Telemental Health for the Homeless Population: Lessons Learned when Leveraging Care

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Abstract

Purpose of Review The purpose of this paper is to review key lessons when using telehealth within the context of mental health and homelessness. We examine technological and bandwidth issues the homeless population might face when getting telehealth services, discuss clinical process adaption needed for working remotely, and highlight the lessons learned when leveraging mental health services to homeless patients across telehealth platforms.

Recent Findings Homelessness is associated with chronic, mental health disparities and access to mental health services is often less accessible among communities with unstable housing. Telehealth provides "OnDemand" treatment options while removing specific barriers found with in-person health care such as transportation, overwhelmed mental health facilities, i.e., appointment availability, and office hour limitations while reducing costs for both providers and patients.

Summary We provide two case examples to demonstrate successful delivery of telemental health services to homeless patients and review lessons learned when leveraging care.

Introduction: Homelessness and Mental Health Disparities

The US Department of Housing and Urban Development reported roughly just under 10,000 people experience homelessness in Colorado and slightly over a half a million people in the USA are living in state of homelessness on any given day [1]. While the majority of Americans are homeless for a limited/short period of time, 22% are chronically homeless, federally defined as being homeless for at least a year or more than 4 times in the past 3 years for a period of a year or more [2]. A growing body of research supports there are multiple detrimental health outcomes associated with loss of housing, including chronic illness, substance use disorders, and unmet mental health needs. Chronic health conditions such as heart disease, diabetes, and HIV/AIDs are found to be 3–6 times higher in homeless populations compared to the general population, with 20% of the homeless people reporting to have a serious mental illness [2]. Although many people experiencing homelessness present with co-occurring disorders, treatment to improve their mental/physical health is lacking; thus, the pattern of homelessness and chronic health conditions appears to perpetuate one another.

The current research indicates the primary barriers faced by someone experiencing homelessness when trying to get adequate treatment were (1) being stigmatized/differential treatment, i.e., patients reported being treated poorly by providers and members of the community when homeless, (2) higher order tasks needed for daily care, i.e., homeless patients had to carefully plan for basic needs such as hygiene, eating, and charging their phones which took away from time allocated for seeking/receiving mental health services, and (3) overall instability, which is attributed to the ability to sustain contact with important others including providers, family, or other sources of support [3]. It should also be noted that within the context of homelessness,

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self-efficacy, and the perception of asserting and maintaining control over their daily lives, their belongings, health, and safety were also potential barriers.

Researchers support that emergency department (ED) for homeless populations is utilized more than any other service type by people without housing and up to 3 times more than that of the non-homeless population [4••]. There are many common factors attributing to high ED utilization for people without housing, including lack of health insurance, lack of transportation, and poor access to primary care [5]. Although repeated ED visits are common for homeless patients, overall health outcomes have not been noted to significantly improve for the homeless population. In general, a homeless person's mortality rate is 3–6 times higher than that of the general population [4••]. Likewise, many people experiencing homelessness are less likely to get the care they need when faced with a medical or mental health problem. People who are experiencing homelessness commonly receive multiple services from various providers; hence, frequent ER visits to different hospitals without data sharing can lead to the risk of misdiagnosing and/or giving patients duplicate treatment/ tests or the wrong medications/treatment.

Telehealth as a Proposed Solution

Technology-based treatments for mental health including tele-therapy, text messages, and mobile apps have been promising in delivering treatment to various populations. The COVID-19 pandemic certainly increased the popularity of telehealth solutions, transforming the way people receive health care; however, many providers from all specialties were developing telehealth tools prior to the pandemic [6–8].

During the initial COVID peak, a 2020 study reported that telehealth visits went from less than 1% to as much as 80% in places where COVID cases were high [9••]. Although telehealth utilization has dropped since the initial peak of COVID, telehealth usage continues to remain high. Karimi reported out of 670,155 participants, 23.1% reported they used telehealth, either audio or video within the last month, with the highest rates among Medicaid users at 29.3% [9••].

It may come as surprising, but ongoing research supports that many homeless people have access to technology; thus, the concept of using technology to break-down access barriers is not a new concept [10, 11]. Recent research supports that generally over half of the homeless population have a cell phone; however, in some studies, up to 90–100% of homeless sample groups had access to a cell phone or mobile device [12••]. Despite cell phone ownership, overall digital access is still an issue. A mixed-methods study of internet and social media use among homeless youth found 56% used the internet at least once a day and 86% once a week. Smartphones were associated with greater odds of

internet access and were the most frequently used method to access the internet, while homelessness sample internet access frequency decreased by 68%. [12••, 13].

Age also appears to be a factor in mobile phone ownership and telehealth use [12••, 14–16]. Heaslip et al. found that young homeless people with mental health concerns were up to 5× more likely to find help online [12••]. Youth aging 16–25 are more likely to use telehealth or fully automated phone interventions, while older homeless people have lower cell phone ownership, hence are less likely to use telehealth services. Older age may also be associated with lower telehealth use due to increased barriers such as expectations of in-person social contact, psychological aging, and digital literacy. Digital literacy as well as comfort with and past experiences using technology varies widely in the homeless as it does in other populations, with age being one of several important mediating factors around digital literacy and comfort [12••, 16].

Other practical problems with cell phone technology mentioned throughout the literature include issues with battery life, limited options when charging devices, breakages, and theft. Lack of trust was also mentioned in various studies as a common barrier when linking people who are experiencing homelessness to telehealth services via their phone or mobile device [12••, 17]. Though there is increasing mobile phone ownership among the homeless, many struggle with affordability of data plans and rely on public spaces for internet access, with COVID aggravating this with associated lockdowns limiting access to public spaces [18]. In addition, challenges can exist around adequacy of bandwidth when using any technology for health care. Bandwidth requirements differ across digital health care applications. The bandwidth needed to access a patient portal or psychoeducational material on the internet is significantly lower than the bandwidth needed for two-way live interactive videoconferencing [17, 19•]. Rural homeless populations may have additional access barriers, although a recent study in this population found high rates of cell phone ownership (87%) and internet access (83%). There was a willingness to use technology for health care but reluctance to engage in direct telehealth [20•]. The reasons for the resistance varied; however, resistance to treatment and general non-compliance with medication management and therapy occurs in both virtual and face-to face platforms for several reasons.

In terms of success outcomes, telehealth modalities to improve access, specifically video visits, have been found to have high levels of satisfaction for both patients and providers [6, 19•, 21]. Recent research reveals technological interventions show high rates of clinical benefit, including reduction of symptoms of psychopathology, specifically for PTSD, depression, and anxiety [6, 15, 16]. As a means to overcome barriers with digital technology, research supports that incorporating telehealth into an urban permanent supportive housing setting also proves to be helpful in allowing

clients to access tele-therapy from the comfort of their own home, or from a designated room located at the housing facility [22].

The Veteran's Affairs (VA) has been known to lead clinical video telehealth and has had some success in delivering mental health care virtually. Between 2017 and 2019, the VA health care system issued 12,148 video-enabled tablets to homeless veterans to receive telehealth. Tablets came with WiFi and data plans and VA representatives guided participants through the technology set-up. Nearly half of the veterans experiencing homelessness had a telehealth visit within 6 months of receiving the tablet, most frequently for mental health [23].

Moving toward a blockchain technology in health care also appears to be a low-cost solution for people experiencing homelessness as a means to track and store their health care information when seeing multiple providers. Blockchain technology, also known as distributed ledger technology (DLT), creates a network among users, making data portable so the coordination of care can be assessable to any provider. Khurshid and Gadnis proposed the concept of blockchain technology (DLT) to allow people who are experiencing homelessness to become a part of data sharing system, connecting providers, and allowing patients to maintain their health care information in one place [24].

Using mobile technology for appointment reminders was recommended throughout the literature for the homeless population, suggesting to improve adherence and a sense of connectiveness [12••]. In effect, the research supports that technology facilitates self-management and people experiencing homelessness are more likely to accomplish daily tasks including coordinating/scheduling appointments if they have access to mobile technology, specifically the internet [3, 7, 25, 26•].

Special Considerations/Requirements

High rates of technology access among certain cohorts of homeless populations including mobile phone, computer, and access to internet make virtual options for mental health services appealing. However, additional issues for both patients and providers when creating and accessing telehealth services need to be considered. Standard telehealth considerations include providers' clinical protocols around safety, consent, and HIPAA compliance, hence adequate training for both patients and providers on using televideo or other technologies [21, 27]. Providers and organizations need to understand and develop strategies to address legal requirements at both the state and federal level, backup plans for technological malfunctions and internet outages, and finally level of comfort, when delivering remote treatment [11, 26•, 28].

Another critical area under-addressed in the literature is the adaption of treatment along with the technology, delivering it to match the specific homeless populations' environment and resources. Adherence to mental health treatment in the aforementioned study on rural homelessness ranged from 43 to 60% [20•, 21, 29]. Previous studies have demonstrated the challenges of mental health treatment among the homeless [30]. Treatment adherence is further complicated by mobility, access, and housing for this population which is overlayed on the previously discussed technology access issues. The adherence and access impact both the length and types of treatments that maybe most effective in working with this population [17, 18, 24]. A better understanding is required around the feasibility of different types of technology-based treatments. The homeless may benefit from more time limited and focal treatments as well as those that can be delivered asynchronously. Promising explorations should look at existing interventions known to have impact (e.g., case management, psychosocial rehab, and outreach) and opportunities to enhance and amplify these by appropriate paring with technology-based treatments [31].

Case Reports

Below we present cases drawn from two recently established telemental health services. These offer medication and therapy treatments for homeless populations established in 2020 and 2021 respectively. By the summer of 2022, a total of 37 clients where provided with treatment across 71 sessions (33% session no show rate), with 75% of the visits used for therapy and 25% for psychiatric assessment and medication.

Case Example 1

"Jean" is a telemental health therapist who is a provider for a virtual integrated care team that delivers telemental health services to primary care offices either direct to consumer (patients located at their home) or from a designated room located at the primary care practice. The team consists of two psychiatrists, four licensed behavioral health therapists, and four administrative staff who facilitate scheduling, technology set-up, and billing. In June 2020, "Jean" began seeing patients via videoconferencing, from an urban shelter for women and transgender individuals experiencing homelessness. With support and funding from the integrated care team, the shelter was able to create a designated telehealth room, equipped with a telephone, computer/laptop, and comfortable seating where guests can get both therapy and psychiatry services. The staff at the shelter were trained on setting-up videoconferencing via Zoom and facilitated in getting patient consents and Medicaid information to the virtual

integrated care team, prior to scheduling visits. From June 2020 to June 2022, 24 guests at the shelter were seen, two for psychiatry and 22 for therapy with a total of 49 visits, 31 no shows, 2 reschedules, and 10 cancelations. Patients who had multiple visits reported satisfaction with modality and indicated they appreciated the convenience of timely meetings, i.e., being seen within days or the same week of requesting an appointment, eliminating travel, and having the same provider each time they were seen. One client, "Bob," who was diagnosed with agoraphobia, reported that as a result of his condition, he had not left his permanent residency at the shelter to receive mental health treatment and therefore would not have received the treatment he needed without the telehealth program located at the shelter. "Bob" received a total of 26 therapy sessions with "Jean" and reported improved psychopathology over the course of treatment.

"Jean" indicated that due to the unforeseen circumstances people without housing generally face, no show rates continued to be high when treating shelter guests. Other issues with leveraging care to this particular shelter included staff attrition, technology problems, guests transiting to other places, or guests not having adequate insurance. Another challenge this telehealth provider faced was around triage and "goodness of fit." Jean reported she was referred many complex individuals with acute mental health needs that sometimes felt outside the scope of what telehealth could provide, however faced limited triage options. "Jean" indicated her biggest take-aways when working with guests at this shelter were that (1) the essential need to build trust and rapport was ongoing with this population; (2) harm reduction and guidance around basic human needs often become the standard of care; and (3) not having access to primary care for labs etc. can interfere with getting adequate treatment, specifically for med management. Overall, "Jean" and the shelter staff found the partnership between the shelter and the integrated care team was effective in meeting clients where they are at while using collaboration across organizations, and allowed them to develop a telehealth model that services homeless individuals in a timely, cost-effective way.

Case Example 2

"Sandy," a tele-behavioral health therapist, and "Jacob," a psychiatrist on the same telehealth team, began seeing clients at a shelter for families experiencing homelessness in March 2021. The shelter staff put together a private telehealth room in their facility which included a computer to access Zoom, a camera, and a telephone in case of internet connectivity issues. Shelter staff facilitated gathering insurance information and getting consent forms signed. The shelter staff helped clients gain access to the telehealth room and connect with the providers through Zoom at the time of their appointments. From March 2021 to July 2022, 14 clients were seen for 22 visits, 4 no shows, 2 rescheduled, and 6 canceled. Six clients were seen by "Sandy" for therapy services and 8 were seen by "Jacob" for psychiatry services.

"Jennifer," a resident at the shelter, was seen by both providers during the time she resided at the shelter. Prior to receiving mental health treatment, "Jennifer" had received multiple citations for behaviors such as breaking rules and speaking to staff inappropriately. During her course of treatment with "Sandy," "Jennifer" addressed anger outbursts which led to citations, excessive crying, and sleep disturbance while also starting medication regimen with "Jacob" to address symptoms. "Jennifer" learned skills to manage symptoms and behavior in the shelter environment. "Jennifer" gained stability with emotions and thoughts which led to increased attendance to appointments for housing and other social services as well as enabled "Jennifer" to maintain employment throughout this time.

Clients and shelter staff reported the benefits of this service were the timeliness and convenience of appointments. On most occasions, clients were able to be seen by both psychiatry and therapy within 1 week of referral. Clients reported improvement in symptoms which helped with organization and management of schedules. Finally, clients reported receiving emotional support during stressful transitions was beneficial.

Collaboration between the telehealth providers and on-site case managers was imperative to the success of this program. One barrier that arose in this setting was having adequate childcare for individuals during sessions as all clients were on the family unit. Another barrier was trouble filling prescriptions due to various insurance limitations. Finally, an inability to follow up with guests after leaving the shelter for alternate housing was an issue at times, specifically with medication management.

Overall, "Sandy" believes this model was effective in treating individuals experiencing homelessness and assisted clients in gaining stability in a time of transition.

Clinical Considerations when Working with Homeless Populations

Synthesizing the existing literature and the clinical case experience, we proffer some initial considerations for organizations and providers in supporting mental health care in homeless populations through videoconferencing and other technologies.

1. Review the technology access considerations: [11, 26•, 27, 28].

    (a) What technology platform will the patient(s) be using? Personal, loaned, or given device. Cell, phone, tablet, or computer.

(b) What will be the data and bandwidth available? Will there be continuous or intermittent service.

(c) Where will the technology be access or used? Will they be connecting through a shelter/housing, public space, or private mobile device.

(d) What is the best assessment of the length of time that patient could be expected to engage in both individual sessions and ongoing treatment?

2. What is the digital literacy and comfort of the patient with the specific technology treatment/device being deployed?

3. Given the technology access, literacy, and comfort considerations, what is the most appropriate technology and intervention to be used and what additional adaptations to the technology and its associated workflow and processes should be undertaken?

4. What are the opportunities to further embed the technology/intervention into a larger system of care for the patient (e.g., care coordination, outreach, and care management)? Can existing technologies be leveraged to enhance and provide more holistic treatment?

Conclusion

Homelessness continues to be a complex public health concern requiring innovative intervention models that "meet clients where they're at" and overcome ongoing barriers to treatment. Telehealth for mental health treatment has grown substantially in the last 3 years with increasing presence of diverse platforms offering both synchronous and asynchronous options for therapy and psychiatry [9••]. Appointment reminders via text appear to have promising results for keeping telehealth appointments and although the literature is limited, researchers support that programs delivering telemental health to homeless patients have found more success when (1) providing the technological device tablet/phone/computer for the patient, (2) incorporating telehealth into supportive housing facilities, and (3) having a multi-agency approach to develop a structured coordination of care [12••, 21, 22, 26•]. Further work is needed to best understand how existing treatments and technologies can best be adapted to serve of the needs of this community that address their mental health needs.

Declarations

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