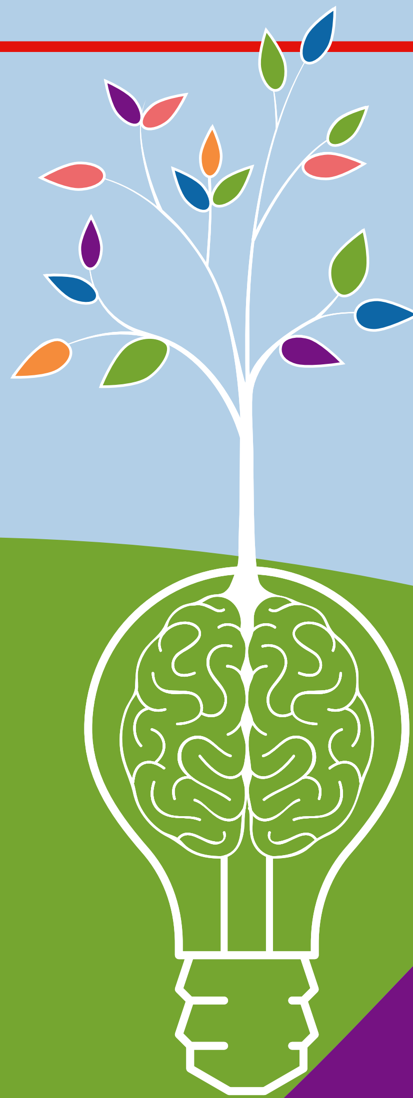
ECONOMIST IMPACT

Embracing innovation in mental health



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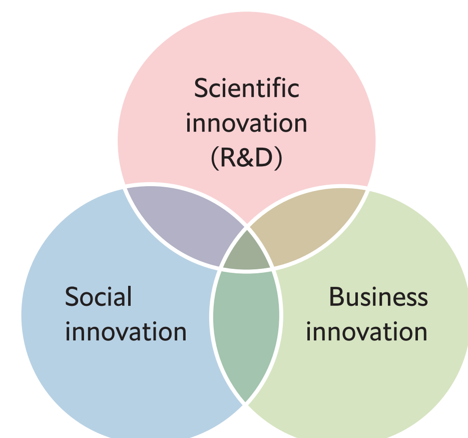
Introduction

The covid-19 pandemic has shifted the healthcare landscape worldwide and, in doing so, has revealed opportunities to meet challenges that far predate it. Reinvention, however, presents its own challenges. With much change underway, it is essential that all stakeholders think creatively about how to ensure that new tools and approaches improve services available to patients.

One area in need of change is mental healthcare. The pandemic has placed exceptional strain on the mental health of many people, increasing an already substantial burden. Depression is currently among the leading causes of disability in the US.[1] To address mental health issues at the required scale, innovation is key.

The World Health Organization (WHO) combines social, science and business aspects in defining innovation in healthcare as the development of "new or improved health policies, systems, products and technologies, and services and delivery methods that improve people's health, with a special focus on the needs of vulnerable populations."[2]

Figure 1. Defining innovation in health



Source: WHO

This report examines the current landscape of innovation in mental healthcare, including challenges such as implementation and achieving scale and sustainability. There are many areas for growth, including overcoming the obstacles—such as stigmatization—that hinder patients from seeking care. For those who do seek help, further challenges arise, including provider shortages and the correlated high cost of care. Another key area—and one that offers fertile ground for innovation—is data use. Accurate, interactive tools are needed to track both the prevalence of mental illness and patient outcomes.

By examining the role of innovation in mental healthcare, we can leverage the momentum

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generated by the pandemic. Despite widespread recognition of the need to improve mental healthcare in the US, there is much to be done.

The mental health innovation landscape: where are we now?

Efforts to improve mental health treatment in the US require innovative thinking to address a multitude of challenges. Funding for mental healthcare—and thus the ability of services to meet needs—remains insufficient, and parity of care with physical health services is still a target rather than reality.

“The way our system is working at this point is similar to a sink overflowing with water,” says Maggie Merritt, executive director of the Steinberg Institute, a California-based advocacy group dedicated to mental health policymaking. “And we’re spending the majority of our time trying to mop up that water versus just turning off the spigot.”

Challenges spanning access and outreach, diagnosis and treatment all require an innovative push to bring services to a consistently effective level.

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Increasing access: overcoming barriers to care

Some of the biggest challenges to providing effective, equitable mental health services arise before people opt to seek help. Difficulties in affording or even finding suitable services are a key challenge to many people in the US. Mental health is also especially subject to stigmatization, which often prevents people from acknowledging (at least openly) that they may require assistance. Significant challenges also exist in relation to funding services and research, while issues linked to stigmatization go hand in hand with difficulties in outreach, and in detection and diagnosis of problems.

Funding challenges

Increased funding for mental health treatment is necessary. In 2015, mental, neurological and substance abuse disorders made up 22% of total disability-adjusted life years in the US, yet only 8.2% of government health funding addressed mental health.[3]

While the expansion of insurance coverage through the Affordable Care Act has increased coverage for many individuals, there has not been a parallel increase in people receiving treatment for their mental health.[4] Further creative outreach efforts are clearly needed.

Detection and diagnosis

Early detection is essential to effective mental health treatment. Yet, for many reasons, including the enduring stigmatization of mental health issues and barriers to access driven by poorly resourced services, health services fail to engage potential patients. In addition, diagnosis of mental illness relies primarily on patients self-reporting their symptoms.

Examples of innovation to improve detection and diagnosis include practical initiatives such as integrating mental health awareness into formal education curricula for medical students in order to improve outreach to potentially vulnerable individuals. Such innovation includes technological solutions such as smartphone-based "digital phenotyping"—tracking patient activity and location, voice- and speech-related indicators, and human–computer interactions—to assist in diagnosis and monitoring.[5,6]

Stigma and outreach

Social stigma has long been associated with mental health conditions. It is often still considered taboo for people to admit—to clinicians, but also to family and friends—that they may need help. Individuals diagnosed with mental illness still experience discrimination, which not only makes

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people less likely to come forward but also creates challenges and limitations in researching potential treatments.[7]

While it is essential to improve the care offered to current patients, it is also critical to expand access to services by eliminating cultural barriers that prevent people from coming forward. For example, people of color are both more likely to experience cultural stigma around mental illness, disincentivizing them from seeking care, and less likely to find a provider who can offer care that is sensitive to the unique issues facing minority communities in the US.[8]

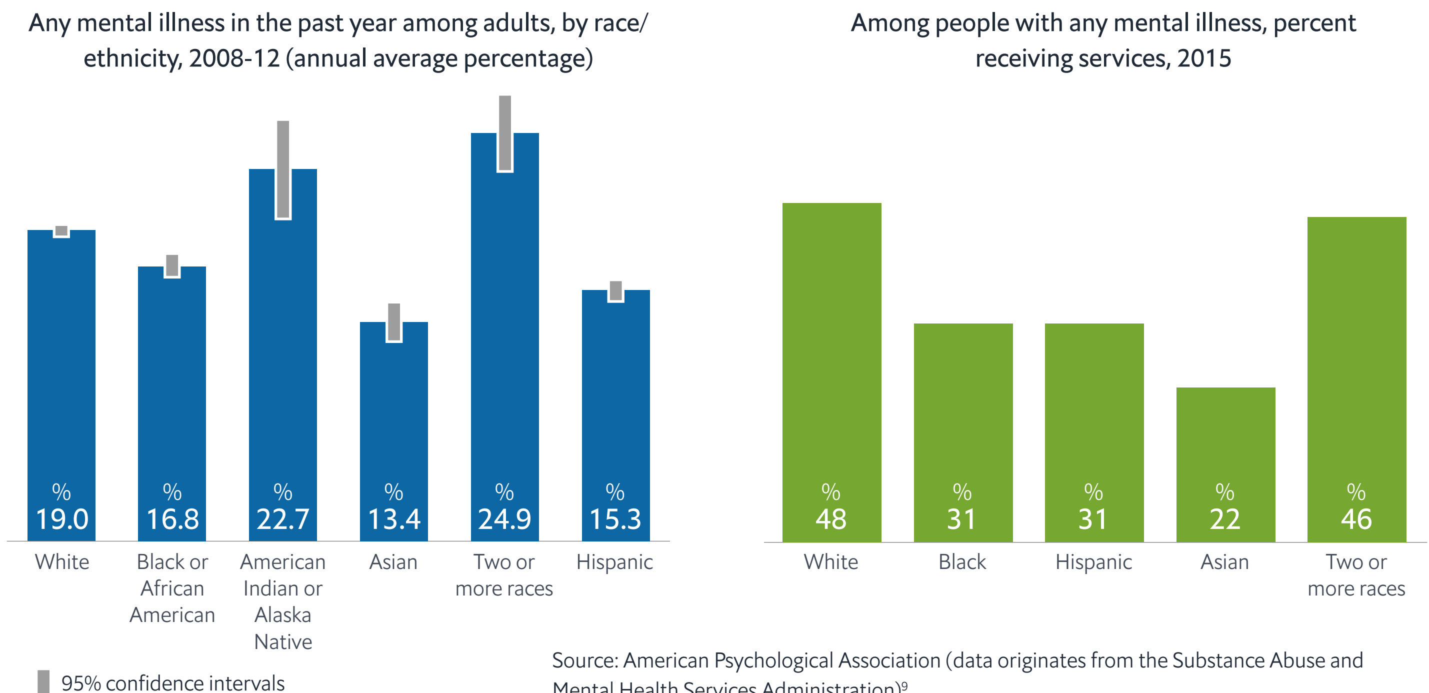
Barriers to help-seeking can be especially pronounced among racial and ethnic minority groups, making it less likely that individuals from these communities will seek help.[9] These culturally specific barriers have been conceptualized as fitting into three categories:

- **affective barriers**, which include stigma and reluctance to seek care because mental health treatment has primarily been tailored to White Americans or, in some cases, has treated people from minority ethnic backgrounds as being mentally inferior;

- **value orientation barriers**, including difficulties in squaring individualistic treatments such as psychotherapy with more collectivist cultural beliefs (as can be the case with people of Latin American or Asian backgrounds, for example); and

- **physical and structural barriers** linked to socioeconomic status, language and bias or prejudice on the part of healthcare providers.[10]

Figure 2. Instance of mental illness compared to the proportion of people receiving treatment, by race/ethnicity, United States.



Source: American Psychological Association (data originates from the Substance Abuse and Mental Health Services Administration)[9]

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Health provider bias is not necessarily active (or even subconscious) prejudice; it can also simply reflect a lack of awareness of culture-specific issues, including the unique stressors of living in a country with deep racial disparities. Nathaniel Counts, senior vice president of behavioral health innovation for Mental Health America, identifies this challenge as "a systemic issue about the way we measure mental health that undercounts psychological distress among people who experience consistent adversity."

"If you've seriously experienced a lifelong series of adversity and disinvestment, it might not show up as a relative change that a clinician can recognize as depression," he says. "And so there's this phenomenon where White people get diagnosed with depression and Black people get diagnosed with diabetes; where [for people of color] mental health is more picked up in cardio-metabolic impacts than mental health impacts."

People with mental illness, especially individuals of color, often do not receive a mental health response to a mental health crisis, instead receiving help through underresourced (especially in mental health terms) emergency departments (EDs) or even through law enforcement. One in four fatal police shootings in the US between 2015 and 2020 involved a person with a mental illness, and an estimated 44% of people in jail and 37% of people in prison have a mental health condition; 2m people with mental illness are booked into US jails every year.[11]

"If you want to grow your own workforce members to augment the current primary care behavioral health workforce... get workforce members who already know the patients, people who are very likely to be of the culture of your underserved patients."

Alexander Blount, professor emeritus of family medicine at UMass Chan School of Medicine and president of Integrated Primary Care

Although these data demonstrate that there is a long way to go, there have been examples of innovation in this area. For example, 24/7 call centers have been established to answer 988 (suicide-prevention line) calls locally, responding with mobile crisis teams and crisis-stabilization programs, seeking to close the revolving door of ED visits, arrests, incarceration and homelessness.[11]

Patients who do seek mental health assistance also face challenges. Such patients typically approach their primary care physician for help, but when referred to a mental health professional, they often decide against pursuing treatment because of perceived stigma or feeling uncomfortable about working with a new organization and provider. "If a medical professional refers [a patient] to a mental health facility, in about 60–70% of cases, the patient won't accept the referral," says Alexander Blount, professor emeritus of family medicine at UMass Chan School of Medicine and president of Integrated Primary Care.

An initiative to combat patients' reluctance is one insurance company's Depression in Primary Care Program, which supports primary care physicians by assisting with diagnosis and treatment of depression. Support includes a screening tool and reimbursement for depression screening and follow-up monitoring. Case managers become directly involved by following up with the patient and then updating the primary care doctor on their condition.[12] This sort of innovation helps to circumnavigate the issue of stigma by empowering primary care physicians to better assist patients.

Recruiting and training individuals from local communities can also help increase understanding and reduce stigma while addressing workforce shortages. "If you want to grow your own workforce

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members to augment the current primary care behavioral health workforce—or if you're going to start with enhancing the behavioral health skills of medical assistants, medical interpreters, or community health workers—you get workforce members who already know the patients, people who are very likely to be of the culture of your underserved patients," says Mr Blount.

Beyond stigma

Stigmatization of mental health problems is a clear, longstanding issue. Yet the reasons that people do not pursue care are vast, spanning a lack of faith in the treatment available to them, a lack of knowledge about how or where to seek treatment and not feeling that they require treatment (which suggests space for innovative thinking on how to educate people about recognizing symptoms). The largest barrier is cost (cited by 38% of people in a 2016 survey), and significant numbers of people say that insurance coverage is either insufficient or nonexistent for mental health services.[13]

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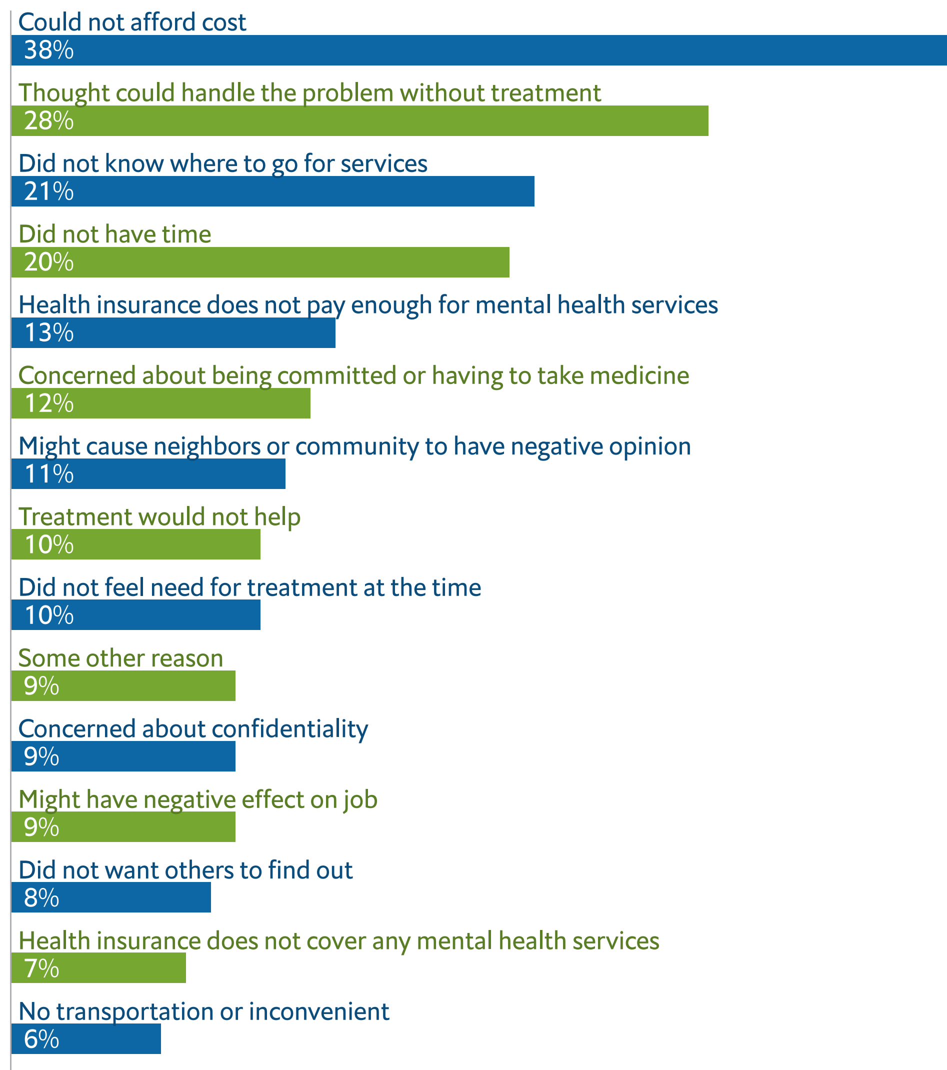
Figure 3. Why people in the US do not receive mental healthcare despite needing it



Note: response categories are not mutually exclusive; respondents could indicate multiple reasons for not receiving mental health services.

Source: American Psychological Association (data originates from the 2016 National Survey on Drug Use and Health)[13]

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Understanding mental illness: innovations and opportunities in research

The start-up sector has begun to make a foray into the world of mental health treatment, albeit focusing primarily on mindfulness and talk-therapy apps. While these are a useful first step, newer technological approaches may reveal more advanced ways for the industry to become involved in care delivery.[14] But while so-called disruptive approaches and a focus on new technologies will improve therapeutic offerings, there is also a need to innovate in less attention-grabbing ways, particularly in terms of conducting research and better understanding mental illness and what constitutes effective treatment.

Trial recruitment and design

Issues with trial recruitment and design can impact the ability of researchers to gather an accurate, representative assessment of (for example) a treatment's impact. Often, for instance, the sickest patients are excluded from trials, meaning that researchers lack evidence of how treatments will work in real-world populations. Challenges also exist in recruitment of specific demographic groups to trials, not least women and members of minority populations.[15,16]

Despite strong recommendations from regulatory agencies for an equal gender balance in trials, a gender gap still exists (lack of childcare and reliable transportation are among reasons cited for this); meanwhile, underuse of health services, and, in some cases, a distrust of the medical research establishment mean that ethnic minority individuals are under-represented in trial populations.[16] In terms of solving the latter issue, extra resources (including training) are needed to better enable research staff to approach and recruit people from ethnic minority backgrounds, and to provide tailored assistance, such as through the use of multilingual study materials.

The aim, ultimately, should be to recruit more heavily from community-level settings, which are likely to be more reflective of local populations. But disparities in terms of gender and ethnicity—as well as socioeconomic status and the urban/rural divide—will need to be overcome.[16]

Beyond recruitment, more work is needed to address the nuances specific to studying mental health treatments and to find new ways to improve the design of clinical trials that can ultimately address these traditional barriers. The placebo effect complicates treatment development because patients who receive a placebo in mental health clinical trials often report a response. Researchers have suggested that a benchmarking tool to quantify the magnitude of this response would be a beneficial focus for future studies.[17]
In terms of measuring severity of a mental health challenge, existing measurement tools use

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composite scoring systems for heterogeneous problems (such as depression) which can mask differences between individual cases and hinder results.[18]

The slow progress of innovation in medication

Medication plays an important part in mental health treatment. However, limitations to our understanding of the brain mean that medication is often unsuccessful: one out of every three patients diagnosed with depression experiences treatment-resistant depression.[19] New thinking and innovations in treatment options for such individuals is key.

Yet there has been a remarkable lack of research to bring new medications to market. Mental health trials made up just 10.2% of the interventional trials in the US registered in ClinicalTrials.gov from 2007-18, while the number of new industry-funded clinical trials in mental health decreased twice as fast as that of other trials.[20]

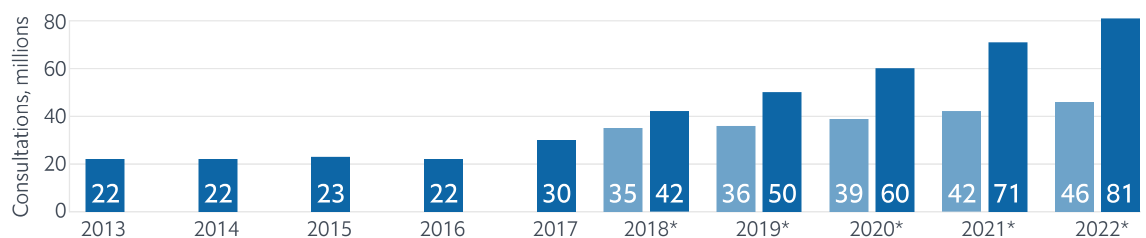
There are, however, signs of new approaches to treatment for mental illness. For example, annual grant funds from the National Institute of Mental Health for novel antidepressant research more than doubled between 2007 and 2020.[21] Understanding of depression and other mental illnesses has also become more complex. Expanding researchers' ability to study alternative treatments, such as psychedelics, as well as shifting focus beyond the brain to areas like the immune system, are increasingly prominent in research and wider discussion.[21, 22]

Innovative thinking around medications has also occurred during the covid-19 pandemic. For example, changes to treatment policies for opioid use disorder (including expanded telehealth options) have improved access to care and medication across the country.[23] But even once a treatment has successfully completed the difficult route to approval (the likelihood of a psychiatric medication progressing from stage I to approval in the US is 6.2%), the same barriers that impede access—inequitably—to mental health care often prevent people from accessing new treatments.[24] Creative thinking is needed across the mental health ecosystem to ensure that individuals have ready access to the medication that they need.

Telehealth's time has come

The pandemic has accelerated many developments in digital health, and use of telehealth in particular has seen a meteoric rise. By virtue of being online, telehealth services can be available to anyone with internet access, including patients in remote areas

Figure 4. Number of telehealth consultations in the US, 2013-22



*Low and high estimates

Source: World Economic Forum[25]

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or patients who wish to avoid physically attending therapy appointments—particularly for privacy reasons.[25]

There are, of course, barriers to the use of telehealth, not least that a quarter of Americans lack internet access. This is another issue that disproportionately affects people of color: as of April 2021, roughly 34% of Black households and 39% of Latinx households were without internet connection.[26,27]

Questions also remain about the ability of telehealth to sufficiently treat serious mental illness. Hospital stays and other inpatient services cannot be replicated virtually, and questions arise as to whether in-person training can directly translate to confident implementation of the skills needed to succeed in telehealth.[28] Nonetheless, telehealth has already demonstrated huge benefits, and these should be expected to grow as providers and patients become more used to engaging remotely.

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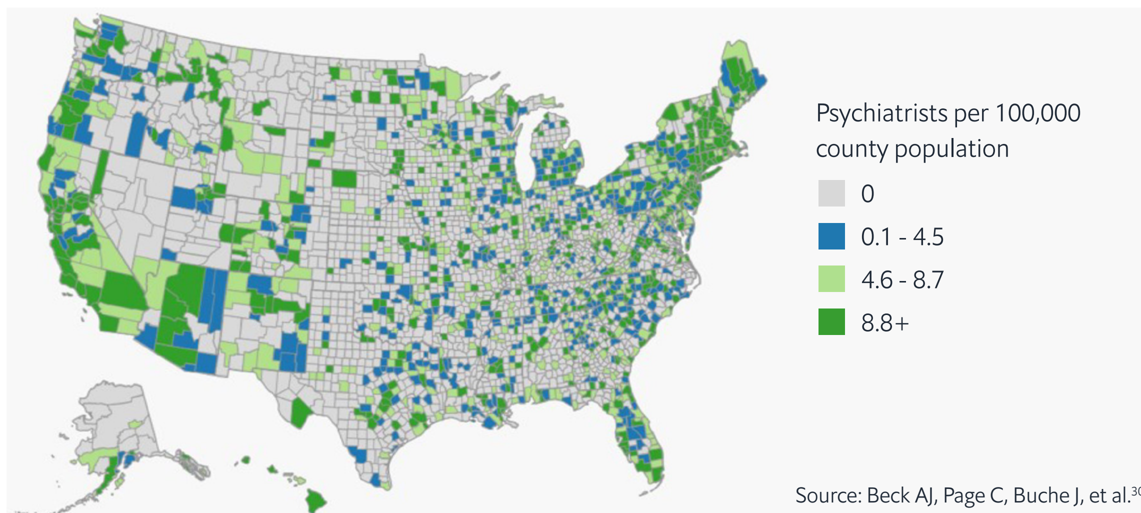
Delivering care: solving the provider shortage

Mental health services have long suffered from workforce shortages. It is estimated that over 75% of US counties have a severe shortage of mental health service providers, and 44% have no practicing psychiatrist.[29,30] Such shortages drastically affect patient choice. Many potential patients can access care only by going out of their insurance network; nearly two-thirds of patients pay out of pocket for mental health services.[31] Even these patients can struggle to find a provider and face increased wait times when they do.[32] Numerous factors contribute to the problem, including lack of training and ineffective efforts to address provider burnout.

One innovative solution to workforce issues, collaborative care models (bringing together primary care providers with a range of behavioral, mental health and social workers) have proven effective in assisting mental health patients: over 80 randomized control trials have demonstrated that collaborative care improves outcomes and can help to address systemic barriers across the care pathway.[33] However, many providers lack the requisite training. Targeted, systematic training would help providers embrace and implement collaborative care more effectively.[34]

Figure 5. Psychiatrists per 100,000 population, by US county



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Burnout among providers

While training is important, it does not holistically address provider shortages. Contributing to the workforce challenge is the fact that the majority of practicing psychiatrists are older than 55, and overall, the number of psychiatrists has declined over the past two decades.[35,36] This decrease combined with rising demand for care means that engaging and retaining younger mental health professionals is essential.

Unfortunately, younger clinicians face their own challenges, especially burnout. "The most intensive care for people with the most severe symptoms is frequently staffed by young professionals just out of school who are paid barely anything," says Angela Kimball, senior vice president of advocacy and public policy for Inseparable. "There's huge turnover, an astonishingly insufficient workforce," says Ms Kimball.

Younger clinicians lack both sufficient training and institutional support, meaning that treatment of patients can be inadequate, while clinicians themselves are likely to burn out rapidly. Burnout is a profound issue. In 2020, 78% of psychiatrists reported burnout and 16% were screened for major depression.[37]

Resolving burnout would increase the number and efficacy of clinicians and thus patient access. Research suggests that organizational characteristics, such as improvements in the workplace environment, are the most promising targets for intervention. Other efforts, such as improving the individual coping skills of clinicians, have proven ineffective. Institutional and structural change most significantly affect employee happiness.[37]

Building a more resilient workforce

A key step to strengthening the mental health capabilities of providers is workforce development and professional training. By focusing on prevention and early detection, providers can help patients address their mental health concerns early on to ultimately reduce the burden of severe issues in the future.[38] This care can be most effective when offered as part of an integrated care model with primary care and physical health. Currently, only 13% of care organizations report that mental health and substance use treatments are integrated into primary care practices.[39] Greater integration will not only improve access to services but will also alleviate some of the burden placed on clinicians.[40]

Some innovative models use case managers to help with patient care. While their role may vary depending on the program, case managers generally ensure that both a patient's physical and mental health needs are addressed at the primary care level. Approaching healthcare from this holistic perspective can improve outcomes.

Workforce shortages can also be addressed by making better use of trained specialists. One example is psychiatric mental health advanced practice nurses (known as APNs). These qualified professionals are routinely overlooked and underutilized, often because the extent of their skills is not understood.[41]

Financial incentives can also be a useful motivator to address workforce challenges. "When we think about the role of electronic health records in integrating care to improve co-ordination and quality of care, it's important to note that there were significant incentives provided to primary care in the general U.S. medical community to adopt electronic health records," says Ms Kimball. "[Yet] most of the behavioral health community was excluded from those financial incentives." Innovative financial incentives can help with everything from provider retention to improving quality of care, but behavioral health providers are not always afforded the same incentive options.

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Deepening knowledge: data, reporting and infrastructure

A central challenge in mental health provision—spanning outreach, access, treatment and outcomes—is data use. Comprehensive data and reporting analytics offer organizations an opportunity to assess their operations and identify targets for improvement. This type of reflection is critical to ensure that providers offer high-quality care that addresses all patients' needs.[42] Yet mental health data are often scarce and inconsistently collected and reported, and reporting tools often do not integrate with each other.

The stigma around mental illness is one source of challenges around data collection—specifically, underreporting by patients.[43] The next challenge is disseminating information to the appropriate clinicians. Multiple platforms and sources collate mental health data, and these are not always interoperable with the systems used by clinicians.[43] The upshot is that data remain siloed and their impact limited.

Even when the correct tools are available, they may not be utilized by clinicians, who are sometimes untrained in their use. "I believe that the therapist should, as part of their therapeutic model, know about different technological tools," says Susan Gurley, executive director of the Anxiety & Depression Association of America. "We need to train mental health providers and primary care doctors to talk about what options are available. I think there are some who don't know what new evidence based tools are on the market, nor would some know how to use them to improve their patient outcomes."

Although the pandemic has accelerated the adoption of digital tools, their potential has yet to be fully realized. Both patients and providers have been slow to adopt new technologies, suggesting room for improvement in the offerings available to both.[44]

Innovative data solutions

Collaborative care models offer a potential solution to address data-related issues in mental health, just as they do in other arenas. By integrating mental health with physical health—including the platforms used to collate, access and analyze data—providers will have more information on patients and will be able to offer better care.[45]

Yet, while collaborative care represents an opportunity to improve both data collection and patient outcomes, implementation of the necessary technological changes remains a barrier. "Building [better data integration] into a system that's Byzantine, and working with so many different and complex administrative levels,

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is really hard to coordinate," says Mr Counts. "It's conceptually a simple fix, but the implementation is so challenging."

Broader collaboration can overcome the limitations of current information systems. For example, if vendors partnered with clinicians to improve electronic health records, the records could be redesigned to better support integrated care. Developing data systems to better reflect actual needs would allow clinicians to track patients over time, share care plans and create consistent documentation.[46]

"Building [better data integration] into a system that's Byzantine, and working with so many different and complex administrative levels, is really hard to coordinate. It's conceptually a simple fix, but the implementation is so challenging."

Nathaniel Counts, senior vice president of Behavioral Health Innovation, Mental Health America

In addition, key stakeholders—providers, technology vendors and developers, regulators, and workforce educators—will need to offer financial and structural support.[46] Additional resources will be needed for analytical support to help providers understand data and identify areas where improvements can be made. For example, could practice guidelines be updated or reimbursement schedules altered to help control costs and improve outcomes?[47]

Only the data can comprehensively answer such questions. Yet data use remains overwhelmingly patchy in mental healthcare—more so than in physical healthcare. It is a clear area for innovation, offering opportunities for those involved in providing care and data tools.

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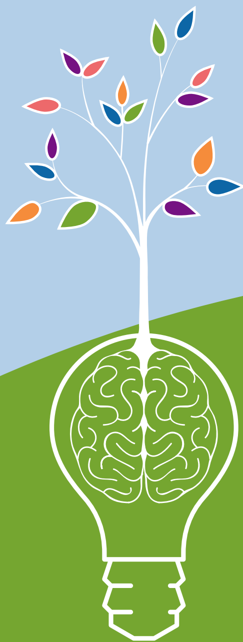
The way forward



Conceptually, innovation can often be synonymous with a magic solution, especially in an era where "disruptive" solutions tend to grab the most attention. Yet healthcare is a slow-moving business, which is in part necessary since any changes involve millions of patients and hosts of providers. In addition, challenges in the US mental health landscape are such that standalone solutions will not be enough to achieve meaningful change. An environment is needed that enables broad and sustainable innovation to be adopted. Policies and, perhaps more importantly, funding are required to support the risks and rewards of innovation, drive collaboration across sectors and stakeholders, and generate trust in innovation among patients and providers.

Innovations must be developed and adopted to improve the patient journey through the mental health system. The following areas require action:

- **Access to care**

  Overcoming stigma at all levels of society is imperative, yet the research base and range of solutions is not robust. Thus, the innovations that do exist, such as recruiting local community members as health staff and establishing mobile crisis teams, must be supported and sustainably financed.

- **Research**

  Innovation in understanding and treating mental illness must be encouraged and funded. This will require trials designed to reflect real-world populations and issues as well as improved measurement tools to more accurately capture results.

- **Delivering care**

  Given the vast shortage of mental health professionals in the US, it is essential not to lose workers to burnout or inefficiencies in areas such as funding and

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administration. In the long term, the workforce pipeline must be improved, beginning in medical school; more urgently, financial incentives and the development of more effective treatments are crucial.

- **Data use and monitoring**

  Improved data collection, sharing and analysis (as well as training) are vital across the full stakeholder landscape to maximize the potential of patient data – and ultimately improve outcomes.

Innovation can—and must—take many forms to improve mental health services. By thinking creatively about how to resolve the challenges that plague the system, providers can alter their practices and ensure that services offer care to every person who needs it. While a variety of innovative solutions have been suggested in this report, a common theme is the implementation of collaborative care, the benefits of which are clear. Innovative thinking and policies are now needed to address challenges of scale and adoption.

Another factor that must be addressed before innovation can have a truly systemic impact is funding. Until mental health services are funded on a par with physical healthcare, the mental health of millions of Americans will not receive the attention that is required.

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Appendix: About this report

Project methods overview

Embracing innovation in mental health is a report by Economist Impact exploring the role of innovation to improve equity and access to mental health care. Despite recent widespread recognition of the need to improve mental health care in the US, individuals continue to experience numerous unmet needs across the care pathway.

Challenges persist for accessing care, understanding mental illness, delivering quality care and measuring the true burden of these conditions. While encouraging developments have occurred and promising innovations emerge, standalone solutions are not enough. This paper aims to examine the under-appreciated barriers to greater development, implementation and uptake of innovation across the care pathway to achieve an improved environment for mental health in the US.

The project began with a pragmatic literature review to identify key themes regarding the status of mental health in the US. The structured literature search identified key recent literature by interrogating selected databases for papers related to the burden of mental health in America and why solutions have been so difficult to achieve. The search covered the effects of mental health at the individual, community, and state/national level, as well as the role of innovation amongst various stakeholders to address these challenges. Literature relating to the policy environment, best care practices, and barriers to addressing challenges was also retrieved.

Grey literature was searched in order to retrieve guidelines, policies and frameworks which were not listed in scientific databases. There was no date restriction on the search, but it focused on gathering the most recent and relevant literature.

Second, we conducted eight expert interviews to complement the literature review, and glean a practical perspective of the mental health ecosystem in the US and disparities and innovative ideas to counter them. Experts were selected based on geographic and topical expertise. We identified key categories of interviewees: clinicians, academics, community experts, advocacy organizations and policymakers or those familiar with policy.

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- **Richard Frank**, senior fellow in economic studies and director of the Schaeffer Initiative on Health Policy at the Brookings Institution
- **Susan Gurley**, executive director, Anxiety & Depression Association of America
- **Angela Kimball**, senior vice president of advocacy and public policy, Inseparable
- **Maggie Merritt**, executive director, Steinberg Institute
- **JoAnn Volk**, co-director of the Center on Health Insurance Reforms (CHIR) at Georgetown University's McCourt School of Public Policy
- **Anonymous**, US public sector representative

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While every effort has been taken to verify the accuracy of this information, Economist Impact cannot accept any responsibility or liability for reliance by any person on this report or any of the information, opinions or conclusions set out in this report. The findings and views expressed in the report do not necessarily reflect the views of the sponsor.

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