



Can AI responsibly help mitigate the mental health crisis?

Leveraging AI to reduce the cost of mental health care

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Can AI responsibly help mitigate the mental health crisis?

Leveraging AI to reduce the cost of mental health care

Executive summary

IBM views artificial intelligence (AI) as a transformative tool in behavioral health, capable of revolutionizing how mental health services are delivered and accessed. According to IBM, AI can help address the significant challenge of access to care, which is a critical issue given the global shortage of mental health professionals and the stigma often associated with seeking help.

AI-driven solutions can augment rather than replace human clinicians. IBM envisions AI being used to provide initial assessments, triage patients, and offer recommendations based on vast amounts of data. This could include identifying patterns in patient symptoms, suggesting potential diagnoses, and recommending appropriate interventions or treatments.

Moreover, AI can facilitate telehealth and remote monitoring, breaking down geographical barriers to care. IBM's telehealth solutions can connect patients with mental health providers regardless of location, enabling continuous care and real-time monitoring. This could be particularly beneficial for individuals in rural or underserved areas who may not have easy access to mental health services.

1 out of every **2**
people in the world will develop
a mental health disorder
in their lifetime

(Harvard, 2023)

IBM also recognizes the importance of ensuring AI systems respect user privacy and confidentiality, especially in sensitive areas like mental health. They emphasize the need for robust security measures and transparent data usage policies.

In summary, IBM sees AI as a strategic tool to enhance access to behavioral healthcare, improve diagnostics, and support treatment planning. By leveraging AI, IBM aims to complement human expertise, expand telehealth services, and ultimately make mental health support more accessible and less stigmatized. The value of leveraging AI for mental health will result in increasing access to care, early diagnosis and treatment, personalized care plans, and cost reductions due to clinical improvements achieved through AI.

Access to mental health care

Imagine needing mental health care yet not having access to the diagnosis and care you need. This is a real obstacle currently being experienced amongst those with mental health diagnosis. According to NPR, roughly two-thirds of Americans with a diagnosed mental health condition were unable to access treatment in 2021, even though they had health insurance.¹ Intervention is not only critical for preventing or reducing the progress of a mental illness, but for improving a person's mental and physical health, community participation and socioeconomic outcomes far into the future.² A shortage of providers is pushing the industry to find alternate solutions to support those in need of care. natural path to help fulfill this high demand for mental health care is technology.

The statistics outlining the issue of access to mental health care are staggering. When two thirds of people with a mental health diagnosis and health insurance are unable to access care³. In addition, the people to provider ratio, for 340 people only one mental healthcare provider in the U.S.⁴ is quite alarming. This situation indicates a need for a swift change and this is where AI can effectively be part of the *access to care* solution.

To identify a beneficial, low risk approach to support mental health, AI needs to be designed, evaluated, and validated by humans before it can be implemented. The use of augmented AI can add significant benefits, while minimizing risk. AI can also add additional value to mental health care by providing the ability to address mental health issues far earlier in the patient's mental health care journey, thereby reducing the cost impacts at a later stage in population health.

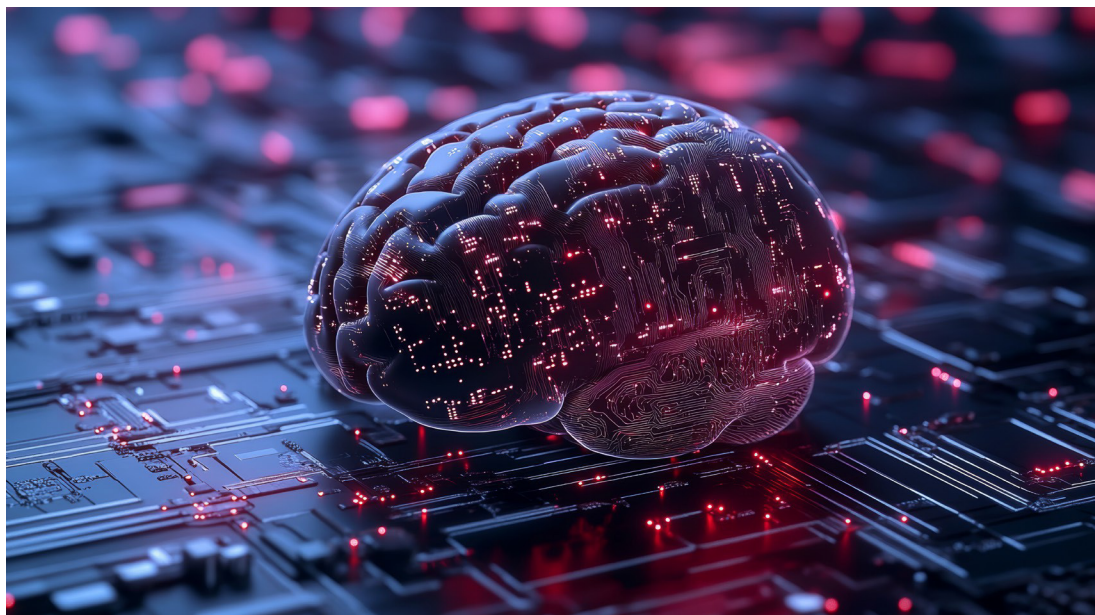


There are thousands of apps with varying amounts of AI, available in the market today that provide mental health support for individuals searching for providers, for anxiety and depression screening and management, and to optimize wellness. Traditionally, technology support for providers has been focused on Electronic Health Record (EHR) optimization and virtual visits. With limited clinicians available, and mental health diagnosis numbers rising - by 25% according to several publications issued by the World Health Organization (WHO), AI is projected to be one of the primary tools that can support mental healthcare, with increased availability, accuracy, and efficiency. AI has the potential to elevate the end-to-end mental health practice, increasing early identification of mental health conditions, personalizing treatment plans, and advancing virtual assistance.⁵ Successful AI must be grounded in “do no harm”, with privacy, security, bias detection, evidence-based practice guidelines, and digital accessibility guardrails.⁶

In addition to telehealth solutions, IBM's population health management tools leverage data analytics to identify health trends and risks within populations, enabling proactive healthcare strategies and better resource allocation. Both are types of solutions that can be used to advocate for access to care in this mental health professional shortage.

122 million
people in the U.S. live in a designated
Mental Health Professional
Shortage Area
(HRSA, 2025)

Early diagnosis and treatment improve prognosis



Immediate access to some level of care early in the mental health journey can help those with immediate, yet not crisis level, mental health needs. Early diagnosis and treatment improve the patient's prognosis.⁷ The average length of time from the onset of mental health symptoms to diagnosis is eleven years.⁸ AI could accelerate the identification of early directional indicators such as specific biomarkers of an illness or potential illness. In a study of 12,000 children, age 9 to 10, brain imaging and connectivity analyses showed biomarkers indicating current psychiatric conditions and predicted conditions for two years following the scan.⁹ Including Leahy's data in the foundational model could be pivotal to identifying potential candidates for the diagnostic testing, as well as continue to isolate patterns following the analysis.

Cedars Sinai Medical Center found that women who developed perinatal mood and anxiety disorder (PMAD) tested positive for specific proteins in their third semester.¹⁰ Predicting PMAD has individual quality of life and economic impacts. PMADs were estimated to cost \$14 billion for the 2017 birth cohort from conception to 5 years postpartum.¹¹ Another example of biomarker identification involves the use of senescence-associated secretory phenotype (SASP) scores to determine the success rate of depression treatment in older adults. This data-driven insight is critical to treatment plan decisions as 50% of older adults remain significantly depressed after being treated with medications. Identifying the 50% of the population where medications would be ineffective, would save time, money, and potential adverse reactions for the patients. The higher the SASP score, the less likely the success of medication treatment, informing the provider to customize the treatment plan to a non-pharmacologic approach from the onset.¹² Biomarkers are

an example of precise data inputs, that we are not incorporating holistically, and AI can help surface them for providers. The move towards the use of collaborative care models where healthcare professionals, patients, and their families work together is becoming popular. This approach aims to enhance patient-centered care and improve overall health outcomes through human-centered design practices.

So what does this mean from a cost and savings perspective? As discussed earlier, recent studies have shown that the proactive part of mental health within the medical health journey will pay for itself. So why aren't we doing more with AI to get to there? The answer is that we are, in small steps. Privacy, informed consent, security, bias mitigation, and integration with EHR data, amongst others, also must be carefully and judiciously applied. All this works in tandem to ensure a fuller scope health care AI journey that includes mental health support.

The average length of time
from the onset of mental health
symptoms to diagnosis is

11 Years

(NAMI, 2023)

Personalized treatment plans

Within the mental health arena, AI is in the very early phases of recommending supportive interventions to consumers, with personalized recommendations such as meditation and online cognitive behavioral health found on mobile phone applications. As AI plugs the gap of access to care, mental health providers can focus their attention on the intersection of cross-conditional treatment plans to further benefit their patients. As an example, IBM's suite of AI and data analytics tools are designed to help healthcare providers make more informed decisions, enhance patient care, and accelerate research. They can analyze large volumes of medical data and provide insights to support diagnosis, treatment planning, and clinical decision making. The power of AI can be a prevalent tool to best support the patient's journey.

The need for balance between AI and patient safety is critical and can impact a patient's quality of life as well as their mortality.¹³ A clear example for the need of patient safety centers around assessing and mitigating existing stigma and bias within the mental health clinical process. Stigma and bias toward mental illness can be an impediment to people accessing needed care. When that stigma and bias exists within the health care system, it can have an especially harmful impact.¹⁴

According to the CDC, in 2021 suicide was the second leading cause of death among individuals between the ages of 10-14 and 25-34, and the numbers are rising.¹⁵ While the early iterations of mental health app technology that use AI and sentiment analysis help identify mental health before it becomes urgent.



Promising studies are underway to simulate the ability to design better treatments by simulating potential therapeutic scenarios, before applying the treatment in reality, and providing online feedback and recommendations to the therapist for optimizing a treatment.¹⁶ These simulations, referred to as digital twins, are expected to be able to apply predictive analytics by leveraging real time data from sources like the patient's EHR, wearables, medical devices, etc., to help clinicians better understand individualized impacts of treatment types, when including additional data points.

An example of this type of AI driven treatment plan can be seen in IBM's Health & Wellness 360 (H&W360) solution. This solution provides an AI entry point to access mental health support at various intersections of a patient's journey. H&W360 brings together clinically validated mental health support tools that delivers services through native iOS and Android mobile apps to the end users through AI, mobile, and intelligent workflows. This interactive solution serves as a mechanism to provide early mental health intervention in the form of self-help, with the added feature of being able to connect users to trained support teams or crisis hotlines when additional help is required.

Part of the AI-supported treatment plan is the use of virtual assistant support. Virtual assistant technology continues to progress. Chatbots offer a way to access mental healthcare anonymously, if desired, to reduce stigma-related impediment. Cheng & Jiang found mental health chatbot technologies, offered by employers after mass shootings, engaged people in immediate care.¹⁷ Individuals felt supported, more informed, and were able to share information with others to help prevent the decline of their mental health. Individuals appreciated the increased communication that was readily available at no charge. Early indicators show that using virtual assistant support, as part of an earlier intervention process in the mental health journey, provides the ability to offer consistent support to help prevent the progression to crisis mode and demonstrated the potential to reduce symptoms, as illustrated in the randomized controlled trial of the Gen-AI-powered chatbot, Therabot, for mental health treatment.¹⁸

Because AI in the mental health field is still so new, clinicians are still hesitant to use it as part of the mental health diagnosis support process. When peer-support mental health professionals used AI to assist them with responses, it was found the combination of humans and AI increased empathy by 20% compared to a human-only peer support mental health workers and by 40% when the human was challenged with providing empathy.¹⁹

Reducing the cost of care, responsibly

According to The Lancet Global Health, poor mental health is estimated to cost the global economy \$6 trillion by 2030.²⁰ Experts across the world warn that the mental health crisis will be at pandemic proportions if it is not made a global priority, now. Additionally, JAMA Network Open published a study that states medical claims costs were reduced by \$190 for every \$100 invested in the mental health benefit.²¹

This high rate of return is further validated when it is looked at in the reverse, the cost of managing physical conditions is about 50% higher when patients also have anxiety and depression.²² So how can AI in mental health help to curb this anticipated rising cost of care? Part of the answer is getting in front of mental health issues earlier in the care process. With access to mental health care so limited, AI becomes the support tool for early on mitigation.

According to respected sources like the WHO, the National Institute of Health (NIH), and the Mayo Clinic, among others, the pandemic caused the mental health numbers to skyrocket. That coincides with the dramatic increase in the usage of social media which is collectively recognized as a contributor to the increasing mental health trends. This is where responsibly developed and managed AI to support mental health needs can make a considerable difference in patient outcomes.

When given the ability to proactively support people's mental health journey, the possibility of reducing the cost of care related to other, more complex, health and social issues presents itself. In the case of NHS Talking Therapies, it has been proven that proactively addressing mental health issues is both effective and cost-efficient, paying for itself within two years by reducing healthcare costs and helping people return to work.²³ One of the lesser discussed downstream impacts of helping people return to work is the increased tax revenues.

As stated earlier in this report, current day mental health metrics are spotlighting the expected doubling, at minimum, of patients requiring access to mental health care within the next 3-5 years. When the global health economic effect is great, with mental health disorders expected to cost nearly a third of the projected US \$47 trillion incurred by all non-communicable diseases

↓ \$190

Medical
claims costs
reduction for every
\$100 invested
in the mental
health benefit

(Hawrilenko, et. al., 2025)

by 2030, additional opportunities exist for the mental health industry to be far more cost effective. Incorporating mental health data into the overall health picture via the integration of the psychological and medical EHR data provides a fuller view of the patient's health. This more holistic health view allows for the ability to proactively participate in the reduction of the development of additional conditions, like cardiovascular and metabolic diseases, that patients are twice as likely to develop when they also have a serious mental illness. Thus reducing the longer-term cost of care.

This then leads to the consideration of not only clinically responsible AI, but also technologically responsible AI. An example of this is how Mayden, one of the leading EHR systems for psychological therapies in the UK, was able to better, and more efficiently, manage their iaptus clinical software²⁴ performance by partnering with IBM to integrate the Instana Observability tool. This allowed for Mayden's iaptus tool to fully utilize the AI technology offered by Instana to better interpret the information, thus providing not only an integration of psychological and health EHR data, but also the highest security standards and AI to best analyze the efficiency of the platform of the data movement.

Concluding Summary

There is an urgent need for improved mental health care access and affordability. Most concerning is the trend line is getting worse, and demand far outpaces the supply of qualified care providers. The urgency for action is palpable and the shortage of mental healthcare providers and the global economic burden of poor mental health underscore this pressing issue.

IBM stands at the forefront of leveraging AI to address the rapidly escalating mental health crisis, characterized by limited access to care, rising costs, and delayed diagnoses. AI, with its potential for early identification of mental health issues, personalized treatment plans, and enhanced virtual assistance, offers a beacon of hope. IBM's suite of AI and data analytics tools is pioneering the way in supporting healthcare providers with insights from vast medical data, improving diagnosis, treatment planning, and clinical decisions.

Moreover, AI-driven personalized treatment plans, such as IBM's Health & Wellness 360 (H&W360) solution, are revolutionizing mental health support. Utilizing virtual assistant technology

including chatbots and agentic AI provide anonymous, accessible mental healthcare thereby reducing stigma-related barriers and encouraging early intervention.

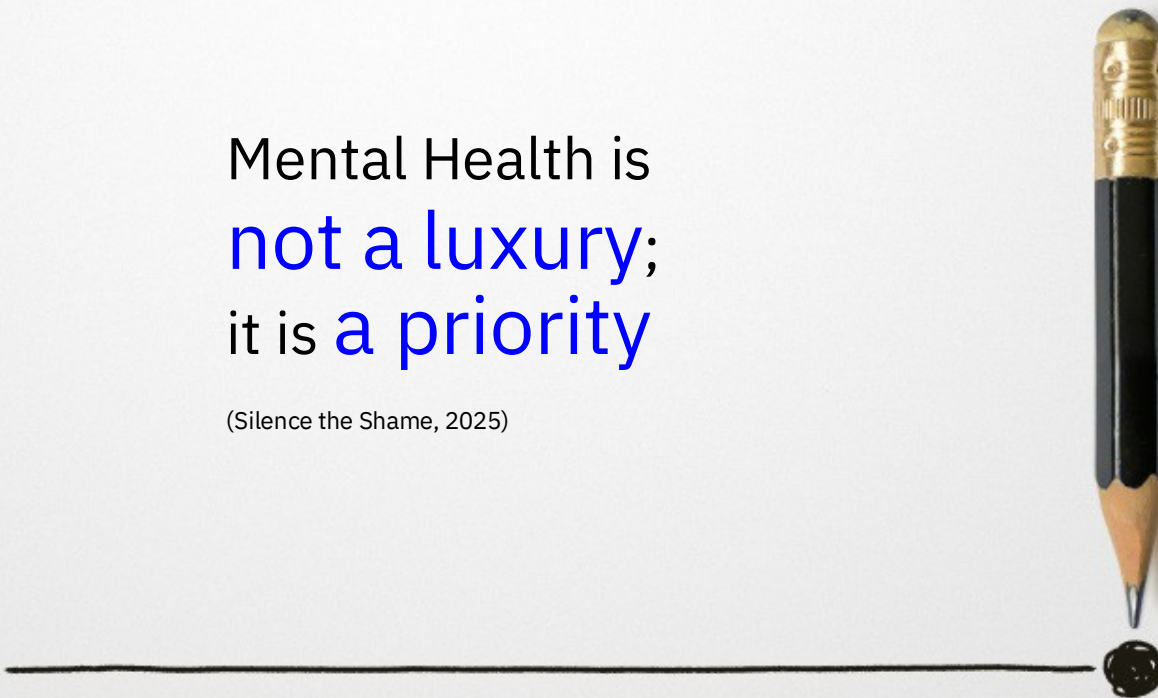
Despite the promising potential of AI in mental health, it is crucial to prioritize patient safety, addressing existing stigma and bias within the clinical process. IBM is committed to integrating AI responsibly, ensuring security, privacy, and adherence to evidence-based practice guidelines.

The time for action is now. By harnessing the power of AI, we can bridge the mental health care gap, improve patient outcomes, and prevent the steep financial burden associated with untreated mental health conditions. It is time to embrace AI as a critical tool in our mental health arsenal, ensuring a future where everyone has access to the mental health care they need, when they need it.

For more information how IBM can help you expand your range related to how you are addressing mental health care, please reach out to us for more information via IBM Consulting.

Mental Health is
not a luxury;
it is a priority

(Silence the Shame, 2025)



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New Orchard Road
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Produced in the
United States of America
July 2025

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