

The Brain Health Initiative

First Annual Report

November 2023

"Brain health is the greatest challenge of societies in the 21st century."

-Dr. Elena Becker-Barroso, Editor-in-Chief, The Lancet Neurology

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1. Executive Summary

How do you change the conversation around brain health? This question was a starting point for the Brain Health Initiative, a first-of-its-kind, multi-year effort that seeks to address the burden of brain health conditions. Our goal is to measure the collective burden of brain disorders on societies and to provide decision-makers with better information to improve health and well-being.

Yes, it's a monumental undertaking. But it's possible with the kind of sustained thought leadership envisioned for the Brain Health Initiative.

The need was clear. Academic institutions, advocacy groups, and private sector organizations have separately sought to bring attention to the number of people around the globe suffering from brain disorders. Previous IHME publications, for example, have noted the "startling" risk of stroke. These efforts have largely been siloed, with different organizations focusing on specific health conditions or geographic regions. Our work fills this gap by quantifying the health and economic impacts of brain disorders—encompassing neurological, cerebrovascular, and mental health conditions—for every country in the world.

To look at these issues holistically while supporting collaboration among thought leaders, the Brain Health Initiative set three ambitious goals:

- Generate the data necessary for stakeholders to understand the health and economic burden of brain health disorders;
- Increase awareness of the burden of brain health disorders;
- Convene thought leaders on brain health to improve health equity and lessen the burden of brain health disorders globally.

Now, one year into this effort, we've marked several key milestones:

- The creation of a new brain health metric. The metric captures for the first time the full disease burden related to brain health. This allows decision-makers to see both the individual conditions and brain health as a whole and to continue to work to address evidence gaps.
- The advancement of novel economic brain health analyses. New health economics work describes the toll of brain health disorders on individuals and communities, the first analysis of its kind to provide a global view. Initial estimates were announced in April 2023. They point to \$1.05 trillion in lost income for people living with brain disorders and \$1.14 trillion spent on direct healthcare costs.
- The development and launch of the Brain Health Atlas. Scientists, policymakers, and lay people alike can now access an interactive public-facing tool with easy-to-understand data illustrating the burden of brain health disorders, globally and for each country.
- The formation of the Brain Health Collaborative. Announced in October 2022 to extraordinary global interest, the Collaborative draws together perspectives from academia, advocacy,

technology, life sciences, and philanthropy. In year one, **30 organizations** have joined the Collaborative with membership expected to grow in year two.

- The launch of new research on modifiable risks for dementia. Through the Initiative and the Collaborative, IHME has continued to expand its population health research into new topics that are crucial to brain health. Through a significant project with the Alzheimer's Disease Data Initiative, IHME will analyze and report on new modifiable risk factors that contribute to the burden of dementia.
- Elevation of brain health into the global conversation. IHME has accomplished this directly and through partnership with Collaborative members through private briefings and public events in 11 locations in six countries globally. IHME engages directly with leaders in the American Academy of Neurology (AAN), the European Academy of Neurology (EAN), the World Health Organization, the World Bank, and many other organizations with significant reach.
- Changes in public policy on brain health. Exceeding our expectations for year one, the foundational ambition of the Brain Health Initiative is already coming to fruition. The most farreaching example of the Brain Health Initiative's new brain health evidence being used to impact public policy took place at the World Bank Summit in Chile, during which leaders from Latin America and the Caribbean committed to prioritize and better resource for mental health conditions.

IHME would like to thank Roche, Gates Ventures, Microsoft, the AARP, and the American Heart Association for their early support for the work that formed the core of the Brain Health Initiative. Roche was instrumental in crystalizing the need for the Atlas and providing the necessary seed funding. The Initiative has since scaled thanks to other key stakeholders including the Alzheimer's Disease Data Initiative (ADDI), the American Academy of Neurology (AAN, the Davos Alzheimer's Collaborative, the European Brain Council, Genentech, the Healthy Brains Global Initiative (HBGI), the McKinsey Health Institute, USAgainstAlzheimer's, the World Bank, and the World Health Organization. This growing community will make the Initiative both impactful and sustainable in the long term.

2. Generating evidence to drive change

Identify and quantify the conditions that make up "Brain Health"

Brain health refers to how the brain functions across multiple areas, including mental, cerebrovascular, neurological, and sensory functions. We know that disorders of the brain represent a significant proportion of health loss across a persons' life course, which is why our first goal was to produce the data-driven evidence needed to guide policy decisions and resource allocation in this area.

Previously available evidence on the burden of brain disorders was largely siloed, with different organizations producing data only for certain conditions or geographies. There was no single, gold-standard effort to track and analyze brain disorders as a whole, around the world. Nor was there a global economic analysis of the impact of these disorders.

The concept of an overarching category of "brain health" is increasingly gaining recognition. IHME used a science-based approach anchored in the Global Burden of Disease (GBD) project to define the category. This led to a definition of brain health that encompasses neurological, cerebrovascular and mental health conditions.



"Brain Health goes beyond the absence of disease to embrace all brain functions (cognitive, emotional, behavioral, creative) which are necessary to cope with life situations and for a happy, productive, and creative life. In fact there is not health without brain health."

Professor Claudio Bassetti Past President of European Academy of Neurology IHME's definition of Brain Health includes brain-related disorders including:

Primary neurological disorders:

- Alzheimer's disease and other dementias
- Parkinson's disease
- Epilepsy
- Multiple sclerosis
- Motor neuron disease
- Headache disorder (e.g., migraine and tension-type headache)
- Other neurological disorders

Cerebrovascular diseases:

- Ischemic stroke
- Intracerebral hemorrhage
- Subarachnoid hemorrhage

Cancer:

 Brain and central nervous system cancers

Infectious conditions:

- Meningitis
- Encephalitis

Mental/congenital/developmental disorders:

- Schizophrenia
- Depressive disorders
- Bipolar disorder
- Anxiety disorder
- Anorexia nervosa
- Bulimia nervosa
- Autism spectrum disorders
- Attention-deficit/hyperactivity disorder
- Conduct disorder
- Idiopathic developmental intellectual disability
- Other mental disorders
- Self harm

Substance Use:

- Substance use disorders
- Alcohol use disorders

In year one, IHME produced our first ever brain health metric—an estimate of the total health loss attributable to these brain conditions when added together. Producing this metric was a critical first step to answering the question, "How large is the burden of brain disorders?"



Global variation in brain health loss

Variation in rates per 100,000 population of health loss due to all brain disorders combined expressed as disability adjusted life years (DALYs).

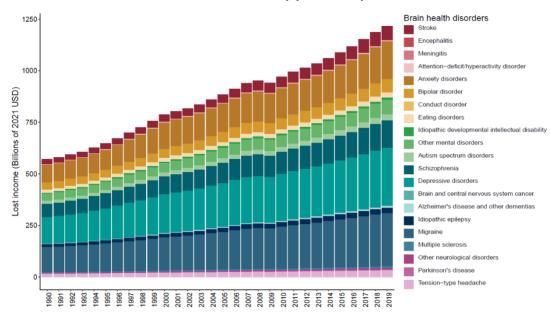
Broaden the economic perspective and expand the evidence base



"Without understanding or having any concept of the burden and impact in a given region, you can't advocate effectively for services and support, for investment into therapies."

Orla Galvin, Executive Director of the European Federation of Neurological Associations

In addition to significant health loss, many brain disorders can have an outsize economic cost—for the patients, their family, and the community. The presence of a brain disorder can turn lives upside down when family and other loved ones may have to give up jobs, relocate, or take on debt to look after someone who has a brain disorder. Consequently, another cornerstone of the Brain Health Initiative is a groundbreaking effort to estimate the global economic impact of brain health disorders. A holistic understanding of the full economic impact will enable policymakers to prioritize interventions and support systems for brain health and caregivers. IHME aims to improve the livelihoods of everyone impacted by brain disorders by providing key stakeholders and decision makers with accurate, clear, and informative estimates of the direct and indirect costs associated with brain disorders. This new analytic project was launched in 2022 at the outset of the Initiative. Preliminary results were first announced at the American Academy of Neurology annual conference in Boston, USA, in April 2023.



Global lost income in billions, 2021 USD, by year and by disorder

Expand research on modifiable risk factors

As part of the Brain Health Initiative, IHME is kicking off work with ADDI and AARP to quantify and visualize the potential impact of dementia risk reduction strategy in the United States.

IHME will estimate potentially avoidable burden attributable to dementia risk factors, and will build on the resources, expertise, and analytic methods developed as part of the ongoing GBD Study. We anticipate this to be the most rigorous and comprehensive assessment of dementia risk factors to date, considering a broad range of potential risk factors, including: level of educational attainment , bodymass index, hypertension, smoking, alcohol use, physical activity, air pollution, diabetes, hearing loss, traumatic brain injury, depression, and social isolation. IHME will rigorously assess the relationship between risk exposures and dementia outcomes to generate an evidence score for each risk-outcome pair. Then, for risk factors meeting a predetermined evidence threshold, IHME will quantify the share of dementia burden that can be attributed to the risk.

Results of this research will be displayed in a visually compelling and interactive web-based tool and will be available for policymakers, consumers and researchers alike.

The results of this project will provide a crucial evidence base for US policymakers to allocate resources. By quantifying the relative contribution of different risk factors to dementia burden within each US state, outputs will identify the modifiable risk factors that have the largest impact on communities around the country, and the policy levers that might offer the best chance at mitigating the burden of dementia. The project will also provide a blueprint for understanding dementia risk factors in settings outside of the US and for evaluating the impact of specific policy scenarios in future work.

3. Increasing awareness

Launch of the Brain Health Atlas for a global audience

For years, a central conundrum around brain health was this: despite widespread acknowledgement that there was a problem, propelling the issue to the top of national agendas was an uphill battle. The evidence is all around us. We can see it in the friend with multiple sclerosis, the family member with dementia, the teen with depression. There was a general sense that the global burden of brain disorders was on the rise. Yet no one had quantified the scope of the problem in a systematic way, using reliable data that were comparable across regions, conditions, and over time. In order to address brain health

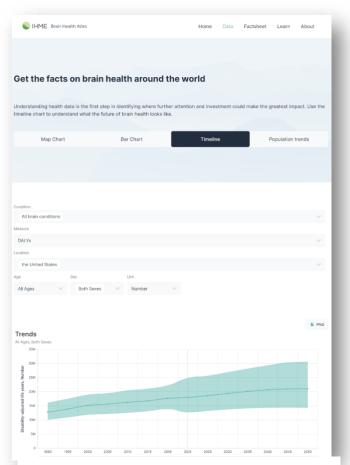
effectively, policymakers and the public alike need to understand the extent of the challenge.

The Brain Health Atlas was conceived to fill this gap. IHME developed and launched the Brain Health Atlas, an interactive public-facing tool with easy-to-understand data illustrating the burden of brain disorders, both globally and by country.

Leveraging Global Burden of Disease estimates, IHME brought the full scope of global brain health to life. The Brain Health Atlas is the first-ever public-facing online tool to analyze the impact of brain disorders around the world. It offers a curated data exploration experience to users who may not have a background in data analytics.

Features and functions of the Brain Health Atlas include:

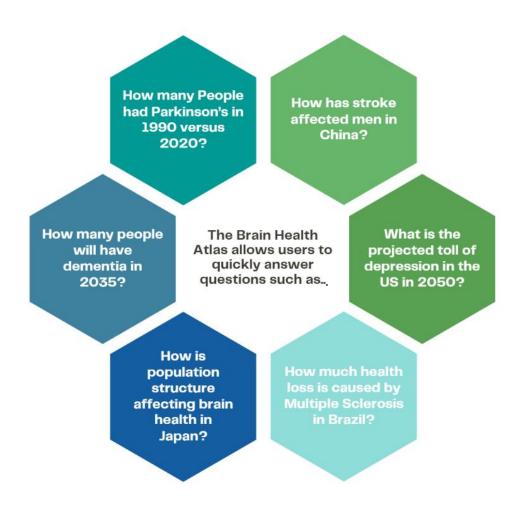
- Brain health data for every country in the world
- In-depth factsheets for 195 countries
- Population trends, timelines, and maps
- Interactive graphics that allow users to explore brain health disease burden trends over time, from 1990 to 2050, by age, sex, and country
- Economic analysis of brain health conditions



The Brain Health Atlas: A public-facing website that communicates the total burden of brain health conditions using words, data, and graphics (Brainhealthatlas.org)

The Brain Health Atlas demonstrates that brain disorders cause more death and illness globally than cardiovascular disease, cancers, and all other condition categories. All told, more than 15% of all health loss around the world is associated with brain disorders—and the prevalence continues to rise. The number of people with Alzheimer's disease and other dementias increased by 178% between 1990 and 2021; Parkinson's cases increased by 172%; and strokes went up 98%.

The Brain Health Atlas is designed to be accessible to both a lay audience and a subject matter expert, and it provides global coverage through factsheets to contextualize brain health in each country in the world. These insights are relevant to a range of stakeholders including decision-makers at the multinational, national, and local levels. The Brain Health Atlas will be frequently updated to incorporate and disseminate new evidence that is produced as part of the Brain Health Initiative.



Elevate brain health into the global conversation

To change the conversation around brain health, we have to reach the right audiences. Since the Initiative's launch, IHME has participated in events around the world to inform and educate diverse global audiences: governments, healthcare payers, advocacy organizations, as well as private sector organizations across technology, science, finance, and more. The Brain Health Initiative's message has reached thousands of key players this past year alone.

IHME data has framed the discussion around the total burden of brain disorders, both in terms of health and the economic perspective.

Our participation in key events like the European Brain Council Event and the AAN Annual Meeting in 2023 helped to communicate the burden of these disorders



"Better evidence drives policy action and can improve health outcomes for populations around the world."

Dr. Theo Vos, Professor Emeritus, IHME

and the important role data plays in making informed decisions about funding and public health interventions.

At the European Brain Council (EBC) Event, IHME's Dr. Theo Vos delivered a keynote speech that underscored the importance of a comprehensive view of brain health. The Brain Health Collaborative, during the 2023 American Academy of Neurology (AAN) Annual Meeting, hosted a panel discussion which brought to light the total burden of brain disorders, the economic impacts, the challenges faced from a clinical perspective, and potential solutions from policy, medical, and technology sectors.

IHME's Dr. Joseph Dieleman also presented preliminary findings on the economic impact of brain health at the 2023 Brain Health Summit, which generated interest amongst advocacy-focused audience

members, who noted that this data would be a crucial tool in creating policy changes.

In year two, IHME will pursue more opportunities to generate awareness of brain health as a top priority for a healthy future, continuing to build momentum and inspire action.

To learn more about IHME's participation in recent events for the Brain Health Initiative, see Appendix B.



Direct policy impacts

"The IHME evidence is extremely important, and now the EAN can start basing our advocacy on it. ... We really hate false claims. It is important that we address all neurological disorders—including stroke, CNS infections, and dementia.

We don't want to hear that your disease is more important than another disease just because you believe it's so. We really want to base our advocacy on the best science published in the best journals. This new analysis gives us the armamentarium to start approaching politicians to take action."

Paul Boon, EAN President



The novel estimates being generated by IHME as part of the Brain Health Initiative are a valuable resource for shaping future policy impacts and policy briefings, and we are already beginning to see the impact it can have. For example, IHME's data on brain health played a critical role in the success of the World Bank Summit in January 2023. This event brought together Latin American and Caribbean Ministers of Health and Finance to discuss the pandemic's impact on health systems and mental health. Data, including IHME's estimates, have made it clear that we are in a global mental health crisis and that the solution involves investing in effective mental health services. By the event's conclusion, the World Bank, the World Health Organization, the Pan American Health Organization, and the governments of Argentina, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, and Paraguay signed a commitment to prioritize mental health resources and policy.

AARP is leveraging IHME's evidence to communicate to state-level policymakers the comprehensive burden of dementia in the United States, and to inform policy priorities and program offerings tailored to each state office.

Organizations like the American Academy of Neurology and the European Academy of Neurology are also beginning to utilize IHME brain health data to effectively communicate the total burden of brain disorders in their respective geographic areas, allowing for more targeted and efficient health policies that will lead to improved health outcomes.

4. Convening thought leaders

"How do we mitigate the [upcoming increase in disease burden] in its tracks? Through collaborative effort, generating data, creating awareness, and bringing everyone to the table to support equitable and inclusive decision making."



Dr. Temitope Farombi, Neurologist at the Chief Tony Anenih Geriatric Centre, University College Hospital, Nigeria

IHME's work on brain health does not exist in a vacuum: that is why we wanted to ensure we learn from and collaborate with top thought leaders representing a range of perspectives.

To this end, IHME founded the Brain Health Collaborative, a global consortium of public and private institutions, scientists, policymakers, and advocates motivated by a common goal of driving awareness and mobilizing resources. When we started one year ago, there were countless disparate organizations working to study or improve some aspect of brain health, each focusing on its own area of expertise. The Brain Health Collaborative aims to bring together these disparate organizations all working towards the same goal. The Collaborative provides various opportunities for organizations to support research and outreach, share data, provide guidance, host events, present findings, and disseminate the evidence needed to drive change.

The objective for the Brain Health Collaborative is to provide global thought leadership, evidence, and insights to advance the understanding, importance, and prioritization of brain health conditions including neurological, cerebrovascular and mental health disorders.

The goals of the Collaborative include:

- 1. Convene thought leaders around brain health and foster a movement of strong advocates to amplify insights, drive evidence-based discussions, and contribute to changes in policy.
- 2. Advance the research necessary to fully quantify and compare the health and economic impacts of brain disorders globally.
- 3. Support and enable discourse about brain health priorities and policies.

The scale and scope of the Brain Health Initiative, and of the Brain Health Collaborative, set it apart. Guided by IHME research, our unique approach is designed to foster collaboration among diverse entities including advocacy groups, policymakers, researchers, medical societies, economists, and private sector entities including pharmaceutical and technology companies. By working collaboratively, this group can bring to light the true extent of death and disability caused by brain disorders, and to offer policymakers data to inform decisionmaking.

The Collaborative is comprised of two groups, Supporters and Stakeholders. Stakeholders provide the expertise to guide the development of the Initiative and are instrumental in translating the Initiative's findings into actionable policies and practices. By fostering collaboration and knowledge sharing, the Stakeholders ensure that the Brain Health Initiative is well-informed,



"Far too often, individuals and organizations try to solve great challenges by working in silos. However, no single organization, or even country, can solve this challenge that brain health disorders pose."

Simona Skerjanec, Senior Vice President and Global Neuroscience Head, Roche

evidence-based, and impactful. Supporters are Stakeholders who also contribute financial resources, data, and other valuable support to the initiative. Their support ensures the Initiative's sustainability and growth and strengthens the Collaborative's capacity to drive change and bring about meaningful improvements in brain health.

In year two, we aim for the Collaborative to expand its reach and impact in the following ways:

- Innovative analysis. As funding allows, IHME will lead future projects to identify risk factors
 associated with brain disorders, develop approaches to measure cognitive function globally, and
 quantify the return on investment for countries investing in brain health. Additionally, we hope
 to analyze policies and assess their effectiveness in reducing the burden of brain disorders.
 Partners in these analyses include McKinsey Health Institute, AAN, AARP, and academic
 institutions in Chile and Kenya.
- **Broadening support**. To scale the Initiative's efforts, the Collaborative aims to attract additional Supporters, leveraging IHME's network and reaching out to other funders.
- Enhanced engagement. Continued efforts will be made to identify and engage key Stakeholders, including scientific and policy experts from diverse backgrounds to help shape research priorities and ensure the translation of findings into actionable policies.
- **Collaboration and impact**. The Collaborative will foster knowledge-sharing among its diverse members, promoting joint initiatives, research programs, and the development of best practices in brain health treatment and support. These cross-sector partnerships will drive impactful change globally, improving brain health outcomes for individuals worldwide.

Appendix A: Brain Health Collaborative Members

- AARP
- Aga Khan University
- Alzheimer's Disease Data Initiative (ADDI)
- Alzheimer's Disease International
- American Academy of Neurology (AAN)
- American Heart Association (AHA)
- Board of Directors of the Texas Healthy Brain Initiative
- Brain Health Nexus
- Child Mind Institute
- Davos Alzheimer's Collaborative
- European Brain Council
- European Federation of Neurological Associations
- Gates Ventures
- Genentech
- Healthy Brains Global Initiative (HBGI)
- Institute of Experimental Neurology at the Scientific Institute San Raffaele
- McKinsey Health Institute
- Meadows Mental Health Policy Institute (MMHPI)
- Microsoft AI for Good
- Ontario Brain Institute
- Oxford Health Policy Forum
- Roche
- The Brain Charity
- UCH Nigeria
- UsAgainstAlzheimer's
- Women's Brain Project
- World Health Organization (WHO)
- World Bank
- World Dementia Council

*Collaborative members as of September 2023

Appendix B: Brain Health Events

In this section we summarize key IHME and Brain Health Collaborative events, and their impact.

American Academy of Neurology Brain Health Summit Washington, DC, USA – September 2022

IHME's Assistant Director of Client Services, Dr. Catherine Gillespie, presented the initial epidemiological findings from the Brain Health Initiative, including the first-ever analysis of the total burden of brain health disorders globally. The setting was the inaugural AAN Brain Health Summit which brought together leading experts, key academic and private sector stakeholders and policymakers in the United States to shape the future of care, discuss brain health over the lifespan, and outline research, education, and advocacy needs.

Brain Health Collaborative Launch

London, UK – October 2022

At the 2022 IHME Roux Prize event in London, an event that celebrates the use of data in decision-making, we launched the Brain Health Collaborative. Here, we solidified support for better decision-making in research and policy in front of an audience from the private sector, universities, and advocacy groups. Attendees got a sneak preview of the Brain Health Atlas.

Attendees represented a range of organizations from the advocacy, technology, science, policy, and finance sectors.



World Bank Summit

Santiago, Chile – January 2023

IHME's brain health data contributed to the success of the World Bank Summit bringing together Latin American and Caribbean ministers of health and finance to discuss the pandemic's impact on health systems and mental health. The data made it clear that we are in the midst of a global mental health crisis—and that the answer involves investing in effective mental health services. By the event's conclusion, the World Bank, the World Health Organization, Pan American Health Organization and the governments of Argentina, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, and Paraguay signed a commitment to prioritize mental health resources and policy.

View the declaration <u>"Rebuilding wellbeing in the aftermath of the pandemic, investing in health</u> systems resilience and mental health."

European Brain Council Event Brussels, Belgium - March 2023

IHME's Dr. Theo Vos, Professor Emeritus, delivered a keynote highlighting the burden of brain disorders, IHME's methods, and the role of data to help decision-makers allocate resources for funding and public health interventions, emphasizing the need for a comprehensive view of brain health and an approach for estimating a comprehensive brain health number. This



presentation drove home the key message that, as Dr. Vos says, "better evidence drives policy action and can improve health outcomes for populations around the world." Dr. Vos sat on a panel discussion alongside Dr. Tarun Dua, head of WHO's Brain Health Unit, titled "mapping the data: you can't address what you can't measure" to discuss the impact and utility of the data measured on policy making, indicating data gaps, new technologies for advancing health and designing scenarios in health data measurement.

American Academy of Neurology Annual Conference

Boston, MA, USA – April 2023

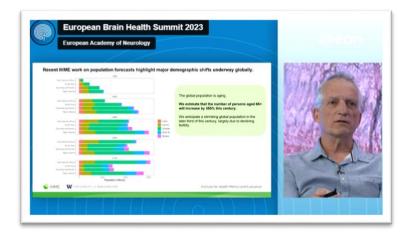
IHME's Resource Tracking team lead and Associate Professor, Dr. Joseph Dieleman, unveiled IHME's preliminary economic impacts of brain disorders at the global level and within the United States at the AAN Policy Hub and Practice Stage at the 2023 Annual Meeting. Following this presentation, the Brain Health Collaborative hosted a panel discussion where AAN President Dr. Natalia Rost spoke on the challenges from a clinical perspective and engaged in a panel discussion about potential solutions. Sarah Lenz Lock, AARP's Senior Vice President for Policy and



Brain Health, spoke to the patient and caregiver perspective and policy solutions; Simona Skerjanec, Senior Vice President and Global Neuroscience Head at Roche, spoke to the need for medical innovations; and Dr. William Weeks, Director of Microsoft's AI for Health Research, discussed the technology innovations that are needed to make an impact.

European Academy of Neurology Brain Health Summit Vienna, Austria - May 2023

At the EAN Brain Health Summit, Dr. Theo Vos presented IHME's estimates of brain health burden in Europe, ongoing and projected demographic shifts that will exacerbate the challenge, and discussed how data should inform decision-making for the future ahead.



This presentation received more than 1,500 viewers online including numerous representatives from European organizations.

US Against Alzheimer's Atlanta, GA, USA – May 2023

IHME's Shayla Smith and Dr. Catherine Gillespie participated in a day-long roundtable on how data can help employers demonstrate the relationship of healthy aging and brain health to the economy and to growing inequality—and how supporting brain health can provide a return on investment.

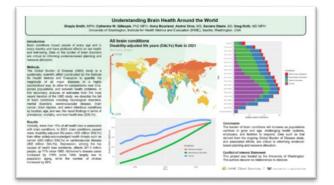
On a panel entitled "The Case for Private Sector Engagement," Smith and Dr. Gillespie shared analysis of IHME brain disorder data, novel disease spending data broken out by payer type in the United States, and discussed where data gaps can continued to be filled by ongoing research.

2023 European Academy of Neurology

Conference

Budapest, Hungary – July 2023

At Europe's largest forum for neurology, IHME's Shayla Smith presented a poster summarizing IHME's case for the recognition and prioritization of the impact of brain disorders at the EAN conference. IHME's participation was linked to the overarching theme of how to utilize data to make



change in brain health. The poster presentation was highlighted in a press release and, additionally, IHME's Xaviera Steele conducted an online press briefing for journalists emphasizing the need for information about the burden of brain disorders to be communicated to broad audiences. Highlights from these presentations include how data are critical to informing evidence-based planning and resource allocation.

Social Outcomes Conference

United Kingdom & Virtual – September 2023

The Social Outcomes Conference serves as a platform for leading researchers, policymakers, and practitioners to exchange their knowledge and insights on improving social outcomes. IHME's Shayla Smith presented on the IHME's standardized approach to quantifying the current burden and future trends of mental health conditions at both global and regional levels. Smith pointed out that unlike other disorders that may present at later stages in life, mental disorders tend to manifest earlier, making early intervention crucial. She delved into the drivers of mental health disorders, emphasizing the importance of evidence-based therapeutic or policy interventions. A significant part of her presentation was dedicated to the global impact of the pandemic on mental health, specifically anxiety disorders and major depressive disorder. She illustrated how the prevalence and burden of these disorders have drastically shifted between 2019 and 2020.

Smith's presentation was a part of broader discussions with Healthy Brain Global Initiative and McKinsey Health Institute on the possible return on investment by focusing on mental health and new funding mechanisms to connect effectively investment with impact.

UNGA Brain Health Day at Scientific Summit

New York, NY, USA – September 2023

The Brain Health Day at the United Nations General Assembly (UNGA), organized by the European Brain Council (EBC), marked a pivotal moment in the global approach to brain disorders. Dr. Gregory Roth, IHME's Director for the Program in Cardiovascular Health Metrics, presented data on the urgent need for action on brain disorders and the economic costs associated with them. His presentation underscored the immense economic and social burdens of these disorders, emphasizing the necessity

for comprehensive data collection and analysis to inform proactive responses. This event was part of a broader series of discussions initiated by EBC, aimed at fostering global partnerships and collaborative efforts to address brain health. The Brain Health Day advocated for a unified, global response to the challenges posed by brain disorders. The event was an important step towards tangible action plans, with the ultimate goal of influencing policy recommendations on a global scale. Its impact was significant, setting the stage for national, regional, and global policymakers to prioritize



brain health in the post-Sustainable Development Goals era and beyond.

American Academy of Neurology Brain Health Summit Washington D.C., USA – September 2023

The second Annual Brain Health Summit organized by the American Academy of Neurology convened a broad range of leaders in brain health in the United States, academic and research organizations, medical societies, policymakers, and patient advocacy groups. As one of a multidisciplinary selection of speakers, Dr. Joseph Dieleman presented preliminary findings from IHME's work quantifying the economic impacts of brain health and discussed the methodology developed for the project.



Advocacy-focused work groups in attendance

had a strong positive reaction to these findings, recognizing that this data would provide an essential tool for the construction of policy change.

Appendix C: References

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