BREAKING THE STIGMA OF MENTAL HEALTH:

IMPROVING THE QUALITY OF MENTAL HEALTHCARE THROUGH TELEHEATLH AND MEASUREMENT-BASED CARE

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As the U.S. continues through the COVID-19 pandemic, it will be important to monitor mental health as well as public health. Over the last 10 years, rates of mental disorders, suicide, and substance abuse disorders are on the rise. With the shift to remote care delivery, utilizing technology to produce quality mental health care will be crucial. This essay emphasizes the need for improvements in mental health care in the U.S. To accomplish this, implementing measurement-based care (MBC) through telehealth will provide patients and clinicians with a chance for personalized care and treatment. This idea will also expand access to underserved areas. Integrating MBC and telehealth is an efficient, cost-effective way to improve quality of mental health care. This essay will provide a discussion for implementation strategies and recommendations.

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Introduction: A Rising Mental Health Crisis

In 2008, the Mental Health Parity and Addiction Equity Act became a law that affirms Americans have the right to health-care benefits, including mental health and substance abuse services. Over 10 years later, there are increasing measures and efforts being taken to improve the quality and access to general healthcare, yet mental healthcare seems to drag its feet (Malekoff, 2019, pp.167-171). The 2019 Nation Survey on Drug Use and Health found that adults with any mental illness (AMI) increased by over 20 million individuals from 2008 to 2019. In 2019, there were an estimated 9.5 million individuals that have a mental illness as well as a substance abuse disorder (SUD) (Substance Abuse and Mental

Health Services Administration, 2020). In 2018, suicide was the second leading cause of death for Americans aged 10 to 34, and the fourth leading cause for those aged 35 to 54. There were 2.5 times the number of suicides as there were homicides this year as well (National Institute of Mental Health, 2020). The most effective treatment option for addressing suicidal ideations and behaviors is psychotherapy. This creates a critical need for accessible mental healthcare in order to prevent suicide.

The demand for adequate mental healthcare is high within the United States, but individuals still face many barriers. Instances of barriers can include high costs, long travel times, stigma, and even perceived ineffectiveness of treatment (Goldberg et al., 2018). People who have experienced seeking health care for their mental illness have reported feeling "devalued, dismissed, and dehumanized" by the professionals with whom they come into contact. Patients have also reported not being included in decisions for treatment and "being spoken to or about using stigmatizing language" (Knaak et al., 2017, pp. 111-116). It takes courage to be able to seek help for an illness you cannot necessarily see. If an encouraged patient seeking help meets the barrier of stigma, it can result in the patient dropping out of treatment or even avoiding treatment entirely.

Likewise, lack of access to mental health care is roadblock for individuals seeking help. Over half of the counties in the United States have no practicing psychiatrists, psychologists, or social workers. Rural areas are significantly affected by the shortage of health professionals. From 2005 to 2015, "rural counties had the highest estimated suicide rates, and also the largest increases over time" (Rojas et al., 2020, 700). Not only is physical access a barrier to mental healthcare, but the high costs are as well. A 12-year-old boy from New York, Timothy O'Clair, died by suicide after his parents were denied insurance coverage for mental health care. Timothy's story highlights why "access delayed is access denied" (Malekoff, 2019, p. 168). Then access and resources are restricted, individuals with mental illnesses will likely turn to risky, harmful behaviors and have higher chances of developing damaging coping mechanisms. Negative coping mechanisms (e.g., smoking, poor hygiene or eating habits, lack of exercise, SUD) result in destructive health outcomes.

These barriers to mental health issues are followed by a rising mental health crisis in the United States before entering the COVID-19 pandemic. Consequently, the current climate of the pandemic has brought to light the necessity of high quality and accessible mental health care. Let's uncover how some of the social regulations of COVID-19 impact mental health and what is being done to improve mental health during the COVID-19 pandemic.

COVID-19 Impact on Mental Health

As we entered 2020, the COVID-19 virus spread rapidly. Due to the swift spread and high death rates, several measures were implemented to ensure public health and safety in the United States. The federal government suggests avoiding group gatherings of more than 10 people as a reduction strategy. Likewise, the Centers for Disease Control and Prevention (CDC) has recommended limiting community movement and practicing social distancing (Mahmoud et al., 2020, pp. 35-41). Wearing a mask in public, working from home, remote schooling, and reduced capacity limits have been consequences of the virus as well. Isolation has been a key component to safeguarding personal and public health. These social regulations could trigger mental health problems in individuals

who do not suffer from AMI, as well as worsen the condition of those currently battling AMI.

The viral outbreak has triggered mental health problems for some, such as anxiety and depression. This can be described as a "parallel epidemic" (Vigo et al., 2020, p. 681). Mental health problems can affect anyone, such as people with preexisting mental disorders, the general population, essential workers, and people that are infected. Health anxiety can range from high to low and was instilled into individuals across the nation (Nicomedes & Avila, 2020, pp. 14-22). An example of low health anxiety could be the thought that an individual can recover from the virus with no repercussions; therefore they do not take recommended health precautions. Contrarily, someone with high health anxiety could "demand testing" consistently in fear of catching the virus (Vigo et al., 2020, p. 682). Individuals who experience high health anxiety can lead to behaviors such as overstocking essential goods (e.g., toilet paper). Social isolation can increase stress, irritability, insomnia, and more in those who do not suffer with AMI. For those who already fight their mental illness or SUD every day, social isolation can worsen their already existing struggles.

Individuals who suffer from mental disorders have the potential to become more vulnerable during the COVID-19 crisis. The increased likelihood of smoking or poor physical health could lead to these individuals becoming immunocompromised, which increases their risk levels (Centers for Disease Control and Prevention [CDC], 2021). Individuals who are likely to have both AMI and SUD could face an escalated risk of death due to social isolation protocols, because no one else might be present if an overdose were to occur (Jayasinha et al., 2020, pp. 692-694). Intervention programs, such as Alcoholics Anonymous and Narcotics Anonymous, thrive off of social support groups. Patients with AMI and/or SUD may opt out of their current treatment or be reluctant to initiate treatment because there might be a lack of service availability (Jayasinha et al., 2020, pp. 692-694). Our nation's mental health care contains gaps currently, but the pandemic could be pivotal if we integrate individualized health care while using advancing technology. As we have seen, many social regulations have forced individuals to enhance and utilize technology in order to communicate between friends, families, colleagues, doctors, etc. Specifically, we have seen growing developments in telehealth throughout the pandemic.

Rise of Telemental Health and Its Effectiveness

Telehealth is defined as "the use of telecommunications to provide health information to care across distance" (McCord et al., 2020, p. 1061). Telemental Health (TMH) refers to the use of health information technology (HIT) and communication technologies to deliver remote mental health care. This includes, but is not limited to, services for evaluation, medication management, and therapy via telecommunications. This delivery method removes or diminishes travel time for patients and providers by delivering remote health care (Mahmoud et al., 2020, pp. 35-41). Under the Coronavirus Preparedness and Response Supplemental Appropriations Act in 2020, CMS removed key telehealth requirements while allowing psychologists to continue services via "audio-only telephones" (Owings-Fonner, 2020, para. 6). In addition, the U.S. Department of Health and Human Services waived penalties for certain violations of the Health Insurance Portability and Accountability Act (HIPAA) for providers using platforms, like Zoom, to treat their patients. Bill-

ing Medicare for telehealth remains the same as it would for in-person care. Also, due to state regulations differing among state lines, APA drafted letters offering partnership with state psychological associations in all 50 states. State governors responded quickly amidst the crisis, resulting in executive orders for telehealth costs to reflect in-person costs (Owings-Fonner, 2020). With the continuous effort to expand telehealth, the discussion of mental health has peaked the nation's interest.

Combatting stigma of mental healthcare with public awareness will hopefully dissolve stigma entirely (Ross, 2020, pp. 135-137). A meta-analysis of fifty-seven studies published from 1997 to 2019 found that using videoconferencing technologies (VCT) "consistently produced treatment effects that were largely equivalent to in-person delivered interventions" (Batastini et al., 2021, pp. 1-22). In an article written by Lara Payne et al. (2020), the effectiveness of telepsychology was analyzed. It was concluded that telepsychology "service-users cite improved access" and "removed treatment barriers such as stigma around" mental health (p. 675). The nature of COVID-19 has pushed clinical areas of psychology and psychotherapy to implement technology to reduce the stigma around mental health and broaden access of mental health care. Individuals who struggle with AMI may find it difficult to complete mundane tasks, which can result in a number of problems. Considering the ease of access, patients with AMI can obtain help without leaving their home and potentially at any time of the day. Similarly, in a systematic review conducted in 2017, Mostafa Langarizadeh and team (2017) reviewed research articles from 2000 to 2017 associated with advantages and challenges associated with telepsychology. They concluded that offering telemental health for "mental services improve patient satisfaction and reduces the costs of care" (Langarizadeh et al., 2017, p. 241).

While this service delivery process seems to be an easy efficient way to improve mental health, the implementation of telepsychology remains inefficient. A study conducted by Hanneke Kip and team (2020) found that "the implementation process was mostly focused on skill training of therapists" as opposed to focusing on organization, patient awareness, and design of the technology (p. 18). I believe that focusing on patient awareness and the organization of care can improve the quality of mental health care. Implementing evidence-based care models and highlighting the patient's autonomy treatment planning could result in enhanced treatment results. Specifically, in a measurement-based care model there is an emphasis on individualized care and boosting communication levels between patient-provider.

Measurement-Based Care

While technology has the potential to be a great resource for improving the nation's mental health crisis, mental disorder and suicide rates continue to rise. Tarlow's (2019) study concluded that using data from PHQ-9 to assess depression can be a predictor for suicide ideation or mental disorders among areas, rather than using geographical, age, race, and gender predictors. The study concluded that 51 percent of individuals who struggled with depression reported thoughts of suicide before starting treatment (Tarlow et al., 2019, pp. 247-252). The patient health questionnaire (PHQ) provides a brief depression screener with nine PHQ items that assess mental health. This questionnaire is a license-free mental health assessment tool that is used widely. There are many assessment tools used for analyzing mental health and substance abuse. Using assessment tools can

help providers determine their patient's level of acuity quickly, as well as help to monitor treatment. Although it is hard to quantify your own feelings and thoughts, using this rapid and easy tool can provide a clear understanding of the next steps in your treatment plan. Peter Drucker, management consultant, notoriously said, "What gets measured gets done" or improved (as cited in Strachman, 2013, para. 1).

In 2006, the term *measurement-based care* (MBC) was devised by Dr. Trivedi. A review article by Ahmed Aboraya (2018) defined MBC "in psychiatry as the use of validated clinical measurement instruments to objectify the assessment, treatment, and clinical outcomes...in patients with psychiatric disorders" (p. 14). These include efficacy, safety, tolerability, functioning, and quality of life.

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MBC has three core elements: (1) continual monitoring of patient outcomes; (2) analyzing the data to make treatment decisions; and (3) discussing measurement data with patients.

Utilizing MBC in a mental health care setting could include creating a routine where regular assessment of symptoms is integrated into decision making, emphasizing self-reported measurements. Consistently monitoring symptoms while simultaneously communicating with the patient could pinpoint what mental illness diagnosis and plan is needed. Also, collaborating with a patient could possibly shed light on their negative coping mechanisms such as misusing substances or poor lifestyle habits. Due to the fact that individuals are unique, goals for recovering are not one-size-fits-all. By monitoring the data collected from assessment tools over time, it can show how well or poorly the action plan is working and if any changes need to be made. Using MBC as a collaborative tool can potentially improve patient engagement, treatment fidelity, and outcome of treatment. Giving a patient autonomy and a safe space to talk about their mental health could result in individualized action plans that align more closely with their needs.

The baseline of MBC is patient-reported outcomes (PROM) of symptoms, reported by rating scale questionnaires like the PHQ-9. Patients complete these questionnaires themselves, so it requires patients to assess their own mental health and become increasingly self-aware. If patient's have the ability to monitor positive progression with their provider, it is possible that it could encourage the patient to stay on track. MBC has also been suggested as a method for "detecting non-response to treatment and tailoring treatment to needs of individual patients" (Goldberg et al., 2018, p. 1). By monitoring negative progression, providers can make important decisions with their patients such as changes in dosage of medication or switching medication entirely. Patient-reported outcomes can pave the way for quality improvement on a clinician level, as well as producing data for mental disorders in order to progress research (Kilbourne et al., 2018, pp. 30-38).

Considering the fact that Medicare reimbursements are dependent on patient-reported quality of care, MBC can also help "organizations align with value-based payment models by providing data about care quality and patient outcomes" (Connors et al., 2020, p. 252).

A randomized controlled trial conducted by Tong Guo (2015) compared standard treatment to MBC in major depression. Ultimately, Guo found that more patients achieved desired results in the MBC group, and in less time (pp. 1004-1013). MBC has been gaining interest in mental health care and has seen several efforts of integration (e.g., Department of Veterans Affairs, Kaiser Permanente).

In 2016, the U.S. Veterans Health Administration (VHA) implemented this method of care into their national treatment system for behavioral health. The VHA's application of MBC highlights the benefits of the care model, as well as emphasizing the areas that could use improvement. The VHA also shows how incorporating technology can support the enrichment of an MBC model.

MBC in Veteran's Health Administration: In a research study by Holliday and colleagues (2020), the VHA's execution of MBC was analyzed (pp. 211-223). The implementation included 185 clinics across 59 sites that agreed to pilot MBC procedures. Participating sites used at least one core MBC measure (e.g., PHQ-9) at the first patient encounter. These measures were taken as often as seen fit, but no less than every 30 days. There were no specific execution rules in terms of what measurement system to use or when to talk to the patient about the results. The data was inserted into electronic health records (EHRs) to ensure that the patient and other providers had the results. Twenty-six clinician-patient dyads were recruited and interviewed on their experience of using MBC. The study found that this method of care provided a more "standardized basis for discussing progress –or lack of progress-- with a given patient" (Holliday et al., 2020, p. 220). Holiday found that not all clinicians had access to feedback systems data because of a purchasing or licensing requirements. Large healthcare organizations, like VHA, have the potential to develop clinical benchmarks based on their own data collection. Holliday's study highlighted that due to the individualized method of care, the process of implementation differs amongst clinician-patient relationships.

Comparably, Ashlee Warnecke and Ellen Teng wrote a paper on MBC in VHA that was published in 2019 (pp. 795-804). Although research shows the positive outcomes of using MBC, in the VHA "60% of patients were given a measure at least once" but only few routinely measured (Warnecke & Teng, 2019, p. 799). Successfully applying MBC proves to be an effective method of care, but it has to be properly utilized. Integrating MBC into telemental health (TMH) could increase quality and access of mental health care. An article published by Bradford Felker (2020), of US Department of Veteran Affairs, emphasized that despite efforts to initiate TMH, few providers went on to apply TMH (pp. 26-31). In 2017, a two-year training project on telepsychology was initiated in the VHA. Studying post-training results, the provider's perception of knowledge, skills, and engagement increased after training. Felker and colleagues (2020) also found that Veterans who received telemental health care doubled from 5 to 10% (pp. 26-31).

While MBC shows promise for being an effective care model for those battling AMI, there are areas that could use improvement. Applying an MBC model through telehealth could improve the quality of the current mental health predicament. Technology holds the power to make mental health care easily and widely accessible, as well as enhancing the communication levels between patients and care teams.

Telemental Health

Measurement-Based Care (tMBC)

With the rise of telehealth due to the COVID-19 pandemic, technology can aid the implementation of measurement-based care. Telehealth can feel less personable due to meeting over a video chat or phone call. Merging telehealth and MBC can help enhance communication levels to ensure that patient-provider relationships feel genuine and amiable. Clinical trials that have incorporated the two "have already shown initial success for this model of care, with some evidence that such services can at times even outperform traditional office-based care" (Douglas et al., 2020, p. 148). A key part of success of tMBC is training. Training providers on digital health is time-intensive but expands the capability of providing high quality care. Patients also being knowledgeable is critical for their engagement. Building programs, like Our Digital Opportunities for Outcomes in Recovery Services (DOORS), that help develop technological "skills and competencies that have been well received by those with serious mental illness" ensure that knowledge of technology used in tMBC on both sides of the patient-provider relationship is thorough, possibly increasing the likelihood of staying on track with the treatment plan created (Torous et al., 2020, p. 3).

Another key factor in producing tMBC is the integration of health information and communications systems. A systematic review of studies on tMBC found that technology appears to be feasible, acceptable and effective. Notably, "treatment engagement was also enhanced with [tMBC]" (Gual-Montolio et al., 2020, p. 18). Data science has significantly transformed fields and can help improve mental health care. EHRs have provided the data to produce algorithms to predict suicidal behavior more accurately than standard assessments in clinics. These records can also predict patterns predicting response to treatments. A rational fear of analyzing big data is the fact that quantity of data often dominates the quality of data. We can hope that the move to tMBC will "facilitate more accurate recording of outcomes that matter to patients, clinicians, and researchers" (Simon, 2019, pp. 349-350). It is important to note that technology can help predict success for treatment, but that does not substitute the need for the patient's preference or collaborative efforts between patient-clinician. In order to successfully take advantage of MBC through telehealth, proper structure of the care model is very important.

Structure

In a tMBC system, it is important to find a way to get patients to routinely utilize the assessment tools like PHQ-9. After the initial telehealth meeting and assessment, I believe assessing a patient's symptoms once or twice a month could prove to be valuable to both the patient and provider. In order to ensure communication with the patient, I suggest scheduling follow up appointments to discuss patient-reported outcome measures (PROMs) and treatment plans. I also believe both patient and provider taking notes and making them accessible to both parties, can provide a clear understanding on symptoms, thoughts, and feelings. Making past assessments available for review on the patient's part can also enable them to monitor and visualize their progress. Communication is the root of MBC and because telehealth is easily accessible, it is important to find a system that allows a patient to utilize resources other than scheduling appointments with a provider. Sharing resources on potential therapists, meetings for substance abuse, information on their diagnosis, etc. in a telehealth system can make it easier for patients to reach out for help.

In a report published by the APA

this year, practice strategies for enhancing communication with tMBC were suggested (Douglas et al., 2020, pp. 143-149). These include, but are not limited to:

- Sending links via text message/e-mail to complete measures (the web-based platform Better Outcomes Now was suggested)
- Ensuring data measured is within a HIPAA-compliant and encrypted secure platform
- Sharing feedback with screen sharing to reinforce measure completion

Clinicians are recommended to implement as they see fit and what feels natural. Many tMBC systems can notify clinicians when a patient's symptoms are declining or if a patient is at risk for "increased suicidality or child abuse" (Douglas et al., 2020, pp. 143-149). Molly Howland and colleagues (2019) conducted a study to assess the implementation of two telepsychology models (pp. 1-8). They suggested using a MBC approach "that combines the team environment of collaborative care and more intensive psychotherapy availability" (Howland et al., 2019, p. 6). tMBC could potentially improve all levels of care when implemented with these recommendations.

Conclusion

In response to the COVID-19 crisis, telehealth has become increasingly popular. As we start to see the negative consequences of social isolation, it is logical to prepare for a "parallel epidemic" (Vigo et al., 2020, p. 681). MBC methods have proven to be effective and can be implemented remotely with existing technologies. The design of MBC involves communication between clinician-patient at every step, along with recording these measures, which can help providers understand the patient's goals and provide a pathway for treatment. The individualization of tMBC makes it possible for patients to reach their personal recovery goals. Likewise, the accessibility of technology in an MBC makes communication between patient and a care team easier the achieve. Technology provides a wide range of resources at a patient's fingertips for them to help themselves. On the other hand, technology can help providers correctly diagnose a patient and be alerted of worsening symptoms or suicidal ideations. Mental health treatment is usually not a linear progression, and MBC does a great job of being flexible and emphasizing need for change. Patients having this care model and resources at their fingertips through technology can make all of this easily accessible. Nonetheless, using a tMBC has shown improved quality of mental health care (Kopelovich et al., 2020, pp. 1-11). With the promising results of MBC and the rise of telehealth, I believe further research could help assess the future benefits of tMBC.

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