Telepsychiatry: an Innovative Approach to Addressing the Opioid Crisis

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Abstract

The opioid epidemic faced by the USA is a complex public health crisis, with staggering loss of life and overwhelming social, health, and economic costs. Despite the rising need for medication-assisted treatment, individuals struggling with opioid use continue to face multiple barriers hindering their access to care, particularly in rural areas. Innovative approaches to enhance access to treatment are needed. Telepsychiatry has proven to be effective and economical across multiple settings and psychiatric diagnoses, including opioid use disorder. As the implementation of telepsychiatry continues to expand, this method of healthcare delivery offers significant opportunities to overcome several barriers to access patients with opioid use disorder face. While addressing the opioid crisis will require multifaceted efforts involving multiple stakeholders and different approaches, a comprehensive strategy must incorporate the adoption of telepsychiatry as an innovative approach to overcoming barriers to treatment and enhancing access to care.

Introduction

The United States has been witnessing an opioid epidemic on a large scale.[1–4] In 2015 alone, approximately two million Americans were diagnosed with opioid use disorder (OUD), [5] which is defined as a pattern of opioid use that is problematic and leads to significant distress or impairment.[6] In the context of this epidemic, drug overdose has become the leading cause of accidental death, with heroin and prescription pain relievers accounting for about 63.1% of total accidental deaths in 2015.[7] Furthermore, the magnitude of this problem has been increasing at an alarming rate. Death rates due to opioid overdose have increased fivefold between 1999 and 2016.[1] This national epidemic is more concentrated in rural areas, where the likelihood of opioid misuse is five times more than in urban areas.[8] Results from the 2003–2004 National Ambulatory Medical Care Survey indicate that nonmetropolitan areas had a prescription rate of opioid analgesics that was 11% higher than metropolitan ones.[9] Concurrently, these rural communities have fewer health

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care providers and more limited access to OUD treatment resources, including pharmacotherapy.[3] In this context, it is no surprise that, from 1999 to 2004, drug poisoning and mortality rates increased by 159% in nonmetropolitan counties compared to 51% in metropolitan counties.[9]

In addition to the loss of life, the tangible and intangible costs of the opioid problem are staggering. Recent estimates suggest that the total annual economic cost of opioid misuse in the U.S. amounts to $78.5 billion in 2013 dollars, with healthcare and substance abuse treatment costs accounting for almost $29 billion.[10] This combination of increased prevalence, high mortality, and significant human and financial costs has policymakers scrambling for solutions to one of the largest public health crises in recent memory.[11] One of the major challenges is that the treatment of OUD requires long-term, structured programs that ideally incorporate both pharmacotherapy and psychosocial services.[12] In terms of pharmacotherapy, only two opioid agonists—methadone and buprenorphine—are approved by the U.S. Food and Drug Administration (FDA) for what is termed medication-assisted treatment (MAT) for OUD.[2]

MAT has been demonstrated to have clear efficacy in treating individuals with OUD.[12–14] Unsurprisingly, there has been a sharp increase in demand for treatment for OUD, particularly MAT.[2] Between 1997 and 2011 alone, the demand for MAT in the USA increased by 900%.[2] While there has been an increase in MAT capacity, largely due to an increase in buprenorphine prescribers, the capacity has not been able to meet the need generated by the opioid epidemic.[15] Despite being one of the most cost-effective solutions for OUD,[12] access to MAT continues to be low.[2]

While acknowledging that there are various pharmacological and psychosocial services offered as part of comprehensive treatment for OUD, this commentary focuses on the implementation of telepsychiatry specifically for MAT, based on the documented need and demand for this particular treatment. The article discusses some of the barriers to care that hinder access to MAT and that curb progress in addressing the opioid epidemic. In addition, the discussion focuses on the expansion of telepsychiatry as an innovative approach to overcoming these barriers and to enhancing access to MAT, particularly for hard-to-reach populations.

Barriers to Treatment

The opioid crisis is exacerbated by limited access to care and insufficient MAT prescribers,[15–18] resulting in treatment delays, decreased quality of care, patient dissatisfaction, and poor outcomes.[19] Foremost among barriers to care are the shortage and unequal distribution of psychiatric providers, particularly in rural areas, where it is estimated that up to 75% of the population have no access to advanced behavioral health clinicians.[18] Even urban areas that have higher ratios of psychiatrists to population are experiencing declining numbers of psychiatrists available to staff inpatient or outpatient facilities, making behavioral health services less accessible.[19] In terms of treating OUD specifically, there is a "critical gap" in access,[19(p.31)] particularly in rural communities, where the barriers include not only limited availability of methadone clinics, but also scarcity of addiction specialists.[15] Furthermore, few physicians have buprenorphine federal waivers, as they are deterred by the required training and the formal waiver application process.[19, 20] While seeking MAT through primary care physicians in rural areas seems like the alternate option, research indicates that just 3% of primary care providers get waivers for prescribing buprenorphine.[4] Given that primary care providers comprise the majority of clinicians in rural regions, this situation creates a disproportionately lower supply of qualified prescribers for a higher risk population.[3, 4] Furthermore, these buprenorphine-specific prescribers tend to become disproportionately siloed in the few counties with higher compensation structures, leaving many patients without MAT.[17] The lack of access to psychiatrists in rural counties, compounded with few primary care providers obtaining buprenorphine waivers, puts hard-to-reach populations at a particular disadvantage by hindering access to MAT.[4]

While the shortage of psychiatrists must be addressed, training new psychiatrists will take time, and augmenting the number of psychiatrists on its own would not be enough to enhance access and quality of care.[21] As policymakers continue to develop and examine such strategies, it is essential to explore new, more innovative avenues to tackle the opioid crisis.[22] Telepsychiatry appears to offer prospects to enhance access to MAT.

Telepsychiatry

Telepsychiatry refers to the use of live videoconferencing and other information communication technologies (ICT) to deliver psychiatric services remotely.[23, 24] While telepsychiatry is not a novel concept, and although telemedicine has been used for several decades,[2, 23, 24] its adoption has significantly increased over the past few years.[25] There is extensive evidence supporting the use of telepsychiatry as equivalent or superior to face-to-face services, with regards to access to care, patient satisfaction, and clinical outcomes.[26–28] The effectiveness of telepsychiatry has been demonstrated across different diagnoses.[24] More specifically for OUD, telepsychiatry and face-to-face buprenorphine MAT are shown to be comparable by measures of additional opioid use, time to abstinence, and patient retention rates.[2, 29]

Studies have found telepsychiatry to be effective across pediatric, adult, and geriatric populations. Also, evidence from both rural and urban regions confirms that telepsychiatry is an equivalent or more efficient alternative to face-to-face care in terms of improving access to mental health services across different clinical settings, with high degrees of satisfaction among providers and patients.[23, 24, 26, 30, 31] Moreover, while some providers may be reluctant to adopt new technologies, studies indicate that videoconferencing does not compromise the therapeutic alliance.[32, 33]

Telepsychiatry can significantly increase access to psychiatric services, particularly in rural areas, through direct patient care and consultation services.[21, 34–36] In addition, telepsychiatry is cost-effective because it increases psychiatrist productivity and decreases the time, cost, and burden associated with travel to receive psychiatric services.[21, 31, 37, 38] Accordingly, telepsychiatry might be considered an attractive option, particularly for rural communities that face limited access to in-person MAT.[2]

The Application of Telepsychiatry for MAT

Videoconferencing has been identified as a tool to enhance access to MAT for OUD in both urban and rural areas, by allowing access to buprenorphine-prescribing physicians.[29, 38] This form of telepsychiatry is sometimes referred to as telesuboxone.[38] Moreover, given that videoconferencing is successfully used in emergency departments to provide effective and faster clinical assessments and consultation services,[21] such services can and should include MAT. The aim is to provide services as early as possible because early intervention has been shown to reduce substance misuse in at-risk populations, as well as improve cost-efficacy.[39] Access can even be enhanced across state lines, as psychiatrists and other prescribers can provide services to patients in different states, as long as the prescribers are licensed in the state in which the patient is located.[16, 41]

Additionally, videoconferencing alleviates other barriers to addiction treatment services in rural communities by offering increased anonymity.[38] As many people might hesitate to seek out mental health services due to stigma or concerns that others might become aware they are seeking such services, telehealth offers the advantage of low profile services.[40] Patients might find this option more attractive and less stigmatizing when seeking psychiatric treatment.[34]

Directions of Telepsychiatry

While telepsychiatry overcomes some key barriers associated with access to treatment, particularly for remote and rural regions, a number of challenges have historically impeded the expansion of care delivery through videoconferencing. However, telehealth continues to evolve and measures to expand services have already been identified and implemented. For example, medical licensure creates geographic limitations for delivering telepsychiatry services, as the psychiatrist is required to be licensed in the state where the patient is located.[16, 41] However, in recent years, many states have taken significant steps to expedite licensing processes for physicians looking to practice remotely, enhancing the ability of psychiatrists to provide services across state lines.[41, 42]

Reimbursement has also historically been a challenging aspect of telehealth, as Medicare has had highly-specific requirements for reimbursement and state public programs have demonstrated large variations in telehealth reimbursement regulations.[42–44] However, Medicare reimbursement for telehealth services has improved, particularly in rural areas, and telepsychiatry services are currently reimbursed by Medicare at the same rate as in-person services.[43, 44] As reimbursement through third party payers improves further, telepsychiatry will become even more feasible with significant potential for expansion.[31]

Reliable access to high-speed internet and updated technology has also created some challenges for implementing telepsychiatry, particularly in more remote regions where there is a higher likelihood of unstable internet connection and outdated hardware.[45] While there is still a gap in digital connectivity between rural and urban areas, rural communities have made significant strides in recent years to improve access to stable, high-speed internet. A recent report from the Pew Research Center indicates that, over the past 10 years, the number of rural Americans with broadband internet connection has doubled.[46]

The above advances suggest that telepsychiatry is likely to continue to develop and that the implementation of videoconferencing services is likely to broaden. This progress conveys a sense of optimism about the potential of expanding telepsychiatry services for MAT for OUD, both for urban and rural communities, as an approach to help address the opioid crisis.

Implications for Behavioral Health

Addressing the opioid crisis and optimizing access to MAT "remains a complex and multifaceted undertaking of great significance for patients, public health policy, and health care as a whole."[2(p.142)] Despite some progress through a combination of legislative, health care, and collaborative community actions, it is imperative to enhance patient access to MAT by incorporating novel solutions.[2, 22] Such solutions must include the establishment and implementation of comprehensive regulations and delivery strategies for behavioral health care, as well as design and funding for such strategies.[21] Efforts need to focus on supporting research, implementing practical applications, enhancing access to care, improving the quality and integration of treatment methods, and ensuring funding to actualize these efforts.[2, 3, 30]

While it is certainly important to enhance the pool of MAT providers, wider practice strategies need to be implemented to address the crisis.[15] Telepsychiatry has the potential to significantly enhance access to care for MAT, especially in rural areas, where the need is high and access is limited. As historical hindrances to the expansion of telepsychiatry services continue to diminish,[41–44] and as more evidence accumulates in favor of using telepsychiatry for MAT, videoconferencing should be seriously considered by policymakers and other stakeholders.[29] Furthermore, it is essential to continue to support research for MAT and other forms of OUD treatments, to develop novel approaches to delivering MAT, and to expand current evidence-based forms of telepsychiatry for OUD.[2] Crises of such magnitude and complexity require innovative approaches and solutions. While telepsychiatry does not hold the key to the opioid crisis' resolution, it has great potential to play a large role in the solution.

Author Contributions

Dr. Hossam Mahmoud developed the concept, performed literature search, performed literature review, write up, and editing. Ms. Emily Vogt performed literature search, performed literature review, write up, and editing.

Compliance with Ethical Standards

Conflict of Interest The authors declare that they have no conflict of interest.

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