

# The projected costs and economic impact of mental health inequities in the United States



Deloitte Health Equity Institute

*If left unaddressed, mental health inequities could lead to approximately US\$14 trillion in costs between now and 2040, according to estimates from the School of Global Health at Meharry Medical College and the Deloitte Health Equity Institute.*



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# Foreword

**M**ental health challenges are often the invisible counterpart to the much more visible chronic diseases that impact so many people in the United States, straining both our social fabric and our economy. Twenty-five years ago, when Dr. David Satcher released the first surgeon general’s report on mental health, he observed that there can be no health without mental health.<sup>1</sup> It is now clear that there can be no health equity without mental health equity.

Diseases of the brain impact our systemic health, which is impacted by the wider set of forces and systems shaping the conditions of daily life.

The important work in this report—a collaboration between the Meharry Medical College School of Global Health and the Deloitte Health Equity Institute—clarifies the connection between mental health inequities and the real costs that society incurs when it fails to address them. It is important to understand that both physical health and mental health are linked, and that the soaring cost of health care in the United States due to chronic physical health conditions will continue to rise until society tackles the mental health needs that exacerbate those issues. While much of the research on health care costs and health inequities focuses on chronic health conditions, for which data is widely available, this

report delves deeper into the intricacies of mental health inequities. This will likely remain a more challenging area to explore until it becomes less stigmatized and gains recognition as being just as important as other chronic health conditions.

This report is an important part of a bigger picture that we began to explore in a previous report, *The Economic Burden of Mental Health Inequities*.<sup>2</sup> In that report, we saw evidence from the recent past of the outsized toll mental health inequities took on our nation, including a cost of US\$278 billion linked to nearly 117,000 excess premature deaths among indigenous populations and racial and ethnic minoritized groups, between 2016 and 2020.<sup>3</sup> This report moves us forward by examining years of evidence to help national leaders anticipate the future of these trends through 2040.

Unfortunately, data shows that these trends continue to worsen. The projections are stark: a rapid rise in linked mental and physical disease, and rapidly rising costs as a result.

This report reveals the estimated financial consequences at stake when society allows mental health inequities to continue unabated. The authors hope that the insight provided within this report will help equip leaders to drive tangible change to address this important issue facing the nation.

**Daniel E. Dawes**  
Founding Dean, School of Global Health at Meharry Medical College

# Executive summary: Addressing mental health inequities for economic prosperity for all



**C**hronic physical health conditions related to poor mental health, along with additional medical expenditures and productivity loss due to mental health challenges, are unevenly distributed across society, resulting in inequities that not only harm individuals but also hinder economic prosperity.<sup>4</sup> Populations with mental health diagnoses face higher rates of other chronic illnesses, highlighting the interconnectedness of mental and physical health.<sup>5</sup>

Meanwhile, barriers to receiving care come from a number of factors—all of which have previously created complexities in understanding the full breadth of the cost of mental health inequities.<sup>6</sup> To address this gap in the research, the School of Global Health at Meharry Medical College and the Deloitte Health Equity Institute conducted an equity-focused quantitative analysis to better understand the connection between mental health inequities and costs incurred when they are not addressed.

At the current pace, according to researchers at the Centers for Medicare and Medicaid Services, health

spending in the United States is expected to grow by an average of 5.4% per year and is estimated to reach a 20% share of the country's gross domestic product by 2031, compared to the 17.3% share today.<sup>7</sup> To understand the scale of that growth in dollars, we look to previous Deloitte research, which estimated that health inequities accounted for approximately US\$320 billion in annual health care spending in 2022 and could grow to US\$1 trillion by 2040 if left unaddressed.<sup>8</sup> As such, this report's analysis underscores the urgent need for an equity-centered approach across government, health care, and business sectors to help mitigate the economic burden created by mental health inequities and the other chronic diseases they exacerbate, and to improve overall well-being.

Lower-income individuals bear a disproportionate burden of chronic conditions, exacerbating their economic challenges, while racial and ethnic disparities persist in health care, as this report's analysis demonstrates. Each of these key issues, reflected in the analysis, may not only lead to unnecessary health care spending but also contribute to productivity loss, especially among marginalized groups that face higher rates of unemployment due to mental health challenges.

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## KEY FINDINGS: CHRONIC PHYSICAL HEALTH CONDITIONS, EMERGENCY DEPARTMENT UTILIZATION, PRODUCTIVITY LOSS, AND PREMATURE DEATH

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The extensive quantitative analysis conducted for this report found the following:

- The United States currently spends an estimated US\$477.5 billion annually in avoidable and unnecessary expenses related to mental health inequities.
  - Under the current conditions, the United States is estimated to spend US\$1.3 trillion per year by 2040 on costs related to mental health inequities.
  - Between today and 2040, the projected cumulative cost attributable to inequities in mental health care is estimated to amount to US\$14 trillion.
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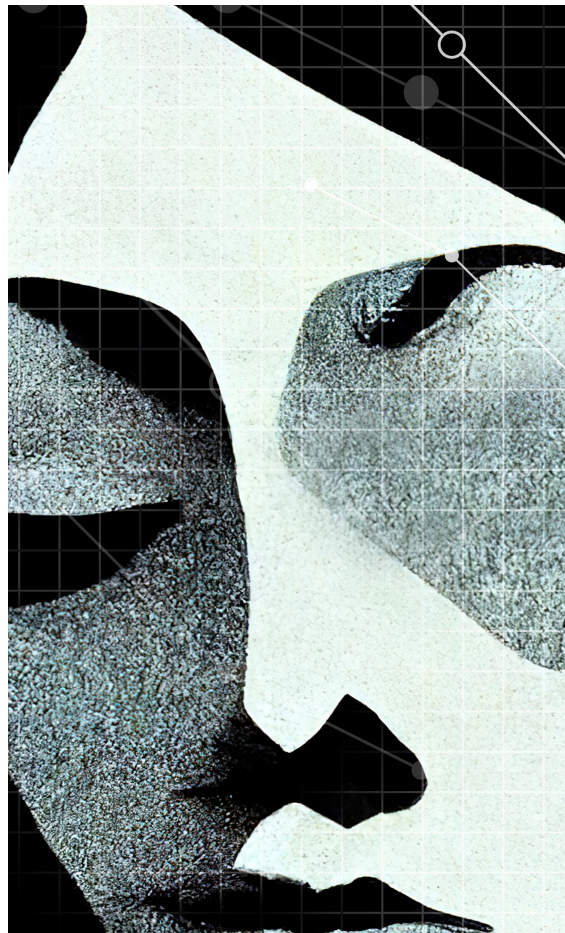
According to the World Health Organization, one strategy to address mental health inequities is through integrated care approaches, which can reduce cultural stigma, improve access to mental health services, lower health care costs, and enhance economic stability by ensuring equitable participation in the workforce.<sup>9</sup>

Both common sense and quantifiable trends highlight the importance of addressing mental health immediately:

- About 90% of American adults believe that the country is experiencing a mental health crisis,<sup>10</sup> and their opinions appear to be justified as prescriptions for antidepressants rose 15% between 2015 and 2019 for adults and 38% for adolescents.<sup>11</sup>
- Trends in mental illness and substance use disorders that were worsening prior to the pandemic have escalated since 2020. As of February 2023, over 30% of adults in the United States reported symptoms of anxiety and/or depression, according to a KFF analysis.<sup>12</sup>
- Between 2019 and 2021, deaths caused by drug overdose increased by 50%, according to KFF.<sup>13</sup>
- According to the February 2024 Axios/Ipsos American health index, “Americans see poor mental health as one of the biggest threats to public health.”<sup>14</sup>

Large gaps in mental health and related chronic disease incidence between populations represent major opportunities for leaders to make changes that simultaneously improve productivity, reduce costs, and enhance the quality of life. Taken separately, any one of these improvements could justify the effort and investment necessary to achieve mental health equity. However, the dovetailing of these benefits is what makes this a must-address issue.

To mitigate the worsening impact of poor mental health on our nation, society should address the underlying factors that contribute to these challenges. These include the broader political and social factors that form the fabric of people’s daily lives and shape their opportunities for a healthy lifestyle, along with access to care.



# Analyzing the rising costs of mental health inequities



**T**he economic burden of health inequities has been escalating over the years, as indicated by various studies. Although the burden of poor mental health in the United States continues to grow across all demographic groups, certain populations such as racial or ethnic minority groups, the justice-involved community (including incarcerated individuals, parolees, etc.), people living with disabilities, members of the LGBTQIA+ community, low-income individuals, and many others, have historically experienced challenges at a rate that is unsettlingly high.<sup>15</sup>

In a 2022 study, *The Economic Burden of Mental Health Inequities Report*, found that over a four-year span from 2016 to 2020, costs derived from mental health inequities alone amounted to an estimated US\$278 billion.<sup>16</sup> Add to that the costs that arise from physical health inequities, which a 2018 analysis estimated to be as high

as US\$451 billion.<sup>17</sup> These numbers mark a substantial increase from a 2009 report published by the Joint Center for Political and Economic Studies in Washington, DC, estimating the annual cost of physical health inequities at approximately US\$300 billion.<sup>18</sup>

To gain a broader understanding of the economic burden of mental health inequities the United States—including direct and indirect medical costs—Meharry Medical College’s School of Global Health and the Deloitte Health Equity Institute conducted an equity-focused quantitative analysis of data from Komodo Health and various government sources. We considered various types of expenditures that relate to mental health inequities that have not been explored in detail in other literature, ranging from chronic physical ailments like diabetes and hypertension, to productivity-related losses stemming from absenteeism and unemployment (see methodology).

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## UNDERSTANDING FREQUENTLY USED TERMS WITHIN THIS REPORT

**Mental health conditions, challenges, and illnesses** are frequently used interchangeably to characterize conditions that affect an individual’s thinking, feelings, behaviors, or mood.<sup>19</sup> For the purposes of this report, the terms *mental health* and *behavioral health* are often used interchangeably or in tandem, to highlight their close-linked nature and accurately reflect the literature.

**Mental health equity** is the right of all individuals, regardless of race, age, ethnicity, gender, disability, socioeconomic status, sexual orientation, or geographical location, to access high-quality and

affordable mental health care services and addresses systemic factors driving health inequities.<sup>20</sup>

**Political determinants of health** encompass the systematic process of structuring relationships, distributing resources, and administering power that collectively impact health equity.<sup>21</sup> These include policies, laws, and systems that change the structural conditions—such as access to transportation and health care—that influence and impact health outcomes. Political determinants of health can exist both at the formal level, seen in federal and local laws, and at the organizational level, through internal policies.

**Poor mental health outcomes** include a broad range of negative consequences resulting from undertreated or untreated mental health conditions, such as social isolation, impaired cognitive function, development of or worsening physical health conditions, and increased susceptibility to substance use. The root causes of poor mental health outcomes are influenced by a multitude of factors spanning social drivers and political determinants of health, which collectively impact one’s overall health and well-being.<sup>22</sup>

Across the 10 facets of expenditures we measured, excess costs arising from mental health inequities total an estimated US\$477.5 billion in 2024 (figure 1). The measured trends indicate that costs will continue to grow through and beyond 2040, when excess spending

in these categories alone are likely to exceed US\$1.3 trillion, with cumulative costs by that time totaling nearly US\$14 trillion. This equates to a cost to society of roughly US\$42,000 per person living in the United States.

Figure 1

## Excess costs arising from mental health inequities

The United States will spend an estimated US\$477.5 billion in avoidable and unnecessary expenses related to mental health inequities in 2024, according to our analysis, and those costs are expected to increase into the future.

	2024	2040
<b>Total expenditures</b>	<b>\$477.5 B</b>	<b>\$1.3 T</b>
<b>Chronic physical health conditions</b>	<b>\$23.9 B</b>	<b>\$76 B</b>
Diabetes	\$11.6 B	\$37.4 B
Stroke	\$2.9 B	\$9.2 B
Hypertension	\$3.9 B	\$12.6 B
Ischemia	\$3.2 B	\$9.1 B
HIV	\$2.4 B	\$7.8 B
<b>Emergency department overutilization</b>	<b>\$5.3 B</b>	<b>\$17.5 B</b>
<b>Productivity loss</b>	<b>\$116 B</b>	<b>\$252.3 B</b>
Absenteeism	\$7.4 B	\$11.4 B
Presenteeism	\$45.4 B	\$69.7 B
Unemployment	\$63.2 B	\$171.2 B
<b>Premature death</b>	<b>\$332.2 B</b>	<b>\$911.9 B</b>

Note: Projections in US dollars.

Source: School of Global Health at Meharry Medical College and Deloitte analysis of Komodo Health, Medical Expenditure Panel Survey, CDC WONDER, and the National Hospital Ambulatory Medical Care Survey data.



# What gives rise to higher mental health prevalence rates?



**T**his report focuses on prevalence rates as an indication of how common or prevalent mental health-related challenges are among distinct populations in the United States and the cost burden disproportionately placed on individuals and society as a result of inequities in those rates. This analysis is not intended to fully identify the underlying causes of those prevalence rates. However, previous research—from sources ranging from Johns Hopkins Bloomberg School of Public Health Professor Lisa Cooper to Harvard T.H. Chan School of Public Health Professor David Williams, to University of

California Davis Professor Ruth Shim—has shown that political and social determinants of health cause an often-unfair distribution of resources and opportunities, resulting in risk factors that are beyond the control of the individuals on whom they act.<sup>23</sup> It is well documented in research that demographic factors such as race and ethnicity are not risk factors in and of themselves.<sup>24</sup> However, political processes, societal structures, and social conditions contribute to variances in disease incidence for these groups, as well as outcomes for individuals experiencing those disease states.<sup>25</sup>

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## EXPLORING HOW HEALTH OUTCOMES ARE AFFECTED BY SOCIAL AND POLITICAL FACTORS

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The **political determinants of health** contribute to the social drivers—including poor environmental conditions, inadequate transportation, unsafe neighborhoods, and lack of healthy food options—that affect all other dynamics of health.<sup>26</sup> Stated another way, the political determinants of health are fundamental drivers of social factors that lead to the health outcomes observed in communities across the country. As the World Health Organization defines it, the social determinants of health are “the nonmedical factors that influence health, or the conditions in which people are born, grow, work, live, and age, that shape the conditions of daily life.”<sup>27</sup> The social determinants of health tend to exist largely due to preceding legal, legislative,

administrative, ordinance, or policy decision that created the subsequent social determinant.

These decisions, often found in legislatures, courtrooms, or boardrooms, are the very political determinants that impact our ability to achieve health equity. This report acknowledges the complex relationships among all these factors and others. Yet, it maintains a narrow focus on the quantifiable cost attributable to inequities in mental health outcomes.

Addressing mental health inequities, and the factors that drive these inequities, is both a moral and economic imperative. Furthermore, it is

important for national security and public safety, as the mental well-being of individuals is essential for maintaining a fit and sustainable military force and first responders.<sup>28</sup>

By prioritizing equity in mental health policies and practices and understanding the political determinants of health framework outlined in this report, leaders across diverse sectors could unlock significant economic benefits while helping to foster a healthier, more resilient society, and remove the economic burden that Americans may bear if society allows mental health inequities to compound.<sup>29</sup>

Why is an equity-focused approach important for both our common good and economic future? The disproportionate burden of mental health concerns felt by the demographic groups represented by the data in this report are associated with significant direct and indirect costs. Because these unnecessary costs are driven by inequities rooted in political and social determinants,

they are, by definition, *reversible*. Moreover, the United States is expected to become a majority-minority country around the year 2040, making it even more imperative that society take an equity-focused approach to help ensure that all groups, irrespective of their racial or ethnic backgrounds, are ensured optimal health outcomes.<sup>30</sup>

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## METHODOLOGY

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To gain a broader understanding of the economic burden of mental health inequities in the United States, the School of Global Health at Meharry Medical College and the Deloitte Health Equity Institute conducted an equity-focused quantitative analysis of data from Komodo's Healthcare Map,<sup>31</sup> the Medical Expenditure Panel Survey from the Agency for Healthcare Research and Quality, the Centers for Disease Control and Prevention's WONDER database, and the CDC's National Hospital Ambulatory Medical Care Survey. This analysis expands on the methodology utilized within Thomas LaVeist, Darrell Gaskin, and Patrick Richard's health disparities research described in the 2009 report, *The Economic Burden of Health Inequalities in the United States*.<sup>32</sup> While previous analyses have quantified the impact of mental health on productivity, they have not attempted to quantify the cost due to inequities specifically. Quantifying productivity lost as a result of inequities in mental health outcomes by race and ethnicity enabled this analysis to achieve a nuanced view of the interconnected relationship between mental and physical health.

This report highlights disparities experienced by three key population groups segmented by race and ethnicity, socioeconomic status, and age. Although other populations experience inequities in mental and behavioral health like those found in this study and are deserving of similar research that focuses on their circumstances, this report can be seen as a small window into a large issue. By employing a deliberate focus on these demographic populations,

this report can begin to quantify the disparities in outcomes—and the potential cost of mental health inequity associated with those disparities—in care related to four different types of costs:

- **Chronic physical health conditions:** Potentially avoidable medical expenditures related to the intersection of mental health inequities and physical health outcomes
- **Emergency department utilization:** Medical expenditures related to untreated or undertreated mental health conditions that resulted in avoidable emergency department utilization
- **Productivity loss:** Economic cost resulting from loss of productivity in the workforce due to mental health conditions
- **Premature death:** Economic cost resulting from deaths due to suicide, deaths associated with substance use disorders, deaths due to inadequate mental health treatment, and deaths due to mental illness associated with comorbid illnesses

Other population segmentations were considered, such as populations based on gender and sexual orientation, but due to data limitations, they were ultimately not included as part of our initial analysis. The exclusion of other populations should not be misunderstood as an assessment of their importance, nor of the likely scale of mental health

challenges among those groups. In fact, this report should be taken, in part, as a catalyst for additional research into additional populations.

Similar to LaVeist, Gaskin, and Richard's approach, for each analysis, a "baseline population" was identified to highlight the inequities that exist across races and ethnicities, socioeconomic statuses, and ages.<sup>33</sup> This baseline population is identified as having lower prevalence rates of chronic conditions, fewer days missed at work on average, or the lowest unemployment rates when compared across groups. This report proposes, based on the literature and original research, that, for groups experiencing higher incidence of chronic conditions compared to the "baseline population," the gap that exists is impacted by mental health inequities. The hypothesis is that with attention to the political and social determinants of health as well as increased access to equitable care, treatments, and supports, all prevalence rates, number of days missed from work, and unemployment would closely align with the baseline population. As a result of these lower incidences of chronic conditions, fewer missed days at work, and lower unemployment, the potential dollars that could be saved are calculated related to closing this gap.

For more insights into the methodology, see the supplemental appendix included on the [School of Global Health at Meharry Medical College's website](#).



# Research findings

The intersection of mental health inequities and physical health outcomes, emergency department utilization, productivity loss, and premature death

**M**ental health is the invisible counterpart to physical health. Previous studies have revealed that a person’s mental health can impact their physical health and vice versa.<sup>34</sup> Therefore, this study aims to quantify those who are suffering from concomitant chronic physical health conditions and mental health conditions, and when inequities exist to determine who is bearing more of the burden of disease. The analysis shared in this report identifies the estimated cost of five high-priority chronic physical health conditions associated with

excess spending that may be attributable to mental health inequities (figure 2).

To achieve a clear view of the issues under consideration in this study, a limited set of physical health conditions was considered. Diabetes, cardiovascular disease, stroke, and HIV were chosen due to their prevalence, cost to society, and known or suspected links to mental health.<sup>35</sup> For each physical health condition described in this report, an analysis of populations, including racial and ethnic groups, socioeconomic groupings, and age bands, was conducted to identify differences in the rates of mental

Figure 2

## Excess costs of care for five high-priority chronic physical health conditions attributable to mental health inequities

*If mental health inequities persist, the costs of treating chronic physical health conditions associated with these inequities are expected to grow significantly in coming years.*

	2024	2040	Cumulative (2024 to 2040)
<b>Chronic conditions</b>	<b>\$23.9 B</b>	<b>\$76 B</b>	<b>\$771.1 B</b>
Diabetes	\$11.6 B	\$37. B	\$377 B
Stroke	\$2.9 B	\$9.2 B	\$92.8 B
Hypertension	\$3.9 B	\$12.6 B	\$126.9 B
Ischemia	\$3.2 B	\$9.1 B	\$95.6 B
HIV	\$2.4 B	\$7.8 B	\$78.9 B

Note: Projections in US dollars.

Source: School of Global Health at Meharry Medical College and Deloitte analysis of Komodo Health and SAMHSA data.

health issues experienced by each group, the rates of certain other chronic conditions among each population, the overlap of those factors, and the excess cost associated with those differences. This analysis accounted for the co-occurrence of mental health and physical health conditions by observing primary and secondary diagnosis codes for each patient. This analysis did not segment patients separately based on the sequencing of their diagnoses. This is to say patients who were diagnosed with a mental health condition and then later diagnosed with diabetes are treated similarly to patients who first received a diabetes diagnosis and were then diagnosed with a mental health condition. The focus of this analysis was disparities in prevalence rates as opposed to sequentially tracking patient diagnoses.

Addressing equity in mental health is an important factor underpinning any success society will have in reducing inequities in mental health, improving chronic physical health disease management, and curtailing the rise of excess health spending. We examined the evidence to determine if it is possible to reduce the impact of mental health inequities, and if so, where leaders can find the most leverage to do so. At the current pace, according to research from the Centers for Medicare and Medicaid Services published in *Health Affairs*, health spending in the United States is expected to grow 5.4% per year and is expected to reach a 20% share of the country's GDP by 2031,<sup>36</sup> compared to the 17.3% share today. As those costs are expected to rise even further by 2040, this report emphasizes the importance of understanding the future mental health status of the United States and its impact on health and health care spending.

- At nearly all ages, those with mental health conditions have a higher prevalence of chronic physical health conditions.
- At nearly all ages, those with a chronic physical health condition have a higher prevalence of mental health conditions. Lower-income individuals with mental health conditions have higher prevalence of other chronic conditions compared to higher-income individuals.
- Among those with mental health conditions, higher prevalence rates of diabetes, HIV AIDS, and stroke are observed for lower-income populations when compared to higher-income individuals.



Fiscally responsible leaders in both government and business should find it necessary to reduce the cost of health care delivery. Demographic and cost trends indicate that spending will rise rapidly between now and 2040 as the populations that are disproportionately burdened grow in comparison to the baseline population. Our analysis reflects that mental health is likely implicated in the incidence and exacerbation of other high-priority chronic conditions—representing both a key challenge and an easy target for reforms that can reduce both inequities and costs. Although equity-centered initiatives will require additional targeted spending, the data indicates that achieving mental health equity can lead to the avoidance of the significantly higher burden that results from the need to manage a growing population of patients with inadequately treated mental health challenges and other chronic diseases.

If we fail to support our growing populations' mental health needs adequately and equitably, costs of treating chronic diseases associated with these inequities will likely quickly balloon out of control.

### **Cardiovascular disease**

Cardiovascular disease is the leading cause of death in the United States, and it is closely intertwined with mental health status.<sup>37</sup> For example, individuals with depression have a 40% higher risk of developing cardiovascular and metabolic diseases than the general population.<sup>38</sup>

People with serious mental illnesses are at even greater risk, as they are nearly twice as likely to develop these conditions.<sup>39</sup> Our analysis revealed that people ages 18 to 64 who have a mental health diagnosis are around two times more likely than those without such a diagnosis to experience cardiovascular disease.

These startling facts indicate that inequities in mental health care may play a large role in future cardiovascular disease outcomes and could be a key component of any strategy to reduce excess health care spending.

### Race and ethnicity

Cardiovascular disease statistics demonstrate that the value of reducing inequities will not always be experienced by individuals from racial and ethnic minorities,

as many would assume. Upon analyzing specific types of cardiovascular disease, including cerebrovascular disease, stroke, ischemia, and hypertension using claims data, the Hispanic population showed the lowest prevalence across all of CVD, but White and Asian populations tended to have lower prevalence in certain specific diseases.

What this shows is that while one might assume that the White, non-Hispanic population in the United States would be the group that sets the baseline. In looking closer, we can see that, in some cases, the White population would in fact be the beneficiary of reduced inequities. Figure 3 shows the baseline population for the cardiovascular diseases examined.

Figure 3

## Prevalence of cardiovascular disease and mental health conditions by race and ethnicity

*The co-occurrence of cardiovascular disease and mental health conditions appears correlated and consistent across racial and ethnic groups.*

	Prevalence of cardiovascular disease		Prevalence of mental health conditions	
	Among general population	Among population with mental health conditions	Among general population	Among cardiovascular disease population
Asian or Pacific Islander	14.0%	23.8%	9.5%	16.2%
Black or African American	13.5%	27.8%	15.4%	31.7%
Hispanic or Latino	11.3%	23.3%	14.1%	29.1%
White	14.6%	25.2%	20.4%	35.1%
Other	11.9%	23.5%	14.8%	29.1%
Unknown	12.1%	22.8%	15.3%	28.7%
<b>Population average</b>	<b>13.1%</b>	<b>24.6%</b>	<b>16.7%</b>	<b>31.3%</b>

Notes: United States, 2022 analysis.

Komodo uses self-reported data along with modeling to determine race and ethnicity fields. This field matches the 2020 Census most closely and is suggested for all studies and analyses that involve race and ethnicity. In the Komodo Data Dictionary, "unknown" means that the patient did not provide race or ethnicity information, and "other" means that the patient has a race or ethnicity other than White, Black, Hispanic, or Asian.

Source: School of Global Health at Meharry Medical College and Deloitte analysis of Komodo Health data.

### Socioeconomic status

For cardiovascular disease as a whole and for the specific disease states within cardiovascular disease, like stroke, the analysis shows that lower-income individuals bear more of the burden of the co-occurrence of cardiovascular disease and mental health challenges. The impact is significant, with stroke occurring around 3x more frequently among people with a mental health diagnosis than in the general population, as demonstrated within this analysis (figure 4). While stroke carries the highest risk of co-occurring with mental health diagnoses and cardiovascular disease, similar results were seen in ischemic heart disease, hypertension, and cerebrovascular disease.

### Age

This analysis revealed, the co-occurrence of cardiovascular disease with mental health is higher at each age band than in the general population, demonstrating that the presence of either condition correlates strongly with an increased likelihood of an individual being diagnosed

with the other. The prevalence of cardiovascular disease among those with a mental health diagnosis is higher at nearly all ages, compared to the prevalence of cardiovascular disease among the general population (figure 5).

### The economic burden of mental health inequities associated with cardiovascular disease

Poor mental health outcomes are a significant risk factor for cardiovascular disease, which is the leading cause of death in the United States—therefore, mental health care should be addressed with the same urgency as care for chronic physical health conditions.<sup>40</sup>

For communities that suffer from worse mental health, closing the gap in access to quality mental health care could also lead to a considerable decrease in the prevalence of premature death, emergency department visits, productivity loss due to cardiovascular disease, and all the costs associated with its management.

Nationally, our analysis estimates that extra costs of hypertension, ischemia, and stroke related to inequitable

Figure 4

## Prevalence of stroke and mental health conditions by type of health insurance coverage

*Mental health conditions are more prevalent among stroke patients on Medicaid, which serves low-income individuals, than among those covered by commercial health insurance plans or exchange plans.*

	Prevalence of stroke		Prevalence of mental health conditions	
	Among general population	Among population with mental health conditions	Among general population	Among stroke patients
Medicaid	0.1%	0.4%	20.2%	73.9%
Exchange	0.1%	0.3%	12.8%	42.9%
Commercial	0.1%	0.2%	14.6%	42.4%
Medicare Advantage	1.0%	2.9%	15.7%	46.8%
Other	0.1%	0.2%	11.7%	52.8%
<b>All</b>	<b>0.2%</b>	<b>0.5%</b>	<b>16.7%</b>	<b>54.4%</b>

Note: United States, 2022 analysis.

Source: School of Global Health at Meharry Medical College and Deloitte analysis of Komodo Health data.

Figure 5

## Prevalence of cardiovascular disease and mental health conditions by age

The co-occurrence of cardiovascular disease and mental health conditions appears correlated and consistent across all age groups.

	Prevalence of cardiovascular disease		Prevalence of mental health conditions	
	Among general population	Among population with mental health conditions	Among general population	Among cardiovascular disease population
0–4	0.7%	2.2%	10.6%	33.7%
5–11	0.8%	2.3%	14.7%	43.5%
12–17	1.5%	4.5%	19.2%	58.7%
18–25	2.4%	8.2%	17.6%	60.2%
26–34	5.2%	15.1%	21.2%	61.1%
35–49	13.2%	30.4%	19.2%	44.3%
50–64	28.8%	57.5%	14.2%	28.3%
65–74	39.7%	77.6%	11.1%	21.8%
75–84	52.2%	89.5%	9.3%	15.9%
85+	57.9%	93.8%	8.7%	14.2%
<b>Population average</b>	<b>13.1%</b>	<b>24.6%</b>	<b>16.7%</b>	<b>31.3%</b>

Note: United States, 2022 analysis.

Source: School of Global Health at Meharry Medical College and Deloitte analysis of Komodo Health data.

mental health care amount to US\$9.9 billion in 2024. As we project those costs into the future, we estimate the costs to total around US\$30.8 billion in 2040, amounting to a cumulative economic burden of US\$55.9 billion between now and the end of our projection period.

Beyond the economic costs, these findings highlight the interplay between mental health and cardiovascular health, strongly suggesting that addressing mental well-being is important if society is to deliver comprehensive cardiovascular care. Integrating mental health considerations into cardiovascular disease prevention and management strategies can help in promoting overall health and reducing the risk of cardiovascular events.

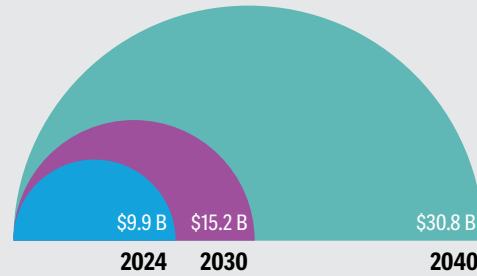
### Diabetes

The relationship between diabetes and mental health is intricate and bidirectional.<sup>41</sup> The analysis demonstrated that when an individual experiences mental health challenges, there is an even greater likelihood that they will be diagnosed with diabetes (nearly 50% higher risk, as compared to the general population’s likelihood of being diagnosed with diabetes). The CDC underscores that poor mental health can adversely affect the management and outcomes of diabetes, while research from the University of California San Francisco points out that people with severe mental illness face added risks of diabetes and *The Lancet Diabetes & Endocrinology* emphasizes the often-neglected comorbidity of poor mental health in individuals with diabetes.<sup>42</sup>

Figure 6

## Projected spending on hypertension, ischemia, and stroke due to mental health inequities

The costs of hypertension, ischemia, and stroke related to mental health inequities are expected to increase.



Note: Projections in US dollars.

Source: School of Global Health at Meharry Medical College and Deloitte analysis of Komodo Health and SAMHSA data.

The role of stress and trauma in the development of Type 2 diabetes has also been described by researchers at Stanford University School of Medicine, emphasizing the impact that psychological factors can have on other chronic disease risk.<sup>43</sup>

Further research links insulin resistance—a primary mechanism through which diabetes impacts individuals with the disease—to a higher risk of depression.<sup>44</sup> This shows a complex interplay between metabolic health and mental well-being. Because mental health challenges both increase the risk of an individual developing diabetes and make ongoing management of this chronic condition more challenging, it is important that we understand the interplay between these disease states and the impact they have on society.

The findings reflected in this report collectively emphasize the need for a comprehensive and integrated approach to health care that addresses both the physical and mental aspects of well-being in individuals with diabetes or who are at risk of developing diabetes.

### Race and ethnicity

Among the total US population experiencing mental health challenges, the White population has the lowest

prevalence of diabetes, as reflected in the analysis. Therefore, the White population serves as the “baseline population” for the examination of disparity in health outcomes and spending related to diabetes resulting from mental health inequities. Higher prevalence rates seen in other groups may be a result of poor mental health care resulting in an exacerbation of this chronic condition.

### Socioeconomic status

Although the prevalence of both diabetes and mental health diagnosis is increased among all socioeconomic bands, the discrepancy is greater among those with lower socioeconomic status, as reflected by the difference between rates of Medicaid-enrolled individuals and those with commercial insurance (figure 8). It should come as no surprise that lower socioeconomic status confers additional risk for mental health challenges and for other chronic diseases. But the degree to which it does, and the costs associated with the additional cases, are concerning.

Because poorly managed diabetes can yield a myriad of complications—cardiovascular, neurological, renal, and vascular—it also can drive up inpatient stays, outpatient visits, and medication costs.<sup>45</sup> Studies reveal significant cost disparities when compared to those with well-managed diabetes: Diabetic kidney disease, cerebrovascular



Figure 7

## Prevalence of diabetes and mental health conditions by race and ethnicity

The prevalence of diabetes within the mental health population, and vice versa, is higher than that of the general population across racial and ethnic groups.

	Prevalence of diabetes		Prevalence of mental health conditions	
	Among general population	Among population with mental health conditions	Among general population	Among diabetic population
Asian or Pacific Islander	8.8%	10.9%	9.5%	11.7%
Black or African American	6.2%	11.1%	15.4%	27.6%
Hispanic or Latino	6.8%	10.9%	14.1%	22.4%
White	5.8%	8.0%	20.4%	28.1%
Other	5.7%	8.4%	14.8%	21.8%
Unknown	5.4%	7.7%	15.3%	21.9%
<b>Population average</b>	<b>6.0%</b>	<b>8.7%</b>	<b>16.7%</b>	<b>24.4%</b>

Notes: United States, 2022 analysis.

Komodo uses self-reported data along with modeling to determine race and ethnicity fields. This field matches the 2020 Census most closely and is suggested for all studies and analyses that involve race and ethnicity. In the Komodo Data Dictionary, “unknown” means that the patient did not provide race or ethnicity information, and “other” means that the patient has a race or ethnicity other than White, Black, Hispanic, or Asian.

Source: School of Global Health at Meharry Medical College and Deloitte analysis of Komodo Health data.

disease, and peripheral vascular disease each incur 10% to 30% higher costs; insulin treatment, angina, and myocardial infarction incur 60% to 90% higher costs; and

dialysis, a 1,000% increase.<sup>46</sup> Optimal diabetes care can not only enhance patient health but also help curtail expenses for organizations managing or financing diabetes care.<sup>47</sup>

### DATA LIMITATIONS

While Komodo Health provides a large data set, it is limited to insurance claims data, and as a result, it risks overlooking uninsured individuals who may represent the highest risk and highest treatment costs. Additionally, another challenge with claims data is that the populations who are the focus of this analysis may be less likely to receive appropriate mental health care and therefore may be less likely to receive a formal mental health diagnosis. Therefore, those with mental health

conditions who are not formally diagnosed would be missing from the claims data.

Similar analyses were run using the US Department of Health And Human Services Medical Expenditure Panel Survey data. The MEPS data reflects a representative sample that better reflects the whole population of the United States and allows participants to answer survey questions related to their mental health. From that sample, we derive a

considerably higher estimate of the financial cost of diabetes attributable to inequities in mental health care. However, as a much smaller sample, that data often lacks the scale necessary to conduct an analysis such as the one undertaken in this research. Both sources are important for policymakers, and variation between them highlights the value of reducing the uninsured and the importance of getting people treatment.

Figure 8

### Prevalence of diabetes and mental health conditions by health insurance coverage

*Mental health conditions are more prevalent among patients with diabetes on Medicaid, which serves low-income individuals, than among those covered by commercial health insurance plans or exchange plans.*

	Prevalence of diabetes		Prevalence of mental health conditions	
	Among general population	Among population with mental health conditions	Among general population	Among diabetic population
Medicaid	4.0%	7.3%	20.2%	37.4%
Exchange	6.7%	8.3%	12.8%	15.9%
Commercial	5.2%	6.0%	14.6%	16.7%
Medicare Advantage	19.7%	29.3%	15.7%	23.3%
Other	3.1%	6.3%	11.7%	23.5%
<b>All</b>	<b>6.0%</b>	<b>8.7%</b>	<b>16.7%</b>	<b>24.4%</b>

Note: United States, 2022 analysis.

Source: School of Global Health at Meharry Medical College and Deloitte analysis of Komodo Health data.

Figure 9

### Prevalence of diabetes and mental health conditions by age

*The prevalence of diabetes within the mental health population, and vice versa, is higher than that of the general population across all age groups.*

	Prevalence of diabetes		Prevalence of mental health conditions	
	Among general population	Among population with mental health conditions	Among general population	Among diabetic population
0–4	0.1%	0.2%	10.6%	26.0%
5–11	0.2%	0.3%	14.7%	23.9%
12–17	0.6%	1.1%	19.2%	35.7%
18–25	1.0%	2.1%	17.6%	37.5%
26–34	2.0%	4.0%	21.2%	43.1%
35–49	5.6%	9.6%	19.2%	32.8%
50–64	13.9%	22.4%	14.2%	22.9%
65–74	20.0%	34.7%	11.1%	19.4%
75–84	23.6%	40.1%	9.3%	15.7%
85+	18.9%	35.8%	8.7%	16.5%
<b>Population average</b>	<b>6.0%</b>	<b>8.7%</b>	<b>16.7%</b>	<b>24.4%</b>

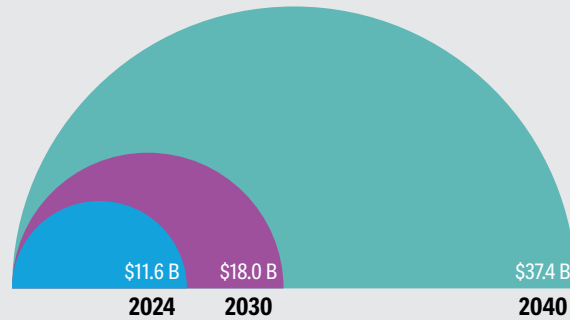
Note: United States, 2022 analysis.

Source: School of Global Health at Meharry Medical College and Deloitte analysis data of Komodo Health data.

Figure 10

## Projected spending on diabetes due to mental health inequities

The costs of diabetes related to mental health inequities are expected to increase.



Note: Projections in US dollars.

Source: School of Global Health at Meharry Medical College and Deloitte analysis of Komodo Health and SAMHSA data.

### Age

The risk that a person with diabetes will also experience mental health challenges appears to remain present no matter the individual's age; however, it is more than twice as high in several age ranges, as demonstrated within the analysis. Due to the challenges that arise in adhering to chronic disease treatment for individuals with concomitant mental health diagnoses, priority should be given to providing high-quality mental health care for these individuals.<sup>48</sup>

### The economic burden of mental health inequities associated with diabetes

If we were to close the gap in diabetes prevalence by adequately serving the population affected with mental health challenges, such that all population groups achieved the benchmark set by the White population, we estimate US\$11.6 billion in costs could be saved each year. These costs are likely to increase as natural demographic changes occur over the coming years. We estimate that by 2040, annual costs could be US\$37.4 billion, and the cumulative costs between 2022 and 2040 could exceed US\$377 billion.

### HIV

Individuals with HIV are at an increased risk of developing mental health conditions, including depression and anxiety, according to studies by the American Psychological Association.<sup>49</sup> In 2019, researchers at Columbia University estimated that 30% to 40% of those with HIV will experience at least one major depressive episode, compared to only 7.8% of the general population.<sup>50</sup> According to the CDC, stigma and discrimination endured by people living with HIV or AIDS contribute to mental health challenges, further emphasizing the need for comprehensive support.<sup>51</sup> Additionally, previous research has shown that mental health conditions may influence the quality of life for those living with HIV, infection management, and the development of additional comorbidities.<sup>52</sup>

Integrating mental health services into HIV patient care plans has the potential to provide a pathway to improving overall health outcomes and the well-being of individuals living with HIV.<sup>53</sup> The data within our analysis supports the finding that reducing inequities in mental health care for the population living with HIV could also reduce unnecessary health spending between now and 2040.

Figure 11

## Prevalence of HIV and mental health conditions by race and ethnicity

Among those with a mental health condition there is a higher prevalence of HIV across all races and ethnicities, as compared to those without a mental health condition.

	Prevalence of HIV		Prevalence of mental health conditions	
	Among general population	Among population with mental health conditions	Among general population	Among population with HIV
Asian or Pacific Islander	0.1%	0.4%	9.5%	26.3%
Black or African American	0.7%	1.4%	15.4%	32.0%
Hispanic or Latino	0.2%	0.6%	14.1%	34.3%
White	0.2%	0.3%	20.4%	40.9%
Other	0.3%	0.6%	14.8%	34.3%
Unknown	0.2%	0.5%	15.3%	21.9%
<b>Population average</b>	<b>0.3%</b>	<b>0.5%</b>	<b>16.7%</b>	<b>33.9%</b>

Notes: United States, 2022 analysis.

Komodo uses self-reported data along with modeling to determine race and ethnicity fields. This field matches the 2020 Census most closely and is suggested for all studies and analyses that involve race and ethnicity. In the Komodo Data Dictionary, “unknown” means that the patient did not provide race or ethnicity information, and “other” means that the patient has a race or ethnicity other than White, Black, Hispanic, or Asian.

Source: School of Global Health at Meharry Medical College and Deloitte analysis data of Komodo Health data.

### Race and ethnicity

While, according to the CDC, HIV is largely attributable to male-to-male sexual contact and therefore disproportionately impacts gay and bisexual men, our analysis did not examine this population.<sup>54</sup> Our analysis did, however, identify a notable disparity across races when it comes to who contracts the virus.<sup>55</sup> Our analysis also reflected that people of all races have higher prevalence of HIV for those with mental health diagnosis, compared to the general population.

### Socioeconomic status

For populations with lower socioeconomic status, such as the Medicaid population, if a mental health challenge is present, the prevalence of an HIV diagnosis is

roughly twice that of the general population. A similar increase is seen across other socioeconomic bands, when segmented by insurance type. When an individual experiences mental health challenges, there is an even greater likelihood that they be diagnosed with HIV (around 2x the risk, as compared to the general population’s likelihood of being diagnosed with HIV), as demonstrated within the analysis.

### Age

No matter a person’s age, a mental health diagnosis is correlated with a higher prevalence of HIV. Similarly, those with HIV have much higher prevalence of mental health diagnoses compared to the general population.

Figure 12

### Prevalence of HIV and mental health conditions by health insurance coverage

For populations with lower socioeconomic status, such as the Medicaid population, if a mental health challenge is present, the prevalence of an HIV diagnosis is roughly twice that of the general population. Increases are also seen across patients with other forms of insurance.

	Prevalence of HIV		Prevalence of mental health conditions	
	Among general population	Among population with mental health conditions	Among general population	Among population with HIV
Medicaid	0.3%	0.6%	20.2%	41.9%
Exchange	0.5%	0.8%	12.8%	20.5%
Commercial	0.1%	0.2%	14.6%	23.2%
Medicare Advantage	0.4%	1.1%	15.7%	39.2%
Other	0.1%	0.3%	11.7%	30.6%
<b>All</b>	<b>0.3%</b>	<b>0.5%</b>	<b>16.7%</b>	<b>33.9%</b>

Note: United States, 2022 analysis.

Source: School of Global Health at Meharry Medical College and Deloitte analysis data of Komodo Health data.

Figure 13

### Prevalence of HIV and mental health conditions by age

No matter a person's age, a mental health diagnosis is correlated with a higher prevalence of HIV.

	Prevalence of HIV		Prevalence of mental health conditions	
	Among general population	Among population with mental health conditions	Among general population	Among population with HIV
5–11	0.0%	0.0%	14.7%	41.3%
12–17	0.0%	0.0%	19.2%	55.0%
18–25	0.1%	0.2%	17.6%	35.0%
26–34	0.3%	0.6%	21.2%	38.7%
35–49	0.4%	0.8%	19.2%	35.8%
50–64	0.6%	1.3%	14.2%	31.5%
65–74	0.4%	1.1%	11.1%	31.2%
75–84	0.1%	0.4%	9.3%	25.9%
85+	0.0%	0.1%	8.7%	22.9%
<b>All, ages 5+</b>	<b>0.3%</b>	<b>0.5%</b>	<b>16.7%</b>	<b>33.9%</b>

Notes: United States, 2022 analysis.

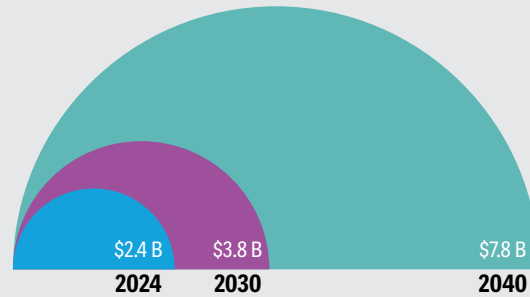
The age range of 0 to 4 is omitted due to insufficient sample size.

Source: School of Global Health at Meharry Medical College and Deloitte analysis data of Komodo Health data.

Figure 14

## Projected spending into 2040 on HIV due to mental health inequities

The costs of HIV related to mental health inequities are expected to increase.



Note: Projections in US dollars.

Source: School of Global Health at Meharry Medical College and Deloitte analysis of Komodo Health and SAMHSA data.

### The economic burden of mental health inequities associated with HIV

The co-occurrence of mental health diagnosis and HIV is demonstrated in medical claims data, with mental health disorders increasing risk of HIV acquisition by 4x to 10x, according to a 2019 article in *AIDS* by Robert Remien and colleagues.<sup>56</sup> This results in considerably higher spending. By examining population statistics related to overlapping HIV and mental health diagnoses, we find that the White population has the lowest incidence, and therefore, sets the baseline. If we were to succeed in achieving equity across racial and ethnic groups by bringing incidence down to the same rate as observed among the White population, we estimate a savings of US\$2.4 billion per year in avoidable costs.<sup>57</sup>

### The intersection of mental health inequities and emergency department utilization

As health care spending continues to rise, the question of how to slow that growth becomes a central concern. Existing inequities in mental health care represent a promising opportunity to control one variable that leads to unnecessary health-related spending.

One consequence of inequitable health care is the excessive reliance on the emergency department (ED) for mental health-related incidents and the overall overuse of the ED by individuals facing mental health challenges.<sup>58</sup> This can not only result in higher direct costs but also an increased burden on health systems' limited capacity and can lead to increases in wait times for other patients.

### The economic burden of mental health inequities associated with emergency department overutilization

In our analysis, we looked at data on frequent users of the ED, which we defined as individuals who had five or more mental health-related ED visits in a single year. By analyzing additional health care interactions, such as inpatient visits following an ED visit, the full scope of costs and health care utilization becomes visible, suggesting the true scope of potential avoidable costs that result from inadequate and inequitable mental health care. In 2024, ED utilization related to mental health inequities incurs an estimated expenditure of US\$5.3 billion annually, with projections suggesting a potential rise to approximately US\$17.5 billion by 2040 if left unaddressed, according to the analysis.

The analysis demonstrates that nearly half of the individuals who frequently use the ED also experience mental health challenges, irrespective of their initial reason for

seeking care. These trends are highly suggestive that, with appropriate access to mental health care, a large portion of the ED visits for these chronic users could be avoided. Whereas patients with appropriate access may schedule a visit with a primary care physician or behavioral health specialist, populations that lack that level of access may be more likely to use the ED as both their primary care service and mental health service, as it is open 24/7, does not require a prior appointment, and in general, has fewer barriers than primary care to see a physician.<sup>59</sup>

This report hypothesizes that the provision of equitable and adequate mental health care could mitigate the need for frequent ED visits or visits related to acute events, such as intentional self-harm, suicide attempt, intentional overdose, adverse effect of drug abuse, adverse effect of alcohol, alcohol poisoning, symptoms referable to psychological and mental disorders, and mental disorders.

If the root causes of mental health challenges are addressed and equitable access to mental health services is ensured, individuals could experience improved mental well-being, leading to a reduction in emergency visits and associated acute events. Comprehensive, integrated mental health care has the potential to not only enhance individual outcomes but also alleviate the burden on emergency health care services.

### **Mental health care and the unhoused**

Not discussed in this report are the costs related to mental health inequities among the unhoused population in the United States. These costs are quantifiable, both in terms of dollars spent and lost by society, and in years of productive life. For instance, life expectancy among the unhoused is in the 50s compared to 78 years of age for the rest of the population.<sup>60</sup>

Based on the published literature, the excess cost burden from premature deaths among the unhoused can be estimated by first multiplying each of the 13,000 annual deaths among that group by the 28 years of decreased life expectancy (78 years – 50 years = 28 years. 28 years x 13,000 = 364,000 years of life lost from premature death in the unhoused population). Next, multiply that number by US\$64,000 (2020 inflation-adjusted statistical value of a year of life, as established by Thomas LaVeist and colleagues' 2009 publication with the Joint Center for

Political and Economic Studies. That report built on previous work by Richard Hirth and colleagues that sought to identify a broadly accepted value of a human life;<sup>61</sup> since its publication in 2000, that work has been widely cited in the literature, making it the basis for this calculation). We estimate that the cost premature death in the United States' unhoused populations equals around US\$23.3 billion in annual excess burden in terms of years of life lost.

### **Mental health care and the incarcerated**

Another distinct group that faces a higher-than-average burden from mental health conditions are those who are incarcerated, especially in the case of incarceration that could be avoided if mental health inequities were addressed successfully. Data reported by the Substance Abuse and Mental Health Services Administration (SAMHSA) shows that “people with mental and substance use disorders are over-represented in the justice system.”<sup>62</sup> SAMHSA reported, “It is estimated that 18% of the general population has a mental illness. However, an estimated 44% of those in jail and 37% of those in prison have a mental illness.”<sup>63</sup> In an Urban Institute report,<sup>64</sup> mental health treatment costs for incarcerated individuals versus those in the general population was calculated based on a large study of employer costs of mental health treatment for each employee. Incarceration costs vary from state to state and include a national average cost per inmate per year. The authors found that each employee with mental illness can incur costs up to US\$15,000 per year when direct treatment costs and lost work or absenteeism are included.<sup>65</sup> We can compare this with an average annual cost of incarceration in the United States that equals US\$33,274.<sup>66</sup>

With 2.1 million people incarcerated in jails and state and federal prisons in the United States, and an estimated 50% of those suffer with mental illness or substance use disorder, we can determine that the United States spends US\$18,274 more on each incarcerated individual per year than individuals in the general population would for average mental health treatment for a year.<sup>67</sup> It means that when considering the total incarcerated population with mental illness—roughly 1,050,000 individuals—the country bears about US\$19.2 billion in excess costs due to incarceration rather than treatment for people with mental illness.

**US\$5.3 billion**  
Extra estimated costs due to emergency department visits related to mental health inequities in 2024

**US\$17.5 billion**  
Projected annual costs by 2040 if left unaddressed

### The intersection of productivity loss and mental health inequities

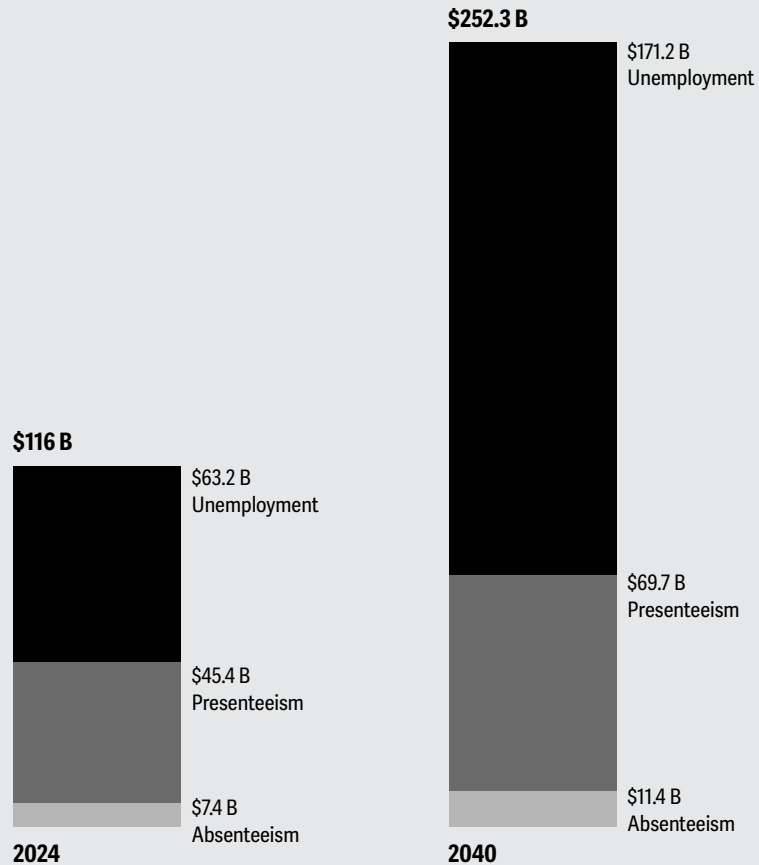
Research consistently finds substantial productivity losses attributable to mental health conditions, as described in a 2023 review of 38 articles by Claire de Oliveira and an international group of colleagues.<sup>68</sup> According to the same source, depression is a major contributor to workplace absenteeism, with affected individuals taking more sick days compared to their non-depressed counterparts.<sup>69</sup>

*Presenteeism*, the phenomenon of being present at work but not fully functioning due to mental health issues, is another significant factor reducing productivity. Additionally, mental illness can lead to disability claims, resulting in prolonged periods of reduced or lost productivity and additional insurance costs. There is a considerable economic impact of mental health conditions on productivity in the workplace, and an equal value to society of eliminating mental health inequities.

Figure 15

### Projected cost of productivity losses attributable to mental health inequities

*Mental health inequities can result in productivity losses when workers take more sick days (absenteeism), show up to work but are not fully functioning (presenteeism), or become unemployed due to mental health issues (unemployment).*



Note: Projections in US dollars.

Source: School of Global Health at Meharry Medical College and Deloitte analysis of Medical Expenditure Panel Survey, SAMHSA, and the US Department of Labor data.



The costs associated with mental health–induced productivity loss accounted for approximately US\$116 billion in losses in 2024, according to our analysis. The annual economic burden of productivity loss due to mental health inequities is projected to grow each year. Between 2024 and 2040, we estimate the United States will have accumulated more than US\$2.95 trillion in productivity losses related to mental health inequities.

### Race and ethnicity

The analysis revealed that individuals of all races and ethnicities miss more workdays when a mental health diagnosis is present. Excess loss of economic value due to missed workdays (absenteeism), unemployment, and unproductive workdays due to mental health issues (presenteeism) presently exceeds an estimated US\$52.9 billion, in annual costs, across all racial and ethnic groups, according to our analysis of self-reported data sources.

If current conditions persist, this figure could increase to US\$81.8 billion, annually, by 2040. These costs could be reined in by adequately treating the groups most impacted with the goal in mind that they achieve parity with the baseline population. In this case, Black individuals experience the lowest levels of both absenteeism and presenteeism (meaning fewest days missed from work), while White individuals experience the lowest rate of unemployment among those with mental health challenges, according to Meharry and Deloitte’s analysis.

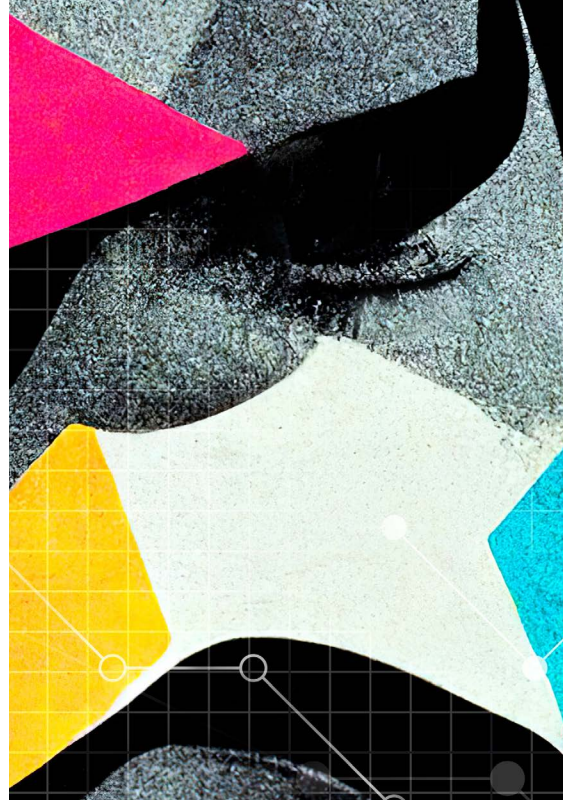
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### DATA LIMITATIONS

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Quantifiable wage data and surveys are unlikely to show reliably the potential ripple effect of mental health challenges throughout family groups. For example, when one’s spouse or child struggles with inadequately treated mental health challenges, does the stress on their partner or parents at home translate into fewer productive workdays?

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### Socioeconomic status

While people of all incomes who have a mental health diagnosis miss more work than the general population, those who are “near poor” and have mental health challenges miss more than twice as many days compared to those with no mental health challenges. (In the Medical Expenditure Panel Survey data, “near poor” is defined as “persons in families with income over the poverty line through 125% of the poverty line.”)<sup>70</sup>

### Age

According to our analysis, people of all ages who suffer from mental health issues miss more work than their counterparts who do not have mental health challenges. However, those who are between ages 35 and 49 and have mental health challenges have the highest average number of days missed from work. Overall, people across all age groups miss 35% more days of work if they have a mental health challenge, whereas 35 to 49 year olds with a mental health diagnosis miss nearly 43% more than members of their age group who do not have such a diagnosis.

Figure 16

### Average number of workdays missed due to mental health issues by income level

Individuals with a mental health condition and income classified as "near poor" miss twice as many days of work as compared to those without a mental health condition.

	Average number of workdays missed	
	General population	Population with mental health conditions
Poor or negative	2.0	2.3
Near poor	1.8	4.7
Low income	2.8	3.3
Middle income	3.1	4.6
High income	2.5	4.4
All	2.6	4.0

Notes: United States, 2021 analysis.

Kessler's Psychological Distress index was used to identify individuals reporting severe psychological distress. Severe psychological distress is defined as an index score of 13 or greater. Mental illness diagnosis was based on ICD -10 codes (F01-99). In the Medical Expenditure Panel Survey, poverty status is defined as follows: poor or negative for person from families with income less than or equal to the poverty line, near-poor with income over the poverty line to 125% of the poverty line, low income for income 125% to 200% over the poverty line, middle income for income 200% to 400% over the poverty line, and high income for income 400% or more over the poverty line.

Source: Deloitte analysis of Medical Expenditure Panel Survey data.

Figure 17

### Average number of workdays missed due to mental health issues by age

People of all ages who suffer from mental health conditions miss more work than their counterparts who do not have mental health conditions. However, those who are ages 35 to 49 and have a mental health condition miss the most days from work.

Age	Average number of days missed	
	General population	Population with mental health conditions
18-25	2.0	3.2
26-34	2.7	4.6
35-49	2.8	4.9
50-67	2.7	3.4
All adults, 18-67	2.6	4.0

Notes: United States, 2021 analysis.

Kessler's Psychological Distress index was used to identify individuals reporting severe psychological distress. Severe psychological distress is defined as an index score of 13 or greater. Mental illness diagnosis was based on ICD -10 codes (F01-99).

Source: Deloitte analysis of Medical Expenditure Panel Survey data.

## The economic burden of mental health inequities associated with premature death

Previous research, highlighted in *The Economic Burden of Mental Health Inequities in the United States Report*, suggests that premature deaths related to mental health inequities resulted in estimated cost of US\$278 billion, between 2016 and 2020.<sup>71</sup> This analysis included deaths due to suicide, deaths associated with substance use disorders, deaths due to inadequate mental health treatment, and deaths due to mental illness associated with comorbid illness.

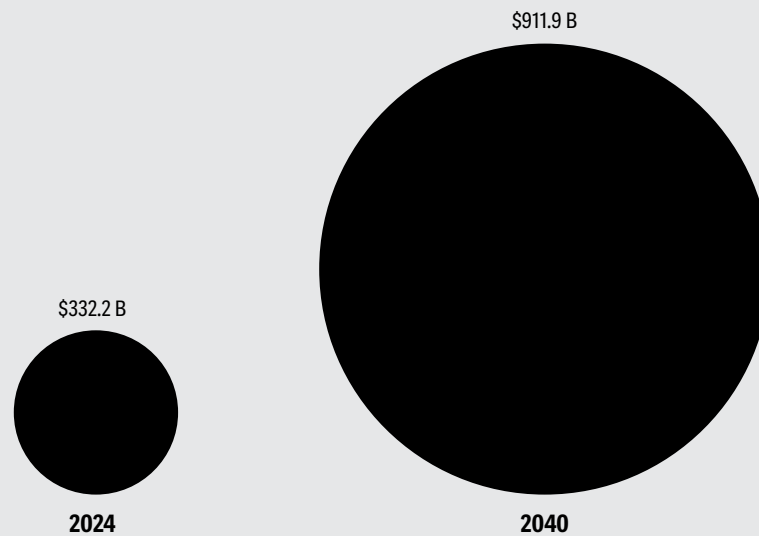
Rates of death by suicide are rising faster among racially and ethnically diverse people compared to their White counterparts. In the 10-year period between 2010 and 2020, Black and American Indian or Alaska Native people experienced the largest increases in rates of death by suicide among all racial and ethnic populations.

Additionally, between 2015 and 2020, the share of drug overdose deaths among White people fell, while, at the same time, the shares of these deaths among Black and Hispanic people rose, according to the Kaiser Family Foundation.<sup>72</sup> Hispanic adolescents accounted for a disproportionate share of drug overdose deaths relative to their share of the population as of 2020 (30% of deaths versus 25% of the population).<sup>73</sup>

The resulting projection from our analysis estimates that costs have risen, topping US\$292 billion in 2022, and they are likely to continue to rise unabated until the growth in premature deaths can be reversed. If the trend remains unchanged, the annual cost of premature deaths in 2040 is projected to reach US\$911.9 billion. The direct path to reducing premature deaths should account for inequities—especially mental health inequities—that could impact certain populations dying prematurely at greater rates.

Figure 18

### Projected cost of premature deaths attributable to mental health inequities



Source: Satcher Health Leadership Institute at Morehouse School of Medicine, *The Economic Burden of Mental Health Inequities in the United States*, 2022.



# Projecting to 2040: US\$14 trillion in excess spending

**U**nless decisive action is taken to curtail the inequities that lead to the avoidable costs described in this report, unnecessary annual spending due to inequities in mental health care is projected to rise to over US\$1.3 trillion per year by 2040,

according to our estimates. The cumulative cost borne by society over that time is estimated to reach about US\$14 trillion.

Leaders across all sectors in the United States should understand how these avoidable expenditures are likely

Figure 19

## Projected cost of mental health inequities

	2024	2040
<b>Total expenditures</b>	<b>\$477.5 B</b>	<b>\$1.3 T</b>
<b>Chronic physical health conditions</b>	<b>\$23.9 B</b>	<b>\$76 B</b>
Diabetes	\$11.6 B	\$37.4 B
Stroke	\$2.9 B	\$9.2 B
Hypertension	\$3.9 B	\$12.6 B
Ischemia	\$3.2 B	\$9.1 B
HIV	\$2.4 B	\$7.8 B
<b>Emergency department over-utilization</b>	<b>\$5.3 B</b>	<b>\$17.5 B</b>
<b>Productivity loss</b>	<b>\$116 B</b>	<b>\$252.3 B</b>
Absenteeism	\$7.4 B	\$11.4 B
Presenteeism	\$45.4 B	\$69.7 B
Unemployment	\$63.2 B	\$171.2 B
<b>Premature death</b>	<b>\$332.2 B</b>	<b>\$911.9 B</b>

Note: Projections in US dollars.

Source: School of Global Health at Meharry Medical College and Deloitte analysis of data from Komodo Health, the Medical Expenditure Panel Survey, CDC's WONDER database, and the National Hospital Ambulatory Medical Care Survey.

to grow in the next 16 years. In projecting these costs from now until 2040, it is also important to recognize that not all growth in costs related to mental health is negative. Investment is required to help ensure certain populations receive appropriate mental health care. As access to mental health services, treatments, and support improves—combined with parallel improvements in affordability—it will likely lead to an increase in some health care costs. However, savings captured by eliminating the avoidable costs described in this report are expected to eclipse the price of providing the necessary care.

Even with improvements to mental health care access and quality for underserved groups, avoidable costs may continue to grow, which could further widen the disparities in mental health care that gave rise to the current situation. One mechanism that could result in this negative outcome could arise if health care expenditures within mental health care expand because of unnecessary or excess care sought by already advantaged populations. Such spending is unlikely to reduce unnecessary costs and increase health equity. Research has shown that such overuse is not likely to create a significant issue, but leaders should be vigilant when formalizing relevant plans.<sup>74</sup>

## Medical expenditures

Medical expenditures are projected to grow an average of 5.4% from now until 2031, based on projections from the Centers for Medicare and Medicaid Services Office of the Actuary.<sup>75</sup> However, utilization and medical expenditures for mental health are anticipated to grow at a higher rate—data shows an 11.5% annual

increase in mental health services for privately insured individuals from 2019 to 2022, which relates to a 15.4% annual increase in spending on mental health services among privately insured individuals within the same time period.<sup>76</sup> Although mental health accounts for only about 5% of overall medical spending, this portion is increasing.<sup>77</sup>

Deloitte predicts a break in the cost curve for medical expenditures, reducing health care spend between now and 2040—resulting from advancements in disease prevention, detection, and treatments; emerging technologies (increased data-sharing and interoperability); and consumers being highly engaged and empowered.<sup>78</sup> It will likely require a concerted and cross-sector effort to cause a parallel disruption to effectively reduce the current trajectory of the expenditures associated with mental health inequities identified within this report. (Deloitte’s research paper, [Six Assumptions for Measuring Health Disruption](#), offers insight to inform actions for the business sector.)<sup>79</sup>

## Using political and social determinants as a tool for cost containment

As awareness that health is influenced by myriad factors beyond genetics, behavior, and personal decisions has spread, it’s important to recognize that the dilemma of cost containment cannot be fully addressed by the health industry alone. To positively impact population health and individual health outcomes, addressing access and pricing of health care delivery and services is important. But to do so, efforts from many sectors should be aligned to help leverage our understanding of the political and social determinants of health.

While this report builds upon previous efforts to quantify the economic costs of mental health inequities by examining additional indirect costs and comorbidities, it addresses only a subset of each. The costs projected would likely increase dramatically if, for example, physical disability, or many other health conditions, were considered. A more inclusive investigation could become even more complicated, as other variables such as political, social, and environmental factors—each of which can be perceived as stressors impacting mental and physical well-being—should be considered.

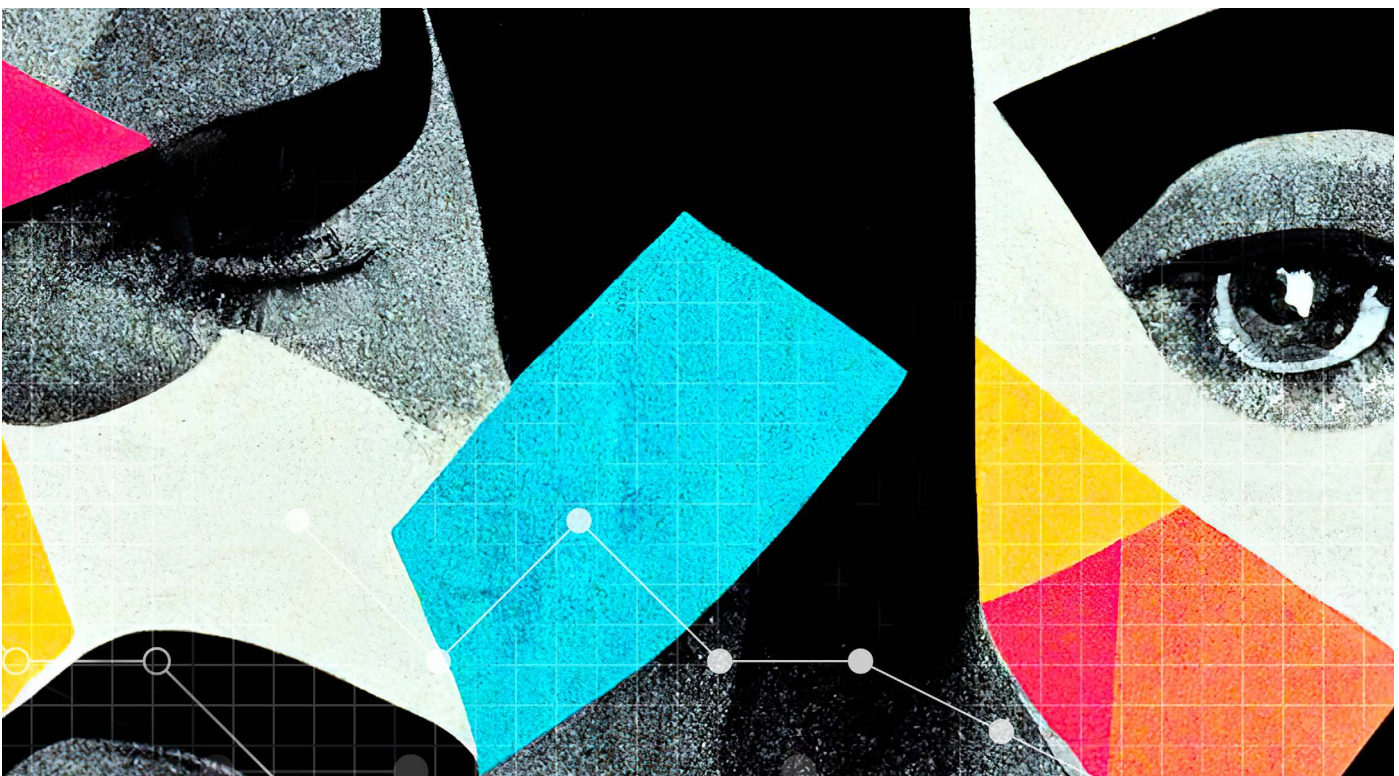
Yet many of these stressors are, in the present day, unquantifiable. This leaves us to understand that actuarial science may never be able to fully calculate a final and true cost of inequities at an individual or societal level. In addition, while this report attempts to quantify the inequity-related “costs” of mental illness, suffering, and death, it also respects and understands that there is no dollar figure that can be placed on the value of human life.

### Who is most affected by the cost of inequities?

- Although the White population shows the highest prevalence of mental health diagnosis, it is non-White populations that tend to bear more of the cost associated with mental health struggles. This is likely due to long-standing structural racism and the legacy of policies that disadvantaged certain populations, as well as social and economic conditions.

- In general, higher prevalence of mental health conditions and higher prevalence of other chronic conditions are correlated. Lower-income populations with mental health challenges have higher prevalence of other chronic conditions. Issues such as lack of access to care and cultural stigma mean that this report likely undercounts—rather than overcounts—individuals with mental health challenges.
- Groups with mental health challenges account for more workdays missed and have a higher rate of unemployment than those without such challenges. For those with mental health conditions, a higher prevalence of other chronic conditions, more days missed from work, and higher unemployment are seen across all age groups.

Eliminating inequities in mental health care should be a priority both because of the moral imperative and because of the measurable benefits that doing so could convey to society. After bringing everyone up to the same level, it is hoped that mental health care and outcomes will continue to improve over time for all groups. American *health spans* (the number of healthy years between birth and death) could expand by another 20 years, on average, and the United States could see a drop in health care spending by 2040, according to [an earlier analysis by the Deloitte Center for Health Solutions](#), if society more fully embraced wellness and prevention, spurred health care innovation, empowered consumers, and advanced equity.<sup>80</sup>



## The economic burden of mental health inequities in business

The economics of the issue are as compelling as the moral argument. For example, decreasing health inequities could lower health plans and system costs associated with poor health outcomes that lead to more emergency room visits, longer hospital stays, and unnecessary hospitalizations. This in turn could generate value for the businesses that pay for health care as well as state and federal agencies and the people they serve. Improving health outcomes could also improve quality ratings of both plans and providers, making them eligible for higher payments from Medicare and other value-based care programs designed to reward quality. In the future, we will likely see value-based equity programs that reward not only improvement in average outcomes but also parity of outcomes among different populations.<sup>81</sup>

Inequities in mental and behavioral health among employees pose significant challenges to both individual well-being and workplace productivity. As demonstrated in this report, poor mental health among employees can significantly impact productivity, especially through both absenteeism and presenteeism. Absenteeism leads

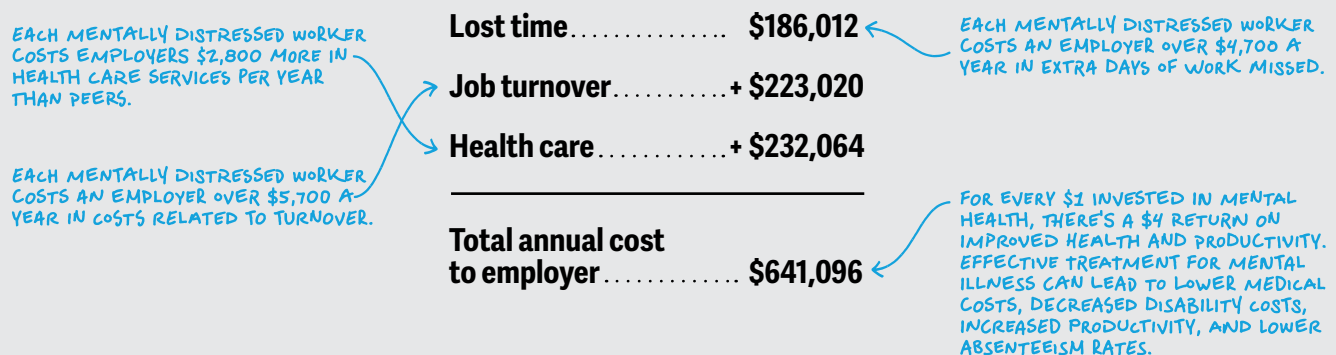
to direct costs for organizations. Presenteeism further compounds these costs by reducing overall efficiency and output. Additionally, previous Deloitte research revealed that talent-related issues, including mental health concerns, are major challenges for organizations.<sup>82</sup> Leadership behaviors, organizational design, and work practices influence employee well-being, encompassing mental health support as an important component.<sup>83</sup>

An industrywide trend of prevention and well-being underscores that, for organizations, tangibly advancing health equity can be a point of competitive advantage. Not only can it help them attract leading talent and elevate their brand and reputation, but healthier workers also have fewer sick days, are more productive on the job, and have lower medical care costs.<sup>84</sup> Previous Deloitte research shows that employees that prioritize human sustainability in turn foster increased opportunities for employee-led innovation and productivity.<sup>85</sup> Expanding workplace benefits and programs to address mental health needs, adequately and equitably, can give organizations a competitive edge. From promoting mental health awareness to providing access to counseling services, supporting mental well-being can be beneficial.<sup>86</sup>

Figure 20

### Mental and behavioral health costs to a hypothetical employer of 500 employees in the manufacturing sector

Estimates from the National Safety Council's Employer Mental Health Cost Calculator, US dollars



Source: National Safety Council's Employer Mental Health Cost Calculator.



# Addressing mental health inequities

**T**he mental health crisis in the United States should be treated as an emergency encompassing a cross-sector approach. Progress should include the *active* and *voluntary* participation of the private and commercialized industries that directly or indirectly affect the service and delivery of mental health and its services. It requires corporate responsibility to solve unjust issues affecting the workforce and enable all workers to seek and access treatment.

Large gaps in the incidence rates of mental health conditions and related chronic physical health conditions between populations represents major opportunities for leaders to make changes to improve productivity, reduce costs, and enhance the quality of life. Taken separately, any one of these improvements could justify the effort and investment necessary to achieve mental health equity. However, the dovetailing of these benefits is what makes this a significant issue that should be addressed.

The urgent need to eliminate mental health inequity calls upon the elected officials who sit at the highest positions in society to provide the political appetite and will to influence policy for the greater good. Academia should generate research and evidence to advance culturally informed care delivery in clinical training. Fields of medicine and public health entities should recruit promising

clinicians to the discipline of mental health and help to establish integrated centers to increase access to care and treatment. Employers should provide culturally informed mental health resources for an increasingly diverse workforce. Local governance should distribute providers and other resources to the places where they are most needed and least found (such as neighborhoods characterized by a high mental health need and high social polarization). Decisions that sit at the most upstream levels related to voting, government action, and policy, have been historically linked, either directly or indirectly, to health outcomes.<sup>87</sup> We should consider these same paths to achieve the necessary equitable mental health outcomes that can help us avoid the future projected in this report.

An equity-focused approach to mental health is paramount for our collective prosperity. The inequitable distribution of mental health challenges not only inflicts unnecessary suffering on affected individuals but also imposes substantial direct and indirect costs on society. Therefore, this report operates from the understanding that achieving mental and behavioral health equity can lead to benefits such as improved health outcomes for all members of society suffering from chronic diseases, reduced incidence of those diseases, greater productivity, significantly reduced unnecessary health care spending, and an overall increased well-being.



# Appendix 1: The political and social determinants of health



**T**he analysis primarily focuses on prevalence rates but does not provide evidence of the underlying factors driving the inequities under consideration. Health outcomes are impacted by factors other than clinical care, which can contribute to prevalence estimates of these conditions. As a general statistic, 80% of health outcomes are attributed to political, social, and behavioral drivers of health, while 20% are related to biological or clinical factors.<sup>88</sup>

## Political determinants of mental health

The Political Determinants of Health framework, championed by Daniel Dawes, illuminates how governmental policies and actions shape health outcomes. It underscores the important role of political structures, systems, and decision-making processes in perpetuating or mitigating health disparities. By recognizing the political determinants at play, policymakers and stakeholders can identify opportunities to enact transformative policies that address underlying inequities and promote health equity for all populations.

## Social determinants of mental health

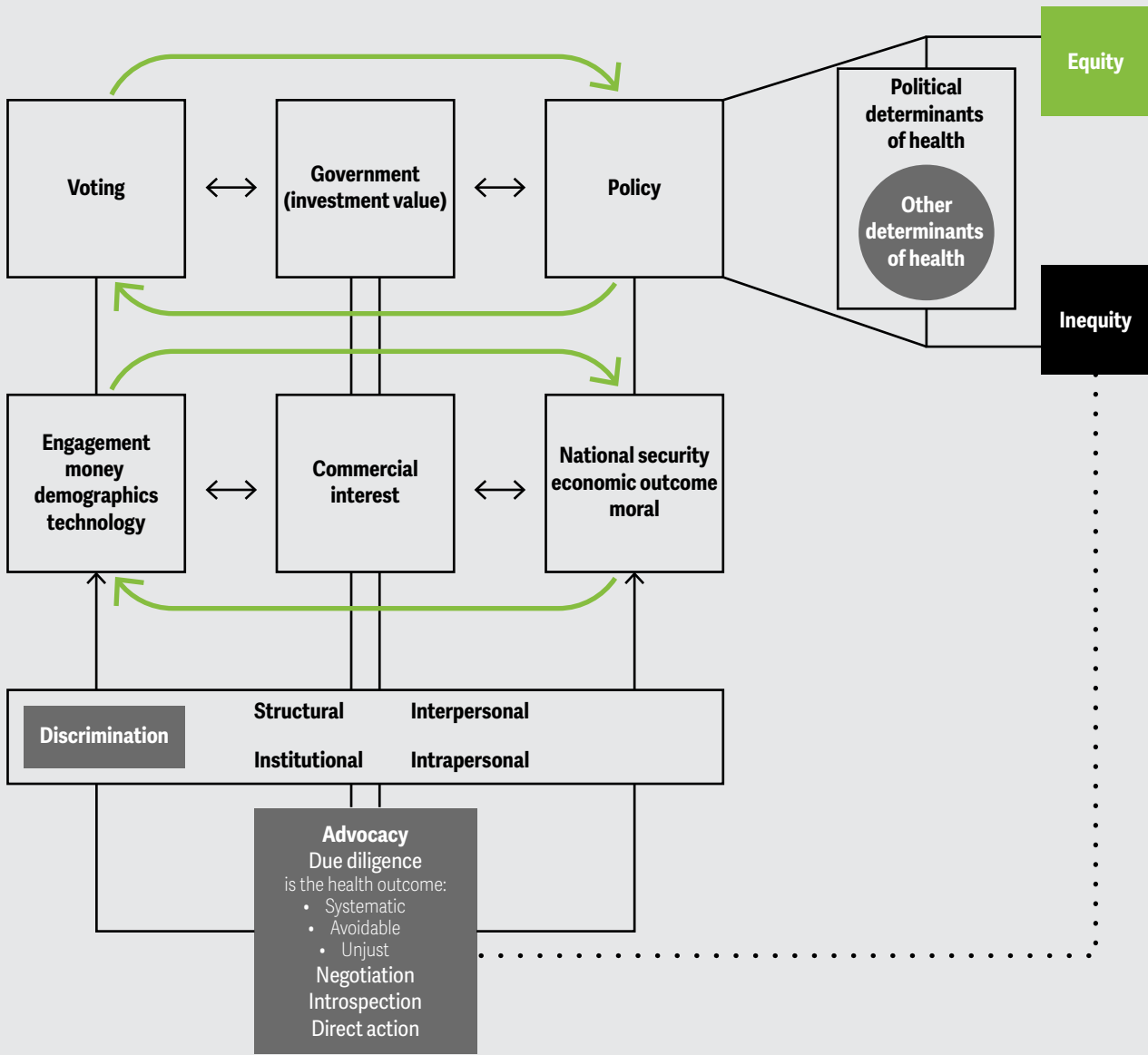
The social determinants of mental health illuminate the ways in which social, economic, and environmental factors influence health outcomes and disparities. It emphasizes the interconnectedness of factors such as socioeconomic status, education, employment, housing, and community resources in shaping an individual's health trajectory. By addressing these upstream determinants, policymakers and public health practitioners can implement holistic interventions that tackle root causes of health inequities, paving the way for healthier communities and populations. This model (figure 22) can also be employed by officials in the business sector to craft and implement organizational policies to address mental health inequities that impact employees, consumers, patients, and communities within the organizations' respective ecosystems.

As demographic factors shift due to factors such as immigration and an aging population, and as the political, economic, environmental, and technological landscape of the United States continues to shift, understanding these frameworks can help leaders to make principled decisions.

Figure 21

### Political determinants of health model

This framework emphasizes how governmental and organizational systems and structures may influence factors that drive health inequities—underscoring the important role of leaders to advance policies that promote health equity.

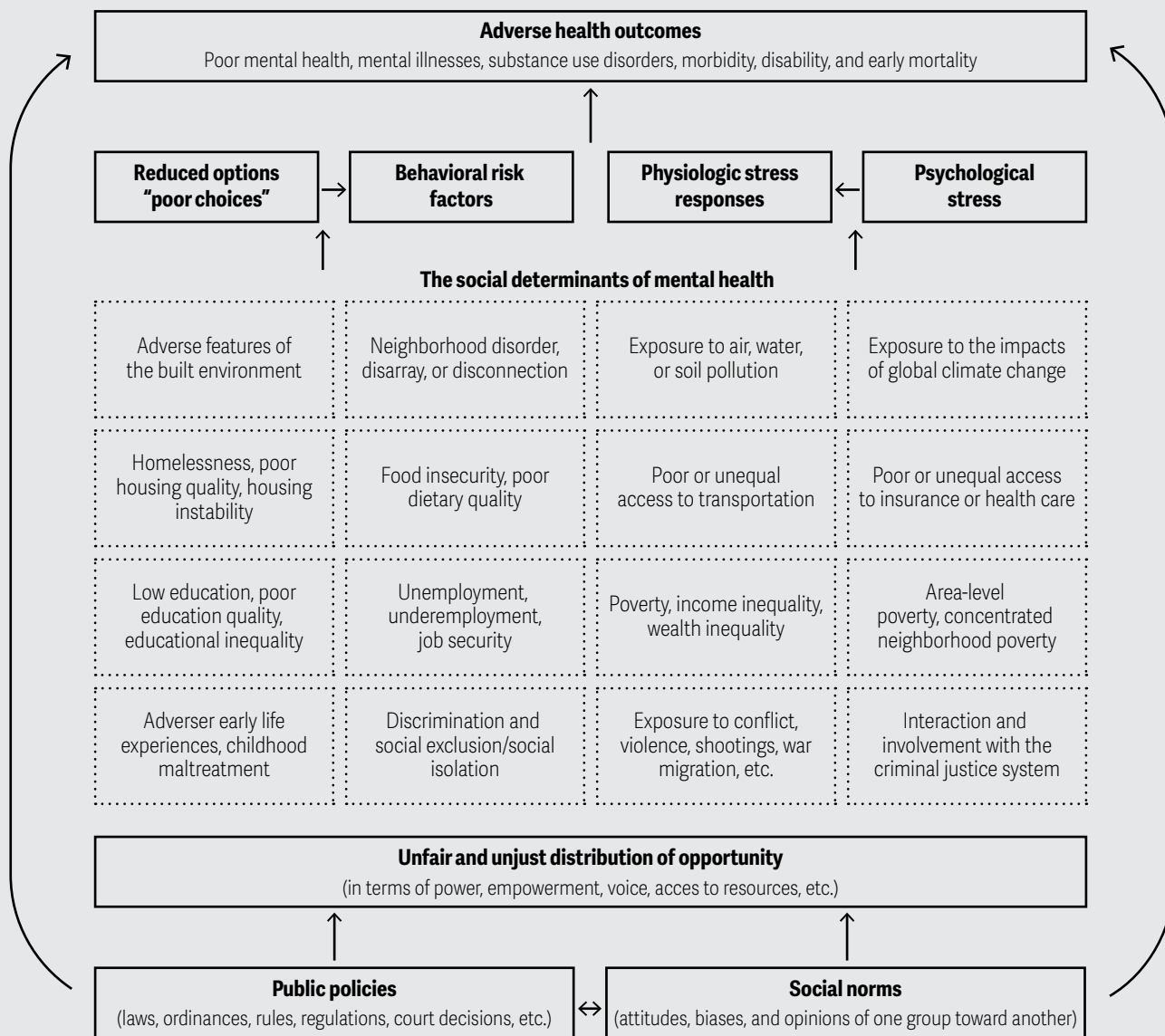


Source: Daniel E. Dawes, *The Political Determinants of Health* (Johns Hopkins University Press, 2020).

Figure 22

## Social determinants of mental health

This model highlights how social, economic, and environmental factors may impact mental health outcomes—promoting upstream interventions that cross-industry leaders can implement to address the root causes of mental health inequities.



Source: Michael Compton and Ruth Shim, "Why employers must focus on the social determinants of mental health," *American Journal of Health*, January 2020.



## Appendix 2: Data, data gaps, and exclusions

**V**arying reporting requirements: Information on the populations examined is not available from all data sources and measures used in this analysis. In addition, where they are reported, definitions of measures and populations may vary based on data sources.

**Systemic barriers:** Disaggregating health data by race and ethnicity poses challenges due to historical underreporting, misclassification, and privacy concerns. Without accurate data, identifying and addressing health inequities accurately becomes difficult, hindering progress toward achieving health equity and leaving marginalized communities underserved and overlooked in policymaking and resource allocation.

**Cultural stigma:** Cultural stigma continues to exist, particularly in minority groups, limiting self-reporting and willingness to seek care for mental health challenges.

**Inequitable access to care:** Due to inadequate mental health care access, not all population groups have the same likelihood of being diagnosed if they do have a mental health condition. Often federal- and state-funded community behavioral health centers are not located in the areas with the highest need of health care services.<sup>89</sup> Addressing this issue may represent an opportunity to impact the inequitable outcomes experienced by marginalized groups. According to SAMHSA research, there is a correlation between geographies lacking adequate access to mental health treatment resources and urban neighborhoods with a high level of racialized economic segregation and poor mental health resources.<sup>90</sup>

**Uninsured population data:** The primary analysis leverages data from Komodo Health, which is an extensive repository of claims data, with additional consultation of data from MEPS. The projections largely exclude populations who pay for their own health services due to being uninsured or underinsured. Therefore, the analysis is tilted toward the insured population and the projected costs, while considerable, may in fact be conservative.

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# About the authors

## **Daniel E. Dawes**

Daniel E. Dawes is a health care and public health leader, health policy expert, educator, researcher, and author. Dawes is the Founding Dean of the School of Global Health at Meharry Medical College. He also holds positions on the White House COVID-19 Health Equity Task Force, the CDC's Advisory Committee to the Director, and the NIH's National Advisory Council for Nursing Research.

## **Jay Bhatt**

Jay Bhatt is a physician executive, primary care physician, and public health innovator. As managing director of the Deloitte Center for Health Solutions and the Deloitte Health Equity Institute, Bhatt directs the firm's research and insights agenda across the life sciences and health care industry. He continues to practice medicine in the Chicago area while serving in his leadership role at Deloitte.

## **Nelson J. Dunlap**

Nelson J. Dunlap is a dedicated health policy advocate, author, and experienced public speaker who uses every opportunity to fight on behalf of marginalized communities and push to advance health equity. In his current role as the vice president of public policy and external affairs at Meharry Medical College's School of Global Health, he helps to lead the public health and health policy initiatives, while keeping health equity as a priority.

## **Christian Amador**

Christian Amador serves as the assistant vice president of strategic initiatives for the School of Global Health at Meharry Medical College. In his cross-sectional role, he supports the advancement of health equity and the political determinants of health framework throughout schoolwide initiatives in addition to ensuring that the school's mission, vision, and vision imperatives are aligned with all endeavors.

## **Kulleni Gebreyes**

Kulleni Gebreyes is a physician leader with more than 20 years of experience in the health care industry across the commercial and public sector. Gebreyes has developed and implemented strategies for population health management and value-based care, physician alignment and patient activation, diversity, equity and inclusion, and the drivers of health. She is an active advocate for vulnerable and underserved communities.

## **Brian Rush**

Brian Rush is a manager within Deloitte's Life Sciences and Health Care practice with more than five years of experience leading a diverse portfolio of projects across the health care ecosystem, including integrated finance and delivery systems, national and regional health plans, and academic medical centers. Rush's expertise lies in helping organizations shift toward value-based care and understand the underlying financial dynamics of the shift.

## **Jack Westfall**

Jack Westfall is a family medicine physician and researcher. He has expertise in health policy, primary care practice-based research, community-based participatory research, integrated primary care and behavioral health, and bridging primary care, public health, and community health. For over 20 years, he was a faculty member at the University of Colorado, where he started the High Plains Research Network.

## **Maria Fendrich**

Maria Fendrich is a senior consultant within Deloitte's Life Sciences and Health Care practice with nearly five years of experience supporting organizations across varying sectors. Applying her actuarial background, she aids in modeling critical financial levers required to meet an organization's strategic objectives, such as increased price transparency and maximizing state and federal funds to best serve populations in need.



### **Andy Davis**

Andy Davis is a principal within Deloitte Consulting LLP's Health Care practice, with over 15 years of experience as a leader in the Health Actuarial practice, driving change across the ecosystem with payers, providers, and life sciences companies. He is known for bringing an understanding of how to quantify the economic value of services to members, patients, and customers, which spans payers, providers, pharmacy benefit managers, large pharmaceutical manufacturers, medtech, and diagnostics companies.

### **Mani Keita Fakeye**

Mani Keita Fakeye is the health equity research manager for Deloitte's Center for Health Solutions and Health Equity Institute. She has over a decade of public health research experience, with methodological expertise in quantitative and qualitative analyses and equity-centered research to engage federal, academic, industry, philanthropic, and community stakeholders.

### **Celeste Philip**

Celeste Philip is physician leader with a 20-year career at the intersection of medicine and governmental public health at local, state, national, and international levels. She is currently serving as a faculty member within the School of Global Health at Meharry Medical College. Philip has expertise in disease prevention, emergency preparedness, data modernization, social determinants of health, health equity, mental health, and well-being.

### **Nefertiti Wade**

Nefertiti Wade, an advocate for health equity and social change, brings over a decade of public health experience in both private and public sectors. As a program officer within the Deloitte Health Equity Institute, she specializes in fostering collaboration across sectors to promote health equity and drive innovation. Centered on inclusivity, Wade champions action to achieve tangible outcomes in advancing health equity.

### **Dewin Hernandez**

Dewin Hernandez is a clinical social worker and mental health equity champion. He leverages his expertise as a senior consultant at Deloitte to advise diverse clients on strategy and transformation. His commitment extends beyond clinical work, aiming for systemic change through community engagement and cultural humility. Through the Deloitte Health Equity Institute, he fosters collaboration to drive health innovation and access for all.

### **Asif Dhar**

Asif Dhar is vice chair and US Life Sciences and Health Care Industry leader for Deloitte LLP. He helps governments, and life-sciences and health care clients reinvent wellness, address disease, respond to pandemics, and tackle health inequities. He has a deep passion for climate, sustainability, and equity and is an executive sponsor for Deloitte's Health Equity Institute.

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# About the School of Global Health at Meharry Medical College

The School of Global Health at Meharry Medical College exists to advance the well-being of the global community by establishing themselves as a distinguished institution that educates and nurtures a diverse and inclusive cohort of passionate health leaders who can navigate political systems and societal structures to positively impact the public's health. Building on the nearly 150 years of service and excellence by Meharry Medical College, the vision of the School of Global Health is to make health inequities history with a mission to empower leaders to catalyze solutions to the world's most pressing and complex health challenges.

## Connect

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# About the Deloitte Health Equity Institute, a part of the Deloitte Center for Health Solutions

Part of the Deloitte Center for Health Solutions, the Deloitte Health Equity Institute works to improve access, equity, and quality of care throughout the health care ecosystem. We delve deeply into issues that matter and tackle the tough questions around health, racism, bias, and structural flaws in the health system. And we provide reliable data and thought leadership, based on rigorous, proprietary research and demonstrated facts. All to help you determine the best path forward to the future of equitable health.

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## Industry leadership

### **Nelson Dunlap**

Vice president of public policy and external affairs | School of Global Health at Meharry Medical College  
+1 615 327 6000 | SGH@mmc.edu

Nelson Dunlap specializes in global health equity, health policy, and research.

### **Jay Bhatt**

Managing director | Deloitte Health Equity Institute | Deloitte Services LP  
+1 312 486 3679 | jaybhatt@deloitte.com

Jay Bhatt specializes in driving health research, innovation, and insights and developing high-impact collaborations and investments to advance health equity.

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# Contributors

**Editorial:** Rebecca Knutsen, Annalyn Kurtz, Debashree Mandal,  
Arpan Kumar Saha, Prodyut Ranjan Borah, and Pubali Dey

**Creative:** Alexis Werbeck, Matthew Lennert, Molly Piersol, Pooja N.  
Lnu, Govindh Raj, and Natalie Pfaff

**Cover artwork:** Alexis Werbeck



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The School of Global Health at Meharry Medical College, located in Nashville, Tennessee, is rooted in Meharry's nearly 150-year legacy of leading on health equity issues. As the nation's first and only School of Global Health we are committed to preparing the next generation of global health learners and leaders to find solutions and respond to our communities' complex and evolving health challenges with a global perspective. A hub for research and academic innovation in global health, mental and behavioral health, population health, public health, environmental health, health communications, social and political determinants of health, and more, the School is a trusted resource for health equity approaches and actionable solutions to the inequities affecting our most vulnerable, under-resourced, and marginalized communities. Learn more at [MeharryGlobal.org](http://MeharryGlobal.org).

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