Perspectives of patients receiving telemedicine services for opioid use disorder treatment: A qualitative analysis of user experiences

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Abstract

Objective: Telemedicine for OUD (tele-OUD) has the potential to increase access to medications for OUD (MOUD). Fully-virtual tele-OUD services, in which all care is provided via telemedicine, are increasingly common, yet few studies document the experiences of patients who utilize such services. Understanding patient perspectives is one of multiple considerations to inform the regulation and reimbursement of tele-OUD services.

Methods: We conducted semi-structured interviews with 20 adults receiving care from one fully virtual tele-OUD service who had received 3–5 weeks of treatment. Analyses were conducted using an inductive and deductive approach informed by the modified Unified Theory of Acceptance and Uses of Technology model.

Results: Over three-quarters of patients with past experience receiving in-person MOUD treatment described tele-OUD as more advantageous with its key strength being more patient-centered. Over three-quarters of patients said they felt tele-OUD helped to ameliorate social barriers to seeking treatment, and nearly all said they appreciated the speed at which they were able to initiate MOUD treatment via tele-OUD Surprisingly, the pandemic was not among the factors that influenced patient interest in tele-OUD.

Conclusions: Patients engaged in one fully-virtual tele-OUD service described unique advantages of tele-OUD. More research is needed to determine the appropriateness of tele-OUD

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for people in various stages of recovery, and data on long-term treatment outcomes is needed to inform decisions about the regulation and reimbursement of fully virtual and hybrid care models for OUD.

Introduction

Although more than 2 million Americans have an opioid use disorder (OUD), fewer than one in five individuals with OUD receive medications for OUD (MOUD) such as buprenorphine or naltrexone.[1–5] Telemedicine for OUD (tele-OUD) uses videoconferencing to connect providers and patients, and has the potential to increase access to MOUD treatment. Telemedicine can bring MOUD prescribers into rural communities without MOUD services,[6] and reduce barriers in access to care for individuals in urban and suburban areas.[7] Tele-OUD has grown exponentially since the start of the COVID-19 pandemic in part because of supportive policy changes; approximately 30% of all outpatient OUD visits among commercially-insured patients occurred via telemedicine in the spring of 2020.[8]

Prior to the pandemic, federal law required buprenorphine and methadone prescribers to evaluate patients in-person before initiating a patient on MOUD. Temporary waivers during the pandemic have facilitated buprenorphine induction as well as follow-up visits via telemedicine (e.g., by waiving the requirement for an in-person evaluation).[9,10] Although use of telemedicine for methadone prescribing was not impacted by these waivers, SAMHSA has allowed for additional take-home doses of methadone during the Public Health Emergency.[11]

Several studies suggest that tele-OUD is comparable to in-person care on outcomes such as retention in treatment.[12,13] Further, interviews and surveys of providers suggest that despite some important limitations (e.g., less structure and accountability), tele-OUD can be an effective way to deliver OUD treatment.[14–17] Patients interested in tele-OUD services currently have several options: they can go to brick and mortar clinics that offer telemedicine services (typically as a component of hybrid care models in which some services are delivered in-person and some via telemedicine) or they can seek out care from a telemedicine company that offers an (exclusively) virtual care model.[10] Despite the widespread use of tele-OUD and the different care models available to patients, there is minimal research on the patient's perspective.[18]

To fill this gap in knowledge, we conducted semi-structured interviews with patients engaged in a fully virtual care model to understand their experiences and to explore their perspectives on the strengths and limitations of the model and how it compares to in-person care. Understanding patient experiences with tele-OUD is important to inform the design of future telemedicine services as well as the ongoing debate on post-pandemic telemedicine policy.

Methods

Telehealth Service

To recruit patients receiving tele-OUD, we worked with an organization called Bicycle Health. As of 2021, this organization provided MOUD prescribing and related services (e.g., online support groups) via telemedicine to patients with OUD in twenty U.S. states.[19] We identified this organization after completing an environmental scan on in-home tele-OUD care, and we selected it because, in contrast to some other tele-OUD organizations, it was active in multiple states.[10] Prior to the pandemic, patients initiated treatment with an MOUD prescriber in-person; however, since early 2020, the majority of patients have initiated and continued treatment exclusively through telemedicine.

There are a number of tele-OUD organizations which vary slightly in their delivery models.[10] For this particular organization, most patients are self-referred, and learn about tele-OUD through a web search or advertisement. At the time of interviews, patients paid a monthly membership fee of $199 (which was covered by some insurers) to access video conferencing visits and optional clinical support services using a mobile phone application (app).

To support progress toward treatment goals regarding abstinence from opioids and other substances,[1] patients complete home-based urine drug toxicology testing at recurring randomized intervals and share the results by providing photos in the app. Additional lab testing (e.g., buprenorphine metabolites for adherence monitoring) is completed as necessary. Prescribing is also managed electronically, and patients designate their preferred retail pharmacy. For patients new to buprenorphine, home induction is monitored through two visits within the first seven days of treatment, followed by weekly visits thereafter in the first month. For patients transferring care from another provider, visits are typically more frequent in the beginning (e.g., 7–10 days apart), increasing to a monthly interval for stable patients in OUD remission. Patients with uncontrolled mental health conditions or multiple substances of use have two or more visits per month, and may receive shorter prescription intervals or random medication counts for accountability support. Consent for two-way provider communication to coordinate care is required for any patients receiving ongoing prescribing of a controlled medication by an outside provider, and optional two-way sharing of medical records with patients' primary care providers (PCPs) is routine. Online peer support groups are optional, and individual counseling is available in some states. Medication costs are not included in the monthly fee. The app allows for messaging to facilitate on-demand patient support (e.g., clinical questions, prescribing, scheduling).

Study Population and Recruitment

We focused on adults who had been receiving services for 3–5 weeks. We selected this time frame so that patients had enough experience to have opinions regarding the care model and to minimize survivorship bias, ensuring that the opinions of those who were not satisfied

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[1]Routine urine toxicology includes testing for opiates, fentanyl, oxycodone, methadone, buprenorphine, amphetamine, methamphetamine, benzodiazepine, and cocaine. Analytes are occasionally changed, and tests may also include tetrahydrocannabinol, barbiturates, and tricyclic antidepressants.

or well served by the treatment model (and would ultimately drop out) were represented in the evaluation. Patients who had received 3–5 weeks of treatment received an email from the tele-OUD organization that advertised the research study. There were no exclusion criteria. If respondents expressed interest and provided permission, their contact information was shared with the study team. Communications clarified that the evaluation operated independently of the tele-OUD organization, the tele-OUD organization administrators and clinicians would have no role in the interviews, data analysis, or interpretation of findings, and the patient's care would not be affected by their participation.

The study team then invited individuals who had expressed interest in participating (n=109) to a 90-minute interview. In selecting participants from the pool of patients who expressed interest, we applied maximum variation sampling in an effort to optimize sample heterogeneity. We sought variation on prior experience with OUD treatment, U.S. state, and rurality. We continued to recruit until we reached thematic saturation. From March to May 2021, we completed 20 semi-structured interviews.

Interview Procedure

Interviews covered patient experiences with tele-OUD (e.g., satisfaction, comparison to in-person treatment, concurrent use of other services, plans for future use), advantages and disadvantages of tele-OUD. Three members of the study team (JS, LUP, PR) conducted interviews and transcription in pairs via videoconference. Patients provided verbal consent after an overview of the study objectives, risks, and benefits, and received a $75 Amazon gift card for participation. The RAND Corporation Institutional Review Board (IRB) approved this study. The research was supported by the National Institutes of Health (NIH) and as required by the NIH and IRB, the tele-OUD organization played no role in the collection of data or its interpretation.

Analysis

Transcript-style notes were taken during each interview and uploaded into Dedoose, a qualitative analysis software.[20] Following each interview and at regularly scheduled team meetings, study team members discussed emerging themes. The lead author (JS) then coded all transcripts following team review (LUP, PR) and consensus on the codebook and theoretical framework for analysis. We used an inductive (bottom-up) and deductive (top-down, theory-driven) approach informed by the modified Unified Theory of Acceptance and Uses of Technology (UTAUT) model.[21,22]

Developed by synthesizing eight distinct models of technology acceptance, the revised UTAUT model includes six constructs related to an individual's use of a technology: performance expectancy (perceived usefulness), effort expectancy (perceived ease of use), social influence (anticipated social approval/disapproval of use), and facilitating conditions (organizational or technical infrastructure supports/barriers), attitude (positive/negative views of use) and behavioral intention (strength of intention to use).[21,22] The model has been used in several previous studies to analyze perceptions of telehealth for home health care,[5,23,24] telemonitoring for heart failure,[25] and telemedicine use during the COVID-19 pandemic.[26,27] To our knowledge, no research study on tele-OUD has used this framework.

We aligned key themes arising from inductive analyses with UTAUT domains. In this way, we used the six constructs of the model to structure and inform our analysis of patient perceptions of tele-OUD. We reached saturation on participants' experiences with tele-OUD after 17 interviews and recruited another three participants to confirm that no additional themes were emerging. We later received data from the tele-OUD organization on which interviewees had dropped out of care, and we confirmed that 3 (15%) interviewees were no longer receiving care from this organization as of June 10, 2021 (40 days after our final interview occurred).

We provide quantitative data for demographics and use of services, but otherwise use descriptive language to indicate the extent to which a theme was expressed in the sample. We use "nearly all" to refer to themes endorsed by 17 or more patients, "a few" for concepts endorsed by three or fewer patients, and "one-quarter," "one-half" and "three-quarters" to refer to themes endorsed by approximately 5, 10, and 15 patients, respectively. Any theme endorsed by 10 or more patients is included with illustrative quotes in Table 2 and summarized with one quote in text. We only present results that are generalizable to tele-OUD services more broadly; themes that were unique to this particular tele-OUD organization (e.g., specific app features, responsiveness of staff to administrative questions) are not discussed.

Results

Participant Characteristics

Twenty patients, including 14 who used the service for prescribing only and six who used it for both prescribing and online support groups, participated in the study. The majority of patients (n=17) were working full-time, and they were evenly distributed across urban (n=11) and non-urban (n=9) communities (Table 1). Most patients (n=16) reported prior experience with in-person MOUD treatment. Fewer than half (n=8) reported prior experience with telemedicine for any medical care, and none had experienced other tele-OUD services. Patients who participated in the study were similar to the broader population of patients using the service who were invited to participate; however, the study sample included a higher proportion of women (Table 1).

Most participants (n=18) reported first learning about tele-OUD through an Internet search, however none were looking specifically for telemedicine care; all were seeking a local OUD provider. Just over half of participants (n=11) used tele-OUD for MOUD induction, while the others (n=9) were already receiving MOUD treatment in-person and were therefore transferring their care to this tele-OUD provider. Most (n=18) reported receiving no concurrent community-based services for OUD.

Performance Expectancy

Performance expectancy refers to the perceived usefulness and relative advantage of tele-OUD, and the degree to which patients believe tele-OUD will help them in their treatment and recovery.[22] Key subthemes in this construct included the speed of getting started with tele-OUD and the perceived patient-centeredness, as compared to in-person care.

Nearly all patients – including all but one who reported past experience receiving in-person MOUD care – reported that they appreciated how quickly they were able to initiate treatment; the large majority said they were seen by a tele-OUD provider within three days of reaching out to express interest in the service. Still, nearly one-quarter said they wished they could have been seen even more quickly, emphasizing the critical importance of rapid engagement when individuals express readiness for behavior change, or when transitioning between providers. As one patient explained, "Every day you're not being seen is another day you could be dead." Most patients observed that in contrast, typical in-person OUD treatment options often involved long wait times for new patients.

Second, over three-quarters of patients with experience receiving in-person MOUD treatment described increased patient-centeredness as a relative advantage of tele-OUD. . The vast majority of interviewees stated they felt a sense of respect or lack of judgement from their tele-OUD provider, and others cited customized treatment plans or provider responsiveness to patient needs and preferences. Additionally, over half of those with prior experience receiving in-person MOUD treatment described those experiences as unsettling or harmful, citing intimidating treatment environments, humiliating interactions with providers or staff, punitive drug testing or adherence measures, and zero-tolerance policies for rescheduled or missed appointments. Patients said they found it difficult to find trusted MOUD providers, citing former "pill mills" turned MOUD treatment centers, or clinics that charged high fees for basic services. As explained by one patient, "So many people just want to prescribe. That's not what we need, we want people who care."

Effort Expectancy

Effort expectancy refers to the perceived ease of use of tele-OUD.[22] Key subthemes for this construct included the user-friendly nature of tele-OUD, the low complexity, and the high flexibility of receiving tele-OUD services.

When asked about ease of use of the service, all patients described tele-OUD as straightforward, convenient, or user-friendly. Most reported no technical challenges, and most described the platform as easy to learn to use. Explained one patient, "This app was easy, I figured it out as soon as I downloaded."

Second, nearly all patients cited the low complexity of tele-OUD, with many noting fewer requirements than typical OUD care (e.g., engagement in psychosocial services was optional). As a result, treatment was more accessible and less time-consuming. Patients explained their appreciation for fewer requirements given work or childcare duties, describing tele-OUD as, "perfect for people who work full-time, or who have family and other responsibilities."

Third, half of patients cited flexibility as an important benefit of tele-OUD, explaining that tele-OUD was easier to use than in-person treatment because of the availability of evening appointments and flexible scheduling, and the convenience of getting questions answered easily through app-based messaging. As a result, many stated they were more likely to attend their appointments or comply with drug testing requirements. One patient pointed out, "It used to take 2, 3, 4 hours to wait to be seen [in-person] even though I had an

appointment, and I had to do it once a month. It was just not realistic to keep a job and make those appointments."

Social Influence

Social influence is a more contextual construct that refers to social acceptability, or the degree to which patients believe their friends, family and other influential people will support them and look favorably on their use of tele-OUD.[21,22] Key subthemes in this domain included social barriers to OUD treatment, the influence of tele-OUD on patient self-image, and a perceived lack of primary care provider (PCP) support for tele-OUD.

Over three-quarters of patients – including over three-quarters of those with experience receiving in-person MOUD care – said they felt tele-OUD helped to ameliorate social barriers to OUD treatment such as stigma, describing tele-OUD as "less intimidating" or "more comfortable" than being seen in an in-person OUD treatment setting. Further, some individuals who used virtual groups appreciated the greater anonymity, as participants in their group came from a much wider geographic area.

Nearly three-quarters of patients described tele-OUD as a customized service that, in contrast with in-person care, aligned with their identity and view of themselves. Some patients, for example, appreciated that tele-OUD allowed them to distance themselves from other patients with OUD (including those who may have relapsed). As one patient explained, "No one wants to sit in a waiting room with a bunch of [people with OUD]." Others said the perceived lack of judgement by tele-OUD providers or the few requirements for tele-OUD treatment communicated a message of respect or trust.

Third, half of all patients described a perceived lack of PCP support for MOUD or for tele-OUD care models. These patients said they felt their PCP was judgmental or not supportive, or that they anticipated feeling shame or stigma if they were to disclose information about their use of tele-OUD to their PCP. Several said their PCP, "doesn't get it about [buprenorphine]," or did not understand the concept of longer-term MOUD treatment.

Facilitating Conditions

Facilitating conditions is another more contextual construct that refers to the degree to which patients perceive that the organizational and technical infrastructure exists to support their use of tele-OUD.[21,22] The key subtheme in this category was the perceived impact of the COVID-19 pandemic. Surprisingly, the pandemic was not among the factors that affected patient interest in telemedicine, as all patients were seeking in-person treatment when they first learned about tele-OUD. When prompted, however, nearly half of patients stated they appreciated the reduced exposure risk offered by tele-OUD as a "silver lining" of telemedicine.

Attitude

Attitude refers to the positive or negative views patients have about using tele-OUD.[21] Key subthemes in this construct included high patient satisfaction with tele-OUD, and patient surprise that MOUD via telehealth was even permitted. First, nearly all patients rated their

satisfaction with the tele-OUD service as a "4" or "5" in a 1–5 scale. Second, over half of patients said they felt surprised to learn that tele-OUD was even possible. Many of these patients said their past experiences with in-person MOUD care made them believe telemedicine would not be legal. According to one patient, "It's just like it's too good to be true."

Behavioral Intention

Behavioral intention refers to the strength of the patient's intention to use tele-OUD.[21] Most tele-OUD patients said they planned to continue using tele-OUD for at least six months. One patient remarked, "As long as they take care of me, I'll stay. Until I've gotten to the point where my brain is okay." A few said they were unsure of how long they would continue. Among those who were planning to continue with tele-OUD treatment, about half said they intended to use the same services (e.g., prescribing only or prescribing and online support groups), while half said they planned to start using additional services such as online groups or individual therapy.

Discussion

In interviews with 20 new users of one tele-OUD service, we found that the majority were satisfied with the service, citing few disadvantages or recommendations for improvements. All patients described tele-OUD as convenient or easy to use, and nearly all said they appreciated how quickly they were able to initiate treatment as new patients. Patients described their MOUD providers or the quality of care they received in positive terms, particularly relative to past experiences with in-person OUD care. These findings are consistent with literature that suggests that fully virtual models of tele-OUD treatment have the potential to increase access to MOUD care and improve the patient experience.[14–17]

While many have focused on the potential benefits of tele-OUD from the perspective of access and convenience, users of this tele-OUD service highlighted other strengths that have not been documented elsewhere, including not being exposed on a regular basis to others with OUD (including individuals who may have relapsed), and the perceived message that each patient is treated as an individual rather than a member of a stigmatized group. Patients also spoke of the challenges they had previously faced in finding reliable MOUD care in their respective communities, and half described the frustration of seeking support from PCPs who they perceived as judgmental or not informed about OUD or MOUD. These findings demonstrate the importance of incorporating patient perspectives into research on tele-OUD and MOUD treatment more generally.

Although findings were strikingly positive, they should be interpreted with a number of caveats. First, while patient experience is very important, it is one of numerous factors that should be considered in the selection of a particular treatment model. At present, there is limited data on the efficacy of fully virtual OUD treatment programs that serve patients in the home and how they compare to in-person care. Studies which assess the impact of different models that incorporate telemedicine on important OUD treatment outcomes such as retention in treatment are needed to inform policy and practice. [13] While our data suggests that increased convenience and more frequent communication may improve

retention in treatment, there is the possibility that tele-OUD does not offer the same structure and accountability as in-person care and as such, may not be as effective for some populations of patients. For example, clinicians have observed that with telemedicine it may be easier to misrepresent drug use and delay and/or tamper with drug testing. In this care model, patients provide photo documentation of home drug toxicology testing. The relative advantages and disadvantages of this approach within fully virtual care models have not been rigorously studied.[16]

Also, while this model appears to be solving key accessibility challenges for certain patients, it does require digital literacy, access to personal devices, Internet access (e.g., through home broadband or cellular service), and financial resources. As a result, many disadvantaged patients may not have the option to use tele-OUD, and if this particular model proliferates, inequities in access may emerge. The cost of tele-OUD services similar to this service could represent a substantial barrier for lower-income individuals with OUD where the service is not covered by insurance; 67% of patients with OUD have an annual family income of less than $50,000.[28] Finally, the particular tele-OUD model under investigation involves more than just care delivered via videoconferencing on personal devices. There were few requirements for most patients to receive MOUD beyond home-based drug testing and attendance at prescribing visits. It should be noted that while psychosocial treatments are often required in conjunction with MOUD prescribing at brick and mortar clinics, the relative importance of such interventions is not well understood, and the necessity and benefit of psychotherapy for OUD may vary by the patient's stage of recovery or other factors.[29–31] Because this tele-OUD organization imposed few requirements, it is unclear whether the high satisfaction we documented was driven by the modality versus other features of the treatment model. Nonetheless, patients pointed out that telemedicine offers unique benefits (e.g., no travel required, privacy of the home setting).

Our study had several limitations. First, we only interviewed patients receiving care at one tele-OUD organization. Second, recruiting patients to provide feedback is subject to response bias,[32] as patients with the highest and lowest satisfaction ratings tend to be more motivated to give input. However, interviews may provide a more accurate assessment of patient satisfaction than patient surveys,[33] and we sought critical as well as positive input on the service. Third, it is difficult to tease out whether satisfaction with the tele-OUD service is driven by satisfaction with the care model vs. satisfaction with the unique provider delivering care. Interviewees discussed both factors as contributing to their experiences. Fourth, relatively new users of the tele-OUD service (3–5 weeks) were recruited to address survivorship bias; as a result, we were unable to assess experiences with sustained use of tele-OUD. Fifth, most of the patients with whom we spoke reported past experiences with in-person MOUD treatment, and few were entirely new to receiving buprenorphine treatment. It is possible that patients who are in earlier stages of recovery may have more challenges with tele-OUD than we report here.

Conclusions

Care models for the treatment of OUD are rapidly evolving in response to the changing regulation and reimbursement environment, improvements in technology, and changes

in patients' demand for and expectations of services. Our findings suggest high patient satisfaction and positive experiences with one fully virtual care model among a convenience sample of new users of the service. More research is needed among different populations of patients (e.g., to determine the appropriateness of tele-OUD for longer-term treatment and for people in early stages of recovery). Further, data on long-term treatment outcomes are needed to inform decisions about the regulation and reimbursement of fully virtual and hybrid care models for OUD.

Acknowledgements

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Table 1.

Characteristics of Interview Participants

Participant Characteristic	Interview Participants		All patients who initiated tele-OUD during the recruitment period [a]	
	#	%	#	%
Total	**N=20**		**N=841**	
Region				
Northeast	0	0.0	9	1.1
Midwest	2	10.0	102	12.1
South	13	65.0	428	50.9
West	5	25.0	302	35.9
Rurality [b]				
Metro (>500,000)	1	5.0		
Urban area (50,000– 500,000)	10	50.0		
Urban cluster (2,500– 50,000)	6	30.0		
Rural area (<2,500)	3	15.0		
Gender				
Women	12	60.0	334	39.7
Men	8	40.0	507	60.3
Age range				
18 – 24	0	0.0	48	5.7
25 – 44	16	80.0	584	69.4
45 – 64	4	20.0	198	23.5
65 +	0	0.0	11	1.3
Employment status [b]				
Full-time work	17	85.0		
Part-time work	0	0.0		
Unemployed	3	15.0		
Past in-person treatment with MOUD				
Yes	16	80.0	-	-
No	4	20.0	-	-
Any past telemedicine use [c]				
Yes	8	40.0	-	-
No	12	60.0	-	-
Stopped receiving tele-OUD services during observation period				
Yes	3	15.0	-	-
No	17	85.0	-	-

[a] Demographic data all of all new enrollments from 2/1/21 to 3/15/21. This information was provided by the tele-OUD organization.

[b] Comparable information for the rurality and employment status of patients who initiated tele-OUD during the recruitment period is not available, as it is not systematically collected by tele-OUD organization.

[c]We queried patients about past telemedicine use (one or more visits) for any reason or specialty.

Table 2.

Key themes and illustrative patient quotes by UTAUT domain

Domain	Illustrative Quote(s)
Performance Expectancy (perceived usefulness of tele-OUD)	
Speed of getting started with tele- OUD	"I think it was like 2–3 days at the most." "It was very quick, which was awesome." "They said it would be 2 days. That took the wind out of my sails…I hung up that phone and went to my dealer. I did what I had to do. I wish I had gotten to see a doctor sooner than I did. I wish people didn't have to wait."
Patient-centeredness of tele-OUD relative to in-person care	"They don't treat me like a drug user. They don't treat me like [a person with OUD]. They treat me like a person. They don't make me feel small, that I'm worthless because of this, and that's the way I felt with [in-person MOUD provider]." "They made me feel like I was worth something, and to not give up." "The doctor [I saw previously for OUD treatment], even with all my private health records, pulled up my sleeves and checked me for track marks. He said I need to detox, 'you've been on this medicine [buprenorphine] for too long.' I was like, 'I just moved here and if I detox, I could end losing my job and everything.' He was completely unfazed. He said, 'you're just substituting one drug for another.' I was like, 'why are you doing this if you don't think it's a proven, evidence-based thing?'"
Effort Expectancy (perceived ease of tele-OUD use)	
Ease of use of tele-OUD/ simplicity of system design	"I like that it's all in one hub." "They stayed on the phone with me to make sure I could get the app to work. They walked me through it. My dad could do this." "Some websites have too much stuff. It can take a lot of clicks to get from here to there. This app was easy; I figured it out as soon as I downloaded."
Low complexity of tele-OUD	"You take a drug test, check in [with your provider], and that is it." "I have been offered to do online support groups, but have not done that. I have been on [buprenorphine] for 7 years, and I prefer to go to meetings in-person, and my life is too chaotic and busy for that right now." "If you're trying to get clean, it needs to be as easy and stress free as possible. [Tele-OUD] goes above and beyond to make this easy."
High flexibility of tele-OUD	"My one fee covers however many visits [with a tele-OUD provider]. She said it was up to me and my call, so I've been sticking with every 2 weeks." "To reschedule the appointment, I type in the app and say, 'instead of this day, I want to come in on this day.'" "I also like that when I move to another state, there is a possibility I can say with [tele-OUD company]."
Social Influence (perceived social support for using tele-OUD)	
Degree to which tele-OUD overcomes social barriers to treatment	"It's so easy going [with tele-OUD], I don't feel like anyone is going to be telling my business, I feel like I can talk about things and it's okay. I don't feel comfortable [getting in-person OUD treatment] where I live, and I don't feel comfortable talking with somebody face-to-face." "I can do it from inside my home, where I'm comfortable, where I feel safe." "I get anxiety attacks in-person. The face-to-face thing has stopped me because of my anxiety. The embarrassment of it. I have been wanting to get clean for some time."
Degree to which tele-OUD (relative to in-person care) enhances patient self-image	"You're treated like [a person with OUD] at [in-person buprenorphine] clinics, even though you're in recovery and doing the work. [Tele-OUD company] is amazing, everyone is so friendly, there to help you. There is no judgmental feeling at all, they are there to just help you. With other doctors, I feel like I'm begging for help." "The cashier [for in-person MOUD treatment] would have bars in front of them, and [the waiting room] was not a welcoming environment." "You go there [for in-person OUD treatment] and it's like going to prison. You go there forever, you sit there forever, and they just treat you like you're a prisoner. Like an inmate. And it's just rough; there are people around trying to get oxy, and it's just a weird place to be in, in my experience. So, I never enjoyed it much in the 14 years I've been doing it. But now I don't have to go in there."
Lack of PCP support for tele-OUD	"Whenever I talk to anybody in the medical field about anything related to [substance use disorder], it's always the last thing I want to bring up…There's a temperature change when you do." "I was shocked that my primary care was not as supportive as I thought she would be… I didn't expect to be coddled. She made me feel uncomfortable." "[PCPs don't understand MOUD], or they think it's very short-term, like less than a year. As opposed to knowing that people have really good outcomes in long-term treatment."
Facilitating Conditions (degree to which patients perceive that the organizational and technical infrastructure exists to support their use of tele-OUD)	
Impact of objective factors in the environment (e.g., COVID-19 pandemic)	"No, the pandemic did not affect my decision [to use tele-OUD]." "No. I mean when I stumbled across telehealth, I was trying to find just general healthcare [for OUD]. The fact that I found the telehealth was just kinda by chance. It was kinda of like a blessing in disguise or a blessing in general. And not having to go anywhere with COVID is like a bonus or whatnot." "COVID didn't directly affect my choice to get treatment."

Domain	Illustrative Quote(s)
Attitude (positive or negative feelings about using tele-OUD)	
Positive feeling about using tele-OUD	"They're angels." "It's perfect." "I absolutely love [tele-OUD company]. I love these people."
Surprise that tele-OUD is possible	"I would have thought, 'Hell no, I can't get the medicine through the internet; that's a mistake.' I wouldn't have thought that was possible. I actually promise you there are a ton of people who don't know about this is possible. This place would put my [in-person OUD] doctor out of business overnight." "I thought it was not possible to get this kind of medicine on the internet or in a FaceTime call, because you can't even get a refill online. That's kind of new, they just changed that recently. I thought that since it seems to be such a serious medication and it's something you need to see a doctor once a month in person, I thought it would be hard to find someone, but with telehealth it's pretty awesome." "I didn't know that [tele-OUD] was an option 'til I was doing research on it, but that would always be my first choice for convenience."
Behavioral Intention (strength of intention to use tele-OUD)	
Intention to use tele-OUD	"I plan to continue to stay stable, to eventually map it out to determine if I want to stay on it or if I want to get off, to just have somebody guide me through." "6–12 months is what I feel like I need, but I'm not sure at the moment. I'll definitely stay with them while I'm at this [OUD treatment]." "I want to try a few of the [tele-OUD company] groups… I never felt comfortable going to one of those [in-person Narcotics Anonymous meetings], even though it's anonymous. I really do, I would like to." "I 110% [plan to stay]. My fiancé was worried because I don't have a job… I was worried about affording it in the long run, but I'm going to get a job."