

Review Article

Telehealth Benefits and Challenges in the Management of Substance Use Disorders in the Era of COVID-19 Pandemic: An Overview

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Abstract

The current COVID-19 pandemic has introduced dramatic and rapid changes on a worldwide scale. People with substance use disorders are at a particularly higher risk of SARS-CoV-2 exposure and transmission because of homelessness, physical and mental health vulnerabilities, and disruption of access to services. Opioid Use Disorder (OUD) patients are heavily dependent on in-person health care delivery. While quarantine and isolation are still the most effective means of containing COVID-19, disruptions in access to medications used for OUD treatments are the main threat to patients with an OUD. Telehealth can be of immense help in this situation. While telehealth is beneficial, concerns about reimbursement, licensure, privacy, security, patient safety, and system interoperability have been identified. During this national emergency, extraordinary planning has been required to limit distribution in care delivery and the resulting consequences. Planning efforts have required the unprecedented use of technology and the change or elimination of archaic regulations.

Keywords: Substance Use Disorder; Telehealth; COVID-19**Abbreviations**

OUD: Opioid Use Disorder; US: United States; SARS-CoV-2: Severe Acute Respiratory Syndrome Coronavirus-2; SUD: Substance Use Disorder; HIV-1: Human Immunodeficiency Virus-1; IV: Intravenous; MAT: Medication-Assisted Treatment; OAT: Opioid Agonist Therapy; DATA: Drug Addiction Treatment Act; DEA: Drug Enforcement Agency; CMS: Centers for Medicare & Medicaid Services

Introduction

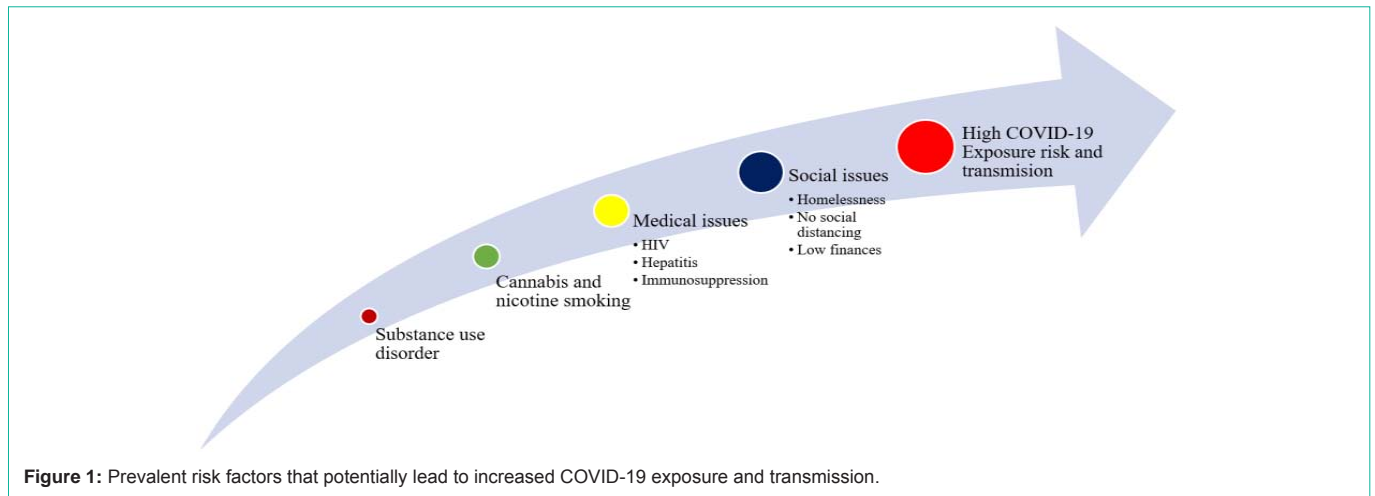
COVID-19, a disease caused by a novel coronavirus that was first reported in Wuhan, Hubei Province, China, in late December 2019. Since then, the virus has evolved into a pandemic, spreading rapidly worldwide [1]. As of May 11, 2020, approximately 4,063,525 cases of COVID-19 had been reported. Unfortunately, this number included 282,244 deaths, the majority of which have been reported in the United States (U.S.) (79,528) [2]. Although most patients infected with SARS-CoV-2 (Severe Acute Respiratory Syndrome Coronavirus-2), the causative agent of COVID-19, experienced a mild illness, about 5% of patients had severe lung injury or even multiorgan dysfunction resulting in a 1.4% case fatality rate [3]. Transmission occurred through symptomatic as well as asymptomatic contacts through daily interactions with people. The transmission was often exaggerated in situations like social gatherings and places with high people density [4,5]. The nosocomial transmission is a severe and worsening problem with COVID-19 with elevated rates of infection in health workers [6].

The COVID-19 pandemic poses a substantial risk for millions of Americans with Opioid Use Disorder (OUD). In addition to being vulnerable and marginalized, those with OUD are also heavily

dependent on in-person health care delivery often provided in crowded offices due to limited resources. COVID-19 also poses a direct threat to patients who use illicit substances because of many reasons. COVID-19 is a disease that mainly affects the respiratory tract, and current research indicates that smoking is most likely associated with the progression and adverse outcomes of COVID-19 [7]. Smoking is a common co-occurring practice in those with Substance Use Disorder (SUD), with more than 50% of smokers using marijuana. Individuals with SUD often experience immunosuppression. Heroin use is associated with an increased incidence of infectious diseases, such as Human Immunodeficiency Virus-1 (HIV-1) [8]. Intravenous (IV) drug users experience higher rates of hepatitis and HIV than those who do not partake in IV drug use, potentially posing a higher risk for immunosuppression and COVID-19 [9]. Many patients with SUD have low socioeconomic status, poor hygiene habits and do not have access to primary medical care, thus, increasing the risk of COVID-19 exposure to them as well as others (Figure 1).

Telehealth and its benefits

A series of multifaceted public health interventions were temporally associated with improved control of the COVID-19 outbreak in Wuhan, China [10]. These interventions included non-pharmaceutical interventions, cordon sanitaire, traffic and travel restriction, social distancing, home confinement, centralized quarantine, and a universal symptom survey. Quarantine and isolation are still the most effective means of containing COVID-19 [11]. In consideration of these observations, efforts are desperately needed to reduce in-person clinical encounters to treat OUD during the pandemic. Disruptions in access to medications used for OUD treatments is the main threat facing patients with an OUD. Telehealth



can be of immense help in this situation. Prior discussions have presented the benefits and challenges of continued substance use disorder services and the use of telehealth as an effective treatment delivery device. Before the COVID-19 pandemic, the U.S. was facing an unprecedented epidemic of SUD, specific to heroin and other opioids.

Implementation of evidence-based Medication-Assisted Treatment (MAT) involves the use of medications such as methadone, buprenorphine, or naltrexone, to those with an OUD. MAT has been shown to reduce the risk of death by as much as 50% [12]. Buprenorphine, which can be prescribed by primary care and providers in other specialties, is a more realistic option for telehealth prescribing. Buprenorphine treatment has demonstrated its effectiveness by increasing patient retention and in reducing opioid use, mortality, and the respective transmission rates of HIV and hepatitis-C. A study in Ontario, Canada, demonstrated that one year of buprenorphine or methadone therapy *via* telehealth was strongly correlated with improved physical and mental health along with reduced illicit drug use, relapse, hospitalization, mortality, and illegal activity. The author conducted a non-randomized cohort comparison study using an administrative database for patients who commenced Opioid Agonist Therapy (OAT). The study focused on patients receiving OAT between 2011 and 2012 across 58 clinic sites in the province of Ontario, Canada. Patients were stratified, with primary treatment modality as being in-person, mixed (25-75% by telehealth), or *via* telehealth alone. The primary outcome was continuous retention in treatment as defined by one year of uninterrupted OAT, based on pharmacy dosing records. Patients treated *via* telehealth alone were more likely to be retained in therapy than patients treated in-person. Telehealth patients demonstrated a retention rate of 50% at one year, whereas in-person patients were retained at a rate of 39%. The group receiving a combination of in-person and telehealth treatment also demonstrated a higher likelihood of retention of 47% at one year than the in-person only group [13].

Additional pilot projects have demonstrated the clinical potential for prescribing buprenorphine *via* telehealth. A telehealth initiative in Maryland has introduced buprenorphine to more than 300 rural Marylanders [14]. A chart review demonstrated that 59% of patients remained in treatment after three months, and 94% of those patients

were still engaged in treatment at three months and no longer used opioids illicitly. A West Virginia pilot retrospectively reviewed two-year clinic records and found no significant statistical difference between additional substance use, the average time to achieve thirty and ninety consecutive days of abstinence and treatment retention rates at ninety and 365 days when in-person and telehealth buprenorphine MAT programs for the treatment of OUD were compared [15].

Moreover, telehealth is more convenient for the patient because of reduced travel time and cost savings. Telehealth is not only beneficial to patients and physicians but the greater healthcare system as well. However, several critical regulatory and reimbursement barriers regarding telehealth for SUD use exists, such as the Ryan Haight Act. Recently, both Congress and the States' governments considered or passed legislation to address these barriers as a result of the COVID-19 pandemic [16]. National emergency declarations made it possible for Medicaid and Medicare payors to waive some regulations and support these changes (Table 1). The recent declarations expand options for the remote prescription of controlled substances without an initial in-person evaluation [17].

States have also relaxed licensure and other legal barriers to controlled substance prescribing *via* telehealth during this national emergency. As of March 31, 2020, guidance concerning the permissibility of initiating a new patient with buprenorphine under a Drug Addiction Treatment Act (DATA) 2000 waiver by use of the telephone has been provided by the Drug Enforcement Agency (DEA). Before this change, an in-person evaluation was needed [18]. Centers for Medicare & Medicaid Services (CMS) released guidance on March 17, 2020 that allows for patients to be seen *via* telehealth without having to travel to a qualifying "originating site," regardless of geographic location [19]. This relaxation of telehealth treatment restrictions, on both patients and providers, has made it easy to complete effective telehealth visits from patients' homes.

Challenges with telehealth

Barriers to the routine use of telehealth include technological hindrances, clinician or provider barriers, ethical and legal regulatory concerns, along with safety, security, and confidentiality concerns. Although technology has developed rapidly, the equipment needed

Table 1: Information, guidance, and resources for telehealth utilization.

Resource Description	Link
Buprenorphine initiation guidelines from DEA	https://www.deadiversion.usdoj.gov/GDP/(DEA-DC-022)(DEA068)%20DEA%20SAMHSA%20buprenorphine%20telemedicine%20(Final)%20+Esign.pdf
COVID-19 Public Health Emergency Response and 42 CFR Part 2 Guidance	www.samhsa.gov/sites/default/files/COVID-19-42-cfr-part-2-guidance-03192020.pdf
FAQs: Provision of methadone and buprenorphine for the treatment of Opioid Use Disorder in the COVID-19 emergency	https://www.samhsa.gov/sites/default/files/faqs-for-oud-prescribing-and-dispensing.pdf
CMS Blanket Waivers for Health Care Providers	https://www.cms.gov/files/document/summary-COVID-19-emergency-declaration-waivers.pdf
HHS guidelines for HIPAA waiver for emergency	https://www.hhs.gov/sites/default/files/hipaa-and-COVID-19-limited-hipaa-waiver-bulletin-508.pdf
Telehealth and HIPAA during the COVID-19 nationwide public health emergency	https://www.hhs.gov/sites/default/files/telehealth-faqs-508.pdf
Medicare telemedicine Health care provider fact sheet	https://www.cms.gov/newsroom/fact-sheets/medicare-telemedicine-health-care-provider-fact-sheet
Medicare Telehealth Frequently Asked Questions (FAQs) 3/17/2020	https://edit.cms.gov/files/document/medicare-telehealth-frequently-asked-questions-faqs-31720.pdf
Use of telemedicine While Providing Medication Assisted Treatment (MAT)	https://www.samhsa.gov/sites/default/files/programs_campaigns/medication_assisted/telemedicine-dea-guidance.pdf
DEA prescription guidelines for controlled substances	https://www.deadiversion.usdoj.gov/GDP/(DEA-DC-023)(DEA075)Decision_Tree_(Final)_33120_2007.pdf

Abbreviations: DEA: Drug Enforcement Agency; FAQ's: Facts and Questions; CMS: Center for Medicaid and Medicare Services; HHS: Department of Health and Human Services; HIPAA: Health Insurance Portability and Accountability Act; MAT: Medication Assisted Treatment

for starting a telehealth service may be an expensive investment and would likely have a maintenance cost. Problems like connectivity and compatibility of different systems used are also quite common [20]. Provider skepticism is a significant factor limiting the acceptance of telehealth. Studies have found that even after controlling barriers such as reimbursement and regulatory issues, negative attitudes from clinicians and institutions are the most significant barriers affecting the use of telehealth services [21].

Poor satisfaction among clinicians may arise from concerns about establishing rapport and successful therapeutic relationships with patients, discomfort with technology, inadequate training, and the perception that telehealth services might add to rather than alleviate their clinical burden [22,24]. This mindset is perhaps reflected in studies that revealed where overall provider satisfaction appeared to be lower than patient satisfaction with telehealth [25,27]. Concerns about security, system interoperability, requirements for licensing, and reimbursement have yet to be fully resolved [25,28,29]. Due to the national emergency and COVID-19 pandemic, there are temporary waivers in place for licensing requirements and reimbursement, but a long-term solution would be needed to eliminate hindrances in the delivery of telehealth services.

A unique challenge exists within the substance use population for those in recovery. Because of the COVID-19 pandemic, adhering to the social distancing requirements can prove challenging. Many support groups, such as Alcoholics Anonymous and Narcotic Anonymous, are based on social support and connectedness as a core principle. Nonetheless, new internet-delivered treatments for substance use disorders such as therapeutic education systems, web-based versions of community reinforcement approaches, and contingency management demonstrated improved addiction treatment outcomes [30]. A recent systematic review of telehealth-based psychotherapy identified 65 studies in this area [31]. The review concluded that a telehealth delivery method for psychotherapy was a feasible option for treatment. The review also revealed that telehealth-based

psychotherapy could be applied to a variety of therapeutic modalities, was useful in different disorders and patient populations, and was associated with high satisfaction among end-users. Another study compared process variables, such as therapeutic alliance and attrition among participants receiving anger management group therapy, either through traditional in-person delivery or by telehealth-based delivery. Findings suggested that even if group psychotherapy *via* telehealth differs in subtle ways from in-person delivery, telehealth is a viable and effective means of delivering psychotherapy. A recent systematic review of 11 studies, examined the therapeutic alliance in e-health, including telehealth-based platforms, for mental health treatment. The review concluded that e-therapy seemed equivalent to in-person therapy in terms of the therapeutic alliance; there was a positive association between the therapeutic alliance and e-therapy outcome [31].

Additionally, people with OUD may face barriers in obtaining medications like buprenorphine or methadone or obtaining services from syringe services programs. With CMS and DEA guidelines regarding the national emergency in place, these access barriers should not be an issue. However, with an increase in take-home medications like methadone and buprenorphine, there is a definite risk of overdose and diversion within the OUD population. Social distancing may also decrease the likelihood of observed overdoses; administration of naloxone to reverse overdose may be less likely and potentially result in more fatalities. Because many of these patients are on temporary employment, disruptions to their work may lead to adverse outcomes such as loss of housing, food insecurity, and ultimately an overall downward spiral that increases the risk of relapse and damage to prolonged recovery. The only viable option to mitigate these risks would be for providers to stay connected with their patients, and telehealth may be the solution.

Patients with OUD will continue to require in-person contact with healthcare providers for some treatment components such as observed urine drug screens or medication management depending

on symptoms of withdrawal. While some medical evaluation can still be done *vs* telehealth, limitations still exist.

Now more than ever, patients with OUD need comprehensive case management. Access to housing and social services programs are essential in overcoming the technological barriers and limitations to telehealth access. Additional waiver requests could support the need for grants to facilitate and grow the telehealth operational infrastructure, virtual counseling capabilities, and remote delivery of medications for the patients who are quarantined due to COVID-19.

The COVID-19 pandemic strikes at a moment when the United States' response to the opioid crisis was beginning to evolve with more affected people gaining access to treatment and effective medications [34]. However, COVID-19 may pose a threat to this process. Some disruptions in the care of patients with opioid use disorder are bound to happen. However, extraordinary planning is required to limit excessive disruption and the resulting consequences. Planning efforts will require the unprecedented use of technology and the change or elimination of archaic regulations. As we try to overcome the barriers associated with access limitations associated with COVID-19, telehealth may be a blessing by allowing patients to stay safe and connected. Even though the declared national emergency is still in place, some states are lifting the restrictions of social distancing. The medical community is worried about a possible second wave of COVID-19. In order to face this second wave efficiently and effectively, telehealth services need to be on stand-by. During this rapidly evolving situation, the authors tried to provide an overview that does not supersede any regulations, emergency proclamations, or directions from local, state, and federal officials.

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