly taken and re-graphed from IHME's global database.
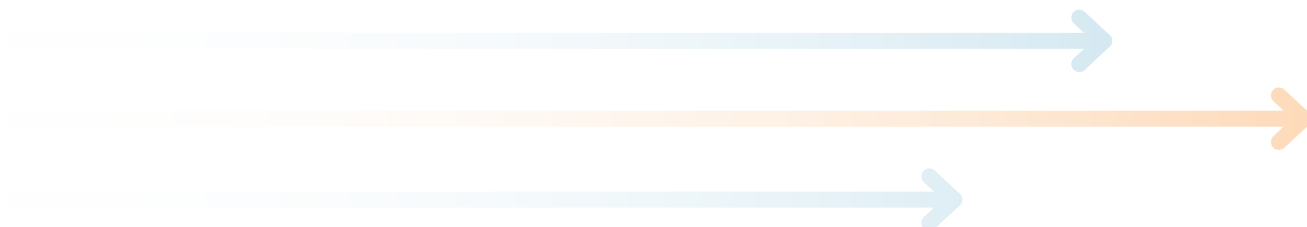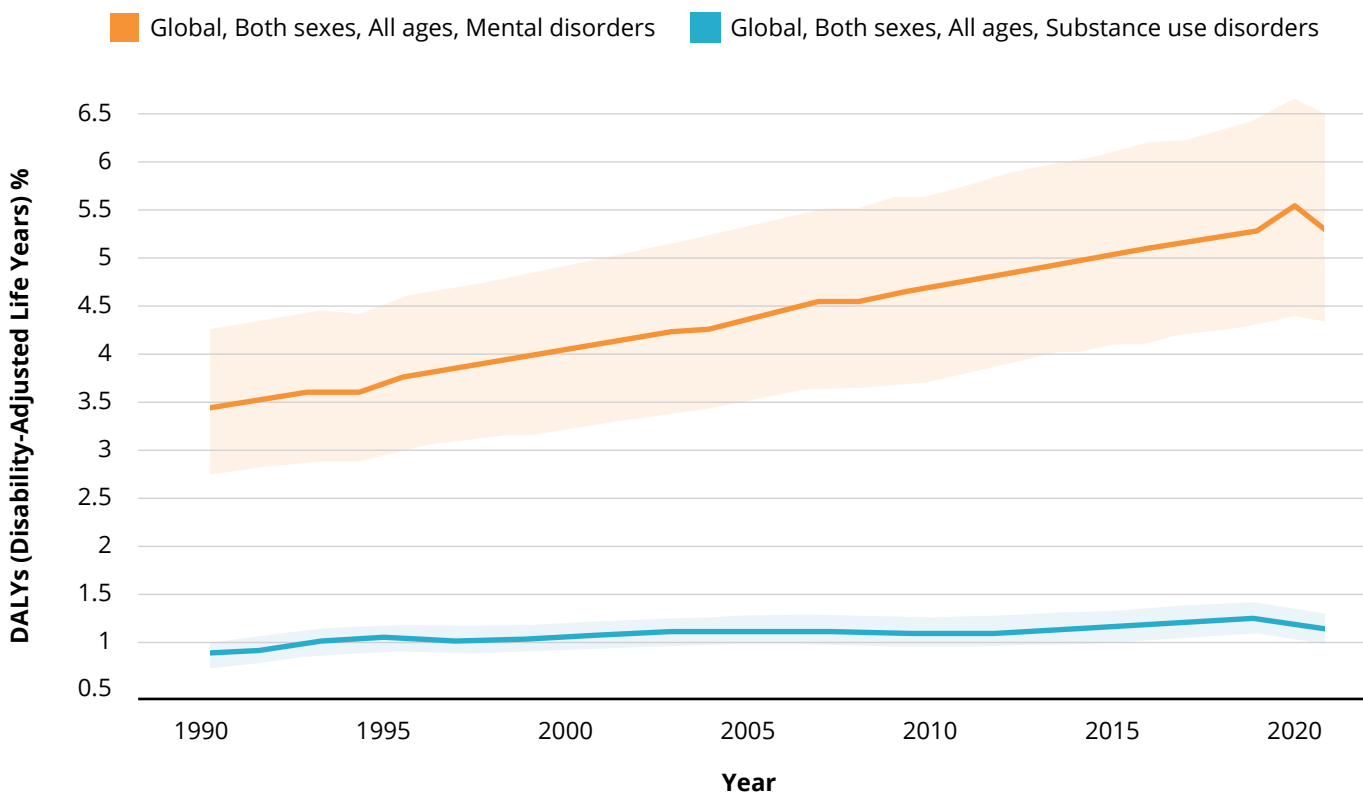
Methodology

For the analysis in this paper, the sustainable financing framework developed by the Emerald Research Consortium (Chisholm et al, 2016) was adapted and amended as follows (see Figure A2):

Figure A2: Methodology for each country analysis

The methodological approach was adapted and amended based on (Chisholm et al., 2016). Specifically, burden and resources spent are contrasted and incorporated into a resource assessment, thereby highlighting financing and resource gaps and/or distortions to inform health systems policy and financial planning debates.
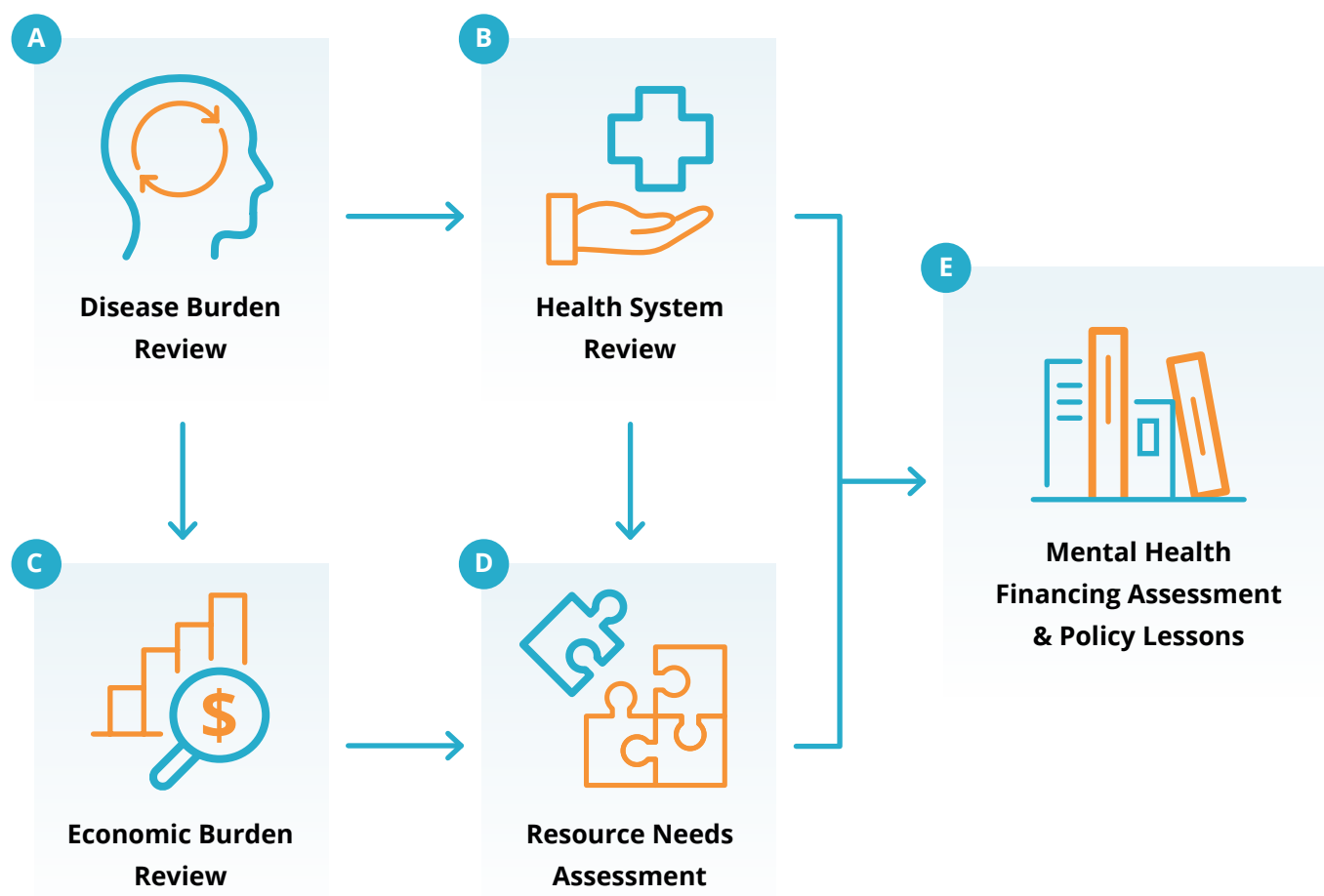
The analysis was conducted in five different phases: (A) Disease Burden Review, (B) Health System Review, (C) Economic Burden Review, (D) Resource Need Assessment, and E) Mental Health Financing Assessment and Policy Lessons (informed by the findings and comparisons of components A – D). Each methodological component is further described below. While a macro-fiscal assessment was not included as a separate section in each country analysis, macro-fiscal data were referenced across the report where applicable.

The analysis used data from five countries, the United States, the United Kingdom, Germany, China, and Japan. The countries were selected due to the major economic straddling that exists between the Americas, Europe, and Asia.

A Disease Burden Review

To comprehensively assess the burden of mental health conditions, this report focused on prevalent mental health conditions, including anxiety, depression, bipolar disorder, schizophrenia, attention deficit hyperactivity disorder (ADHD), and idiopathic developmental intellectual disability, with an emphasis on serious mental health conditions. This review involved consulting databases such as the Institute for Health Metrics and Evaluation (IHME) and PubMed to gather the latest data on disease prevalence, incidence, and DALYs. The analysis aimed to capture the global and national burden of these conditions, utilizing systematic reviews and meta-analyses from recent studies to provide a robust understanding of the current mental health landscape.

B Health System Review

To assess the healthcare systems in the United States, the United Kingdom, Germany, China, and Japan, this analysis focused on their capacity to deliver mental health services. For this report's purposes, capacity encompassed the integrated capabilities of healthcare infrastructure, human resources, data systems, insurance coverage, and the payer ecosystem. Data for these indicators were collected from global databases maintained by WHO and the Organization for Economic Co-operation and Development (OECD). Additionally, we reviewed national health policies and legal frameworks related to mental health financing, leveraging previous work conducted by health policy institutions. This analysis aimed to identify strengths and weaknesses in each country's healthcare system concerning mental healthcare provision (OECD, 2024a).

C Economic Burden Review

The economic impact of mental health conditions was assessed by reviewing available literature and data on the financial costs associated with healthcare utilization, lost productivity, and social welfare. This included direct costs (e.g., hospitalizations, medications) and indirect costs (e.g., absenteeism, presenteeism). Studies from databases like PubMed, Google Scholar, and national health expenditure reports were used to quantify the economic burden of mental disorders in the selected countries. This review aimed to highlight the significant economic implications of untreated and under-treated mental health conditions (Bloom et al., 2011; Trautmann et al., 2016).

D Resource Assessment
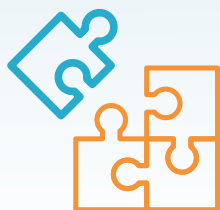
To identify the necessary resources to bridge the gap in mental health care, we examined disparities in healthcare access and service delivery. This involved analyzing the existing healthcare financing structure, including budget allocations and expenditures on mental health services. Data from global health financing databases and national budget reports were used to assess the adequacy of current funding levels. We also identified areas requiring additional investment to ensure equitable access to mental health care across different population groups (Patel et al., 2018). Where data were available, government spending on mental health over the past ten years of data availability and current fiscal year budgets were obtained and analyzed. This included disaggregating spending by condition type where available. Comparative analysis was conducted to assess financing for mental health relative to other health issues, identifying budget gaps in areas such as access to mental healthcare, out-of-pocket expenses, diagnosis, and prevention. Key global experts were consulted for data availability. Additionally, the WHO provided an internally prepared spreadsheet detailing the status of available data across the 194 WHO Member States, allowing for further analysis beyond the scope of the Mental Health Atlas 2020 report.

E Mental Health Policy Assessment

For the policy assessment of each country, both PubMed, GoogleScholar, and databases and consortia like the European Observatory on Health Systems and Policies, the Peterson-Kaiser Family Foundation health system tracker, and the WHO document databases were searched for the latest reviews and updates on policy trends and anticipated changes. The time frame for eligible studies was 2012 – most recent. The policy sections were augmented based on feedback of in-country policymakers and experts.

Correlation Between Care Gaps and Financing Inadequacies

This report assessed the correlation between existing care gaps and financing inadequacies, evaluating the effectiveness of investments in mental health services. This involved a comparative analysis of mental health systems, funding, and outcomes across the selected countries. The analysis aimed to identify best practices and areas needing improvement to enhance the efficiency and impact of mental health financing (Patel et al., 2018; Saxena et al., 2007).

The resulting recommendations focused on integrating mental health financing within the broader NCD and mental health agendas, advocating for the inclusion of mental health in national health plans and insurance schemes. This involved establishing arguments for integration based on comorbidities and current mental health outcomes. Stakeholder interviews and expert consultations were conducted to gather insights and refine the recommendations (Patel et al., 2018; World Health Organization, 2020c).

Severity Split Analysis

To support the disease burden analysis. A rapid review of the literature on severity level distributions for prevalent mental health conditions, including anxiety, bipolar disorder, alcohol and drug use disorders, schizophrenia, and depression was conducted. With methodological guidelines produced by the WHO and Cochrane, health systems researchers increasingly utilize the rapid review method to accelerate timelines for systematic evidence synthesis (Klerings et al., 2023; Tricco et al., 2017).

PubMed was searched on 6 June 2024 using the terms severity, GBD, and mental health. The search yielded just 11 results. Two independent reviewers (JL and TJ) screened each title and abstract to assess whether the article presented original data on severity split distributions for any mental health conditions at a global, national, or sub-national level. If an article did not meet these criteria, we excluded it from full-text review. After title and abstract screening, we excluded seven articles, leaving four for full-text review (Burstein et al., 2015; Ferrari et al., 2013, 2022; Santomauro et al., 2023). For each of these articles, we searched their citations to identify potentially relevant studies. Citation searching identified one additional paper (König et al., 2023).

We fully reviewed four articles to assess the extent to which comprehensive data on disease severity levels is readily available. Based on our review of these studies, we found that raw data for disease state severity splits by location for most mental health conditions are incredibly limited, confirming conclusions presented in The Lancet (2022) by the 2019 GBD Mental Disorders Collaborators. Using alternative methods to work around data gaps, the Collaborators developed a model and extrapolated 2019 global estimates for disease severity splits for 12 mental health conditions (Ferrari et al., 2022). Burstein et al. (2015) used data from Australian National Health Surveys and 2013 GBD data to create a model from which to extrapolate global (not location-specific) estimates of various health state severities, including for some mental health conditions. Similarly, Santomauro et al. (2023) developed a model using 2019 GBD data and extrapolated the severity distribution of anxiety disorders in Australia. Ferrari et al. (2013) employed similar methods to analyze 2010 GBD data and present severity proportions for depressive disorders.

Finally, to the extent data were available for the conditions of interest, country-level disorder severity splits from Burstein et al. (2015), Ferrari et al. (2022), and Santomauro et al. (2023) were extracted.

Overall health spending United States

The latest OECD Health Statistics revealed notable insights into health expenditure patterns. In 2022, total health expenditure in the United States was estimated at 16.6% of GDP. This expenditure is broken down into 14.1% voluntary or out-of-pocket spending and 2.5% government or compulsory spending (OECD, 2024b). These figures highlight the substantial role of private and OOPs in the overall health spending landscape, indicating a reliance on non-governmental sources for health financing.

Further disaggregation of health expenditure by type of financing in 2021 shows that 30% of health spending was covered by government schemes, 53% by compulsory health insurance, 1% by voluntary health insurance, 11% out-of-pocket, and 5% from other sources (OECD, 2024b). Notably, compulsory health insurance included spending by private health insurance, indicating a significant contribution from the private sector.

In 2021, public sources contributed significantly to total health expenditure. Specifically, government transfers accounted for 29% of the total health expenditure, while social insurance contributions added another 25%. Over the decade, from 2011 to 2021, there was an observable increase in the share of total government expenditure allocated to health, rising from 18.9% in 2011 to 21.4% in 2021. This trend reflects a growing commitment by governments to fund health services, underscoring the importance of public funding in maintaining and improving health infrastructure and services (OECD, 2024b).

Compulsory health insurance in 2021 was financed through a mix of sources. Government transfers made up 25% of the financing, social insurance contributions constituted 22%, and compulsory prepayments were the largest portion at 53%. There were no contributions from other sources.