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Substance use treatment in Appalachian Tennessee amid COVID-19: Challenges and preparing for the future

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**ABSTRACT**

The COVID-19 pandemic created a number of rapidly emerging and unprecedented challenges for those engaged in substance use disorder (SUD) treatment, forcing service providers to improve their treatment strategies as the crisis deepened. Drawing from five ongoing federally funded SUD projects in Appalachian Tennessee and hundreds of hours of meetings and interviews, this article explores the pandemic’s impact on an already structurally disadvantaged region, its recovery community, and those who serve it. More specifically, we note detrimental effects of increased isolation since the implementation of COVID-19 safety measures, including stakeholders’ reports of higher incidences of relapse, overdose, and deaths in the SUD population. Treatment providers have responded with telehealth services, but faced barriers in technology access and computer literacy among clients. Providers have also had to restrict new clients to accommodate social distancing, faced delays in health screening those they can accept, and denied family visitations, which has affected retention. In light of these challenges, several promising lessons for the future emerged—such as preparing for an influx of new and returning clients in need of SUD treatment; making arrangements for long-term housing and facility modification; developing a hybrid care delivery model, taking advantage of new regulations enabling telemedicine; budgeting for and storing personal protective equipment (PPE) and related supplies; and developing disaster protocols to withstand threats to intake, retention, and financial solvency.

1. Background

The global COVID-19 pandemic created a number of rapidly emerging and unprecedented challenges for those engaged in substance use disorder (SUD) treatment, forcing service providers to improve their treatment strategies as the crisis deepened. We used multiple disadvantage model (MDM) constructs, such as resource deprivation, geographical isolation, low-socioeconomic status, and lifestyle factors, to explore the unique challenges brought on by the pandemic in rural Appalachian Tennessee for the recovery community. The MDM identifies adverse structural, organizational, and individual factors that place people at a disadvantage in responding to a public health crisis (Cheng & Li, 2017; Lo et al., 2015). Previous studies have employed MDM constructs to investigate minority populations disproportionately affected by homicide, intimate partner violence, and alcohol use disorders while placing particular emphasis on resource provisions and access to services (Cheng & Lo, 2016, 2018; Lo et al., 2013).

Rural Appalachian residents are at particularly high risk for SUD and overdose but frequently lack treatment resources. Nearly 22% of the region’s rural population lives below the poverty level, compared to 16% of the region’s urban population and 14% of the general U.S. population (Appalachian Regional Commission, 2019). Across Appalachia’s 107 rural counties, stretching from Mississippi to Pennsylvania, socioeconomic disparities from education to unemployment beset residents. The health consequences are also evident. Overall, the overdose mortality rate for Appalachian residents is 65% higher than the U.S. average (Meit et al., 2019). Despite this alarming disparity, nearly 80% of residents in need of treatment do not receive services (Saloner & Kartekeyan, 2015). For those who do receive services, wait times often last several weeks.
Isolation, both geographic and social, may be the greatest threat and most significant challenge in addressing the multiple disadvantages faced by individuals with SUD and the organizations serving small, rural communities, particularly in historically disadvantaged areas of the Appalachian region. Prior research suggests feelings of adversity, isolation, and loneliness may precipitate SUD (Cullen et al., 2020; Hussong et al., 2020; Rapier et al., 2019). During the initial phase of the pandemic, stay-at-home orders and social distancing requirements restricted access to treatment options for many SUD clients (Volkow, 2020b); among those in treatment, some left residential facilities to be with their families. Sudden changes that COVID-19 caused affected SUD clients’ ability to maintain contact with peers and counselors, disrupting their support systems and increasing their potential for relapse (Cullen et al., 2020). Social distancing requirements also interfered with their recovery support systems (Volkow, 2020a). Furthermore, ex-offenders found themselves at increased risk of drug overdose once released from detention centers, especially due to lack of easy access to treatment (Akiyama et al., 2020; Hawks et al., 2020). Although telemedicine offers a potential solution, evidence suggests that SUD clients benefit more from face-to-face support, which builds bonds with peers and treatment providers in a manner not easily accomplished virtually (Alexander et al., 2020).

This article draws upon our interactions with hundreds of SUD stakeholders in rural Appalachian Tennessee since the onset of the COVID-19 pandemic. As part of five ongoing federally funded SUD projects—which involve outreach to those with SUD (especially opioid use disorder), implementing integrated treatment, and evaluating treatment effectiveness in the region—we participated in numerous on-site and virtual meetings; interviewed clients, treatment providers and other stakeholders; and documented the ongoing challenges facing the SUD community during this unprecedented public health crisis.

2. State of affairs with SUD and treatment

2.1. Access to illicit substances and increase in SUD and mental illnesses

Treatment providers, leaders of state and community antidrug coalitions, and faith-based recovery advocates consistently reported a marked increase in substance use in the region during the pandemic. Despite stay-at-home orders and social distancing requirements, stakeholders noted that illicit drugs were equally, if not more easily, available. They further stated that alcohol consumption was rising, even for those without prior histories of alcohol use. Some stakeholders attributed increased substance use and relapse to the influx of funds from economic stimulus checks and the continued availability of cheap illicit drugs, along with the added impacts of isolation, boredom, and stress from lost employment. They also observed increased availability of methamphetamine and opioids (Fentanyl, in particular) as well as an increase in polydrug use. Many stakeholders believed that financial stress associated with COVID-19 contributed to substance use and relapse for many individuals, leading to a rise in drug overdoses and overdose deaths. These stakeholders further reported higher call volume for mental health needs, especially anxiety and depression, but also for suicidal ideations.

2.2. Admitting and retaining SUD clients in treatment

During the initial phase of the pandemic, providers were unable to access rapid testing needed to efficiently screen new clients for COVID-19 prior to intake, and instead had to rely on tests with slow results that delayed prospective clients’ entry into residential facilities. At the same time, due to social distancing policies, existing clients and those in the wider recovery community could not maintain meetings with support groups, sponsors, or counselors. Additionally, several stakeholders emphasized that residential treatment clients felt cut off and isolated due to the elimination of visitations, leading them to leave treatment prematurely to be with their families. New clients found it harder to secure housing in the midst of the pandemic, partly because housing units were taking fewer referrals.

Providers’ outreach efforts with the criminal justice system were stymied by the elimination of face-to-face meetings with judges, district attorneys, and parole officers. Without this customary means of rapport building, providers were forced to rely on telephone exchanges to explain the value of their services and even get orders signed. Phone calls proved successful with established contacts but were deemed inadequate for additional outreach efforts or working with new clients.

2.3. Using telemedicine and remote treatment solutions

Staff at both residential and outpatient facilities scrambled to meet their clients’ needs with video counseling for virtual group meetings as a substitute for typical face-to-face meetings. The residential facilities provided the technology resources to staff working remotely to conduct individual and group therapies, case management, and recovery support services. Providers purchased teleconferencing software but were met with a lack of adoption in many cases due to pre-existing socio-structural disadvantages, such as some clients’ lack of computer literacy and access to hardware, software, and Internet. These issues interfered with providers’ attempts to hold virtual group meetings and counseling sessions, compounding clients’ already worsening feelings of isolation and increasing the potential for relapse.

2.4. Resource deprivation to maintain services

Given the systemic economic disadvantages of the Appalachian service area, many treatment agencies barely managed to maintain their existing budgets prior to the pandemic. To comply with social distancing requirements, some facilities reduced their beds by up to 50%. For those reliant on reimbursements tied to bed utilization, this proved financially difficult, requiring some agencies to take loans as well as rely on the federal payroll protection plan. Filling the remaining beds was challenging, because of limited mobility and outreach to referral sources. Fundraising efforts were also adversely impacted due to events being canceled.

2.5. Safety measures for clients and staff

Treatment facilities implemented measures to protect staff and existing clients from exposure to COVID-19. They took the necessary steps of suspending in-person counseling and support groups while restricting clients’ external contacts with their families. While agencies managed to have adequate staff present on campus, many counselors and volunteers telecommuted. To protect those who were still working on-site, facilities had to find financial resources to purchase personal protective equipment (PPE) and sanitizing products, engage in frequent cleaning, monitor in-person traffic, and maintain social distancing. While these precautions were necessary, they further stretched limited financial resources. Furthermore, in some cases, staff members testing positive for COVID-19 forced agencies to test others, engage in contact tracing, and quarantine those suspected of contagion.

Staff members were further impacted by strict limitations on personal contacts and increased workloads. New safety policies required staff to limit their movements to work and home; and once home they were not to have visitors. Meanwhile, older volunteers were expected to remain home and not report to work, shifting more duties to paid staff. Providers shared that staff members appeared to understand the need for the new safety protocols and did not resent these policies. Agency leaders were sensitive to the increased work demands placed on staff members and, when possible, made attempts to hire more employees to replace volunteers.
3. Lessons learned: preparing for the future

Based on our experiences, we recommend SUD treatment service providers working in regions similar to rural Appalachian Tennessee consider the following actions to prepare for future emergencies:

3.1. Preparing for an influx of new and returning clients

Both the psychological toll from experiencing disasters and the disruptions of treatment services contributes to increasing substance use and exacerbates the problems of an already impaired patient population (Toriello et al., 2007; Vlahov et al., 2004). Furthermore, social distancing mandates can potentially increase the likelihood of overdose mortalities when users lack the access to healthcare workers or others trained in reversing overdoses (Jenkins et al., 2020; Volkow, 2020a). Increased substance use has been reported during the pandemic due to what has been referred to as COVID Stress Syndrome, which is associated with fears of potentially contracting COVID-19, socioeconomic implications of the pandemic, and traumatic experiences related to viral exposure (McKay & Asmundson, 2020; Taylor et al., 2020). Thus, a pronounced increase in the number of people requiring SUD treatment and mental health services in the months following the COVID-19 pandemic is likely. Recently, 13.3% of respondents in a national U.S. survey reported initiating or increasing substance use as a means of coping with stress or emotions related to COVID-19 (Czeisler et al., 2020). Additionally, reports from an emergency department in Virginia found a greater number of visits for opioid overdoses during the first four months of the pandemic compared to the same timespan in 2019. The total number of nonfatal opioid overdose visits increased from 102 between March and June 2019 to 227 between March and June 2020 (Ochalek et al., 2020). Based on these early findings, providers should prepare for an influx of new and returning clients; in particular, they should be mindful of how this surge of clients can lead to burnout and mental health challenges among staff members, which have followed other public health emergencies (Toriello et al., 2007). In addition, providers should build community relationships, especially with the legal and healthcare systems, as a gateway to recruiting clients during future emergencies.

3.2. Arrangements for long-term housing

Facilities should also be prepared to provide long-term housing services to those who would otherwise be forced to live in environments unconducive to SUD treatment and recovery. Care facilities should include dedicated spaces where telehealth service provision can occur confidentially. Immediate, inexpensive modifications and long-term investments in renovations and new housing construction should include plans for social distancing among clients and with visitors. In the short-term, group meetings and visitations can be made safer with large vein, encouraging continuous learning and adaptability helps to establish an understanding of past strengths and weaknesses of public health emergency management. Developing such an understanding allows for future improvements in planning for, recovering from, and responding to emergencies. From the operational perspective, the Common Ground Preparedness Framework, a protocol that emphasizes ethical considerations, should guide public health emergency preparedness (Khan et al., 2018). From encouraging proactive decision-making about resource allocation to fostering communication both internally and to the public can help to promote resilience in the face of public health emergencies. In the same vein, encouraging continuous learning and adaptability helps to establish an understanding of past strengths and weaknesses of public health emergency management. Developing such an understanding allows for future improvements in planning for, recovering from, and responding to emergencies. From the operational perspective, the Common Ground Preparedness Framework, a protocol that emphasizes a six-tiered approach to public health emergencies, based on preparation, monitoring, investigation, intervention, management, and recovery, could be instructive (Gibson et al., 2012). Providers should educate patients about proper use of their medications in the event that they cannot access their clinic. Thus, designing disaster preparedness protocols would allow for continued client evaluation/intake, including rapid testing and service provision, i.e., counseling and medication dispensing during pandemics. Providers and programs must also make it a priority to set aside emergency funds for future pandemics (Bearman et al., 2020).

3.3. Developing a hybrid delivery care model

SUD providers can better prepare their staff and clients for a potential shift to telehealth in the future by integrating these technologies into standard treatment practices, such as providing counseling and facilitating group meetings via remote conferencing, including consultations with family members on skills to help clients maintain the treatment plans while at home. While technical limitations persist, such as difficulty accessing computers and the Internet, results emerging from related work with 60 clients in the region indicate most possess a smartphone, including those recently experiencing homelessness and living in rural Appalachian counties. Clients can use cell towers and free Wi-Fi hotspots; some of the clients who we interviewed even used Google to find treatment. Bandwidth may be an issue, but as one provider shared, “Everybody’s got Facebook up here.” As providers invest in a hybrid approach, they should employ videoconferencing solutions with free smartphone apps and video compression effective enough to ensure reliable connectivity. In addition, programs should train staff in delivering services effectively in virtual environments. The further integration of hybrid treatment services will also allow agencies to serve a greater number of clients simultaneously, which may be needed in the coming months as new and returning clients require therapy.

3.3.1. Providing prescription and care remotely

Treatment providers can now take advantage of changes to federal regulations permitting remote mental health and behavioral health services, including over-the-phone prescriptions for medications such as buprenorphine to treat opioid use disorders (Gojdati et al., 2020). Restrictions on opioid treatment prescriptions have also been relaxed in light of the COVID-19 pandemic. Methadone clinics can increase prescription limits and suboxone can be provided without an in-person visit, as a telemedicine consultation will suffice. In Tennessee, several pharmacy-specific gubernatorial executive orders have been implemented to allow practitioners to prescribe controlled substances without having to interact in-person with patients. These protocols were deemed necessary to respond to and prevent the spread of COVID-19 between providers and patients with the intent of promoting the health and well-being of Tennesseans (Tennessee Pharmacists Association, 2020). If proven effective, such measures can be implemented in the future to maintain the availability of pharmacotherapy for SUD clients deemed eligible for this treatment approach.

3.4. Access to PPE and hygiene supplies

SUD providers should develop plans for purchasing, storing, and replenishing PPE (Ranney et al., 2020). Agencies should also be mindful of rationing or controlling the supply chain through controlled allocation of PPE (Livingston et al., 2020) and maximizing the lifespan of available PPE supplies (Patey et al., 2020). Guidelines recommend the rationed use of PPE, which includes extended use of respirators and N95 masks that were in short supply. Current evidence suggests that extended use in this manner does not compromise the masks’ protective properties (Janssen et al., 2007; World Health Organization, 2020).

3.5. Updating disaster preparedness protocols

The resilience framework, which emphasizes ethical considerations, should guide public health emergency preparedness (Khan et al., 2018). From encouraging proactive decision-making about resource allocation to fostering communication both internally and to the public can help to promote resilience in the face of public health emergencies. In the same vein, encouraging continuous learning and adaptability helps to establish an understanding of past strengths and weaknesses of public health emergency management. Developing such an understanding allows for future improvements in planning for, recovering from, and responding to emergencies. From the operational perspective, the Common Ground Preparedness Framework, a protocol that emphasizes a six-tiered approach to public health emergencies, based on preparation, monitoring, investigation, intervention, management, and recovery, could be instructive (Gibson et al., 2012). Providers should educate patients about proper use of their medications in the event that they cannot access their clinic. Thus, designing disaster preparedness protocols would allow for continued client evaluation/intake, including rapid testing and service provision, i.e., counseling and medication dispensing during pandemics. Providers and programs must also make it a priority to set aside emergency funds for future pandemics (Bearman et al., 2020).
4. Conclusion

The COVID-19 pandemic created severe challenges to reception and retention among substance use treatment providers in rural Appalachian Tennessee and beyond, leading to financial strain for providers, additional stresses for staff, and on-going risk and pain for those suffering from SUD. These challenges, therefore, manifested in a three-fold problem: engaging clients and getting them enrolled in treatment, keeping clients and staff safe, and maintaining clients in recovery services. Providers and programs need to establish strong ties, in advance of emergencies, with members of the legal and health-care systems. Treatment enrollment during a crisis involving contagion requires adding rapid testing to prescreening protocols to successfully enroll prospective clients. Once enrolled, clients and the staff serve who them need to follow safety protocols to remain healthy, which requires emergency preparedness, prior staff training, appropriate design and use of space, and requisite supplies. Keeping clients engaged is a persistent challenge for treatment programs; this challenge is heightened in an emergency and vulnerable to disruption. Providing multiple modes of engagement, such as socially distanced but in-person group meetings, remote videoconferencing, and hybrid in-person/remote counseling, may serve to buffer disruptions.

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CRediT authorship contribution statement

SKK, MS, and PJJD conceptualized the study. HA and YX assisted with the literature review and all authors participated in writing, intellectual input, critical revision, and approval of the manuscript.

Declaration of competing interest

All authors report no financial interest, benefit, or conflict of interest involved with this study.

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