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Scaling and Sustaining Facilitated Telemedicine to Expand Treatment Access Among Underserved Populations: A Qualitative Study

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Abstract

Background: Opioid treatment programs are an essential component of the management of opioid use disorder (OUD). They have also been proposed as “medical homes” to expand health care access for underserved populations. We utilized telemedicine as a method to increase access for hepatitis C virus (HCV) care among people with OUD.

Methods: We interviewed 30 staff and 15 administrators regarding the integration of facilitated telemedicine for HCV into opioid treatment programs. Participants provided feedback and insight for sustaining and scaling facilitated telemedicine for people with OUD. We utilized hermeneutic phenomenology to develop themes related to telemedicine sustainability in opioid treatment programs.

Results: Three themes emerged on sustaining the facilitated telemedicine model: (1) Telemedicine as a Technical Innovation in Opioid Treatment Programs, (2) Technology Transcending Space and Time, and (3) COVID-19 Disrupting the

Status Quo. Participants identified skilled staff, ongoing training, technology infrastructure and support, and an effective marketing campaign as key to maintaining the facilitated telemedicine model. Participants highlighted the study-supported case manager’s role in managing the technology to transcend temporal and geographical challenges for HCV treatment access for people with OUD. COVID-19 fueled changes in health care delivery, including facilitated telemedicine, to expand the opioid treatment program’s mission as a medical home for people with OUD.

Conclusions: Opioid treatment programs can sustain facilitated telemedicine to increase health care access for underserved populations. COVID-19-induced disruptions promoted innovation and policy changes recognizing telemedicine’s role in expanding health care access to underserved populations. *ClinicalTrials.gov* Identifier: NCT02933970.

Keywords: telehealth, telemedicine, integrated health, hepatitis C virus, treatment access, opioid treatment programs, sustainability

Introduction

Sustainability of telemedicine targeted to underserved populations has not been extensively evaluated due to insufficient attention to sustainability factors. Estimates indicate that nearly 40% of all new public health programs are terminated after initial funding ceases.¹ Inattention to sustainability factors also occurred recently during the COVID-19 pandemic that necessitated the transition from in-person to telemedicine encounters. These abrupt

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changes can have disproportionate impact on underserved populations who have had longstanding challenges utilizing telemedicine.² Since limited data exist in the literature on telemedicine sustainability, we sought to understand the experiences of people responsible for implementing telemedicine before and during the COVID-19 pandemic. The evidence gap is even more considerable related to telemedicine to underserved populations.

Since 2017, we have been evaluating a facilitated telemedicine model for treatment of hepatitis C virus (HCV) infection through a randomized controlled trial among people who use drugs. The study was conducted at 12 opioid treatment programs throughout New York State.^{3,4} To guide establishment of a statewide facilitated telemedicine network, we used the sociotechnical system framework,² which emphasizes patient-centered factors including technological infrastructure and the interface between patients and telemedicine providers. Before the pandemic, opioid treatment programs required frequent in-person attendance for methadone dispensing. As people who use drugs typically consider opioid treatment programs as “safe spaces” and destigmatizing health care venues, situating facilitated telemedicine encounters in opioid treatment programs ensured adequate broadband and technology access.⁵

For the current inquiry, our aim was to use a qualitative approach to interview and subsequently analyze transcripts derived from opioid treatment program administrators and staff about their experiences of integrating telemedicine for HCV treatment into programs to understand the common meanings and shared practices. These data provide insight to understand their experiences and visions for sustainability and scaling. At the time of the interviews, participants also had had exposure to facilitated telemedicine before and after the COVID-19 pandemic. Therefore, the influence of facilitated telemedicine during the COVID-19 pandemic emerged from participants’ discussions of their experiences.

Methods

RESEARCH PARADIGM

Hermeneutic phenomenology seeks to understand, from a post-positivist/interpretivist paradigm, situations as experienced within a context of time, place, and situational influences.⁶⁻⁸ We utilize hermeneutic phenomenology to interpret administrators’ and staffs’ common meanings and shared practices of the phenomena of sustaining facilitated telemedicine for HCV treatment in opioid treatment programs. We chose hermeneutic phenomenology as opposed to the psychology-informed interpretative phenomenological analysis.⁹⁻¹³ For more detail, see the Supplementary Material.

SETTING AND RECRUITMENT

We utilized purposive sampling to individually interview administrators and clinical staff participating in a stepped wedge randomized controlled trial comparing on-site telemedicine and medication dispensing to off-site referral for HCV management.^{3,4} Study-supported case managers identified and invited, for an individual interview, site leadership and staff who had at least moderate involvement in facilitated telemedicine implementation (Supplementary Material). Participants were interviewed using a virtual platform after signing written informed consent. The institutional review board at the University at Buffalo (parent institution) and at each participating institution approved the study.

INTERVIEW CONDUCT

Thirty- to 60-minute interviews were conducted using Zoom by an expert in hermeneutic phenomenology (S.S.D.) between January and July 2021. Initial open-ended questions focused on participants’ experiences with follow-up probes based on administrators’ roles or staff members’ day-to-day hands-on experiences. We inquired about role-specific integration experiences of facilitated telemedicine for HCV care. Probes focused on telemedicine workflows, staffing, regulations, measurement, sustainability, and future growth potential.¹⁴ Zoom recorded and transcribed the interviews. After de-identification, additional research team members reviewed each transcript for accuracy, which were subsequently reviewed by the interviewer. The transcripts served as data for analysis.

QUALITATIVE ANALYSIS

We used hermeneutic phenomenology to interpret interview transcripts.^{7-9,15} A hermeneutic phenomenology expert (S.S.D.), social psychologist (A.V.), and case manager (S.J.G.) comprised the primary analysis team. Upon completion of initial interpretative summaries and theme development, the study principal investigator (A.H.T.) and study director (A.D.) participated in the interpretation process to explicate and agree on themes. The analysis team was racially and sexually diverse and multidisciplinary including nursing, social psychology, public health, and medicine. A Professor of Nursing with 30 years of experience in qualitative research and who had no preconceived notions of the investigative question led the team, which served to minimize bias. See the Supplementary Material for analysis process and rigor statements as well as the Standards for Reporting Qualitative Research (SRQR) checklist.

Results

We interviewed 45 participants from 11 settings, 44 using Zoom’s audio and video capability and 1 by audio only. The

transcripts included 246 single-spaced pages. Most participants were aged 41–60 years (57.7%), female (62%), non-Hispanic (84.4%), and Caucasian (48.9%). Our results revealed three themes and one constitutive pattern to explicate sustaining facilitated telemedicine in opioid treatment programs.

THEME 1: TELEMEDICINE AS A TECHNICAL INNOVATION IN OPIOID TREATMENT PROGRAMS

Participants remarked that before the study, opioid treatment programs had limited opportunities to integrate telemedicine. One administrator noted:

We were devoid of any penetration of anything telehealth-wise before the study ... [The study] gave me the opportunity to “drive the car,” the real experience of the value of telehealth, and it provided me an impetus planning initiative [for] my proposal to leadership ... I have empirical evidence of the value of telehealth services. (Administrator)

Participants acknowledged telemedicine’s ability to improve health care access. “We have patients that come from 50 miles away ... There’s nowhere to get treatment out there [rural]” (Staff).

Participants identified several organizational level features including workforce training and redundancy in clinical roles as requirements for facilitated telemedicine success. “If the designated person who was supposed to receive the medications was on vacation, then nobody would receive them” (Staff). An administrator highlighted the need for interdisciplinary collaboration to maintain facilitated telemedicine. “Staff involvement was probably the biggest piece for success” (Administrator). Another participant highlighted difficulties with scheduling. “Trying to do it [telemedicine] without an actual schedule was one of the difficulties” (Staff). Participants further recommended local information technology support, telemedicine integration within the electronic medical record, and a dedicated, private office space to improve satisfaction with telemedicine.

Preparation and prior telemedicine experiences were key considerations for understanding the need for innovation,

When we did that [pilot] study, a number of things were new, but a lot of the things we learned in the pilot study we improved on. This study was a win-win for not just us as staff, but also for patients, because we’ve had the experience. (Staff)

The pilot study provided an opportunity to develop “a system that was tested and proven” (Staff). Staff also innovated flexible workflows around facilitated telemedicine for

hepatitis C treatment demonstrating the capacity for sustainability to develop workarounds to effectively integrate facilitated telemedicine into the setting:

It’s a care team. To avoid the pitfalls, my staff will actually call the patients and make sure that they remember to log on ... Then I’ll get a text message from them saying “Your 2:30 telemedicine is [on].” We confirmed and they’re logging on. (Administrator)

Education and training were recommended as one administrator commented, “It was a transition for everyone because many people have never used telemedicine, so learning the system ... takes time, it takes training, like anything else new” (Administrator). Facilitated telemedicine’s sustainability is dependent on “really good marketing, not only to the patients, but to the counselors ... [during] routine [staff] meetings ... Giving [HCV treatment] to patients in the absence of [educating] staff is not useful” (Administrator).

Participants described the case manager as “a crucial piece to sustain this moving forward” (Administrator). Case managers engaged and educated patients, coordinated HCV treatment, and facilitated telemedicine encounters. “You need a dedicated [case manager] to get things set up, figure out the insurance, and getting paid” (Staff). Another participant remarked, “[In] these busy clinics, you need dedicated staff, [a] case manager ... I was often by myself handling all the medical visits, and it was very stressful” (Staff). Another participant elaborated, “[A] patient navigator works well with this population, trying to get [patients] where they’re supposed to be, and do what they’re supposed to do” (Staff).

Once facilitated telemedicine was established, its benefits spread rapidly through the opioid treatment program peer pipeline. “Word of mouth is ... the best advertising. It grows within the clinic because it is their own little community” (Staff). “[O]nce one person is effectively treated, [word] will travel and people will be lining up” (Staff). Facilitated telemedicine can be beneficial to opioid treatment programs’ reputations too. “[Telemedicine] can enhance the agency... One of the positives of coming to our facility” (Administrator). Another participant commented on the marketing value, “Getting the message out, putting out the rate of success, is extremely important” (Administrator).

THEME 2: TECHNOLOGY TRANSCENDING SPACE AND TIME

Participants recognized facilitated telemedicine’s ability to expand health care access beyond HCV. “It’s a wonderful tool [that] opens a lot of possibilities. It’s not difficult to set

up ... Telemedicine is the way of the future, and we're now a part of it" (Staff). Facilitated telemedicine integration can impact the public's perception about opioid treatment programs, their mission, and the value-added services they provide. One administrator remarked, "One of the state and federal strategic planning initiatives is to make this opioid treatment program a 'full-service garage' ... [to offer] a whole continuum of services that the patient needs" (Administrator). Participants described the potential for facilitated telemedicine to expand treatment possibilities.

[If] integrated, it [telemedicine] will be used more ... We just got a grant where we're allowed to give all our hypertensives at home including blood pressure monitoring. What are we doing in the office that we really couldn't do at home? Is there an app on your phone [that] allows you to listen to the heart? Technology growth [will] make that a little easier. (Administrator)

Participants recognized facilitated telemedicine's potential as an alternative to off-site referral. "[Our patients] are unable to get themselves to commit to appointments ... They tend to get lost and slip through the cracks" (Staff). Further, they noted facilitated telemedicine's potential to address mental health disorders, human immunodeficiency virus (HIV), diabetes and hypertension. Recognition of facilitated telemedicine's potential can mitigate staff reluctance as one staff member remarked:

Methadone clinics are known to be very chaotic and difficult environments ... It was easy for [staff] to [not want to] deal with this [telemedicine]. We had to say to them "Look, this is also taking care of our patient population ... It's part of what we're doing here, and we are not separate staff or a separate program." (Staff)

Participants also noted some limitations highlighting the barrier to telemedicine access outside the opioid treatment program. Furthermore, they noted an advantage of the setting, it promoted initial in-person interactions, particularly early in the formation of the provider-patient relationship.

In the beginning, it's always good to meet somebody [with] a face, to see the genuineness of a person, and then move into telemedicine. You establish trust and relationships by meeting face-to-face. (Staff)

Other participants noted important reasons for in-person evaluations.

[I]f you're doing a physical head-to-toe assessment, that may be difficult [for telemedicine]. If you're assessing them [patients] as far as treatment goals, you're paying attention to, their appearance, their gait, their speech. You're not able to listen to lung or abdominal sounds or take vital signs. (Staff)

However, the same staff member also elaborated on facilitated telemedicine's beneficial aspects to removing limitations in accessing treatment that were especially crucial during the pandemic, "That's why [telemedicine is] so beneficial ... You can still get help, get treatment, you can communicate to your physician, you're not limited" (Staff).

Participants realized facilitated telemedicine's potential redefinition of the opioid treatment program mission. An administrator highlighted how telemedicine might have a potential impact on program decision-making:

It's absolutely critical that every decision we make, we think first "How does this support, enhance, or impede patient spirits?" ... I'm looking at the actual success in terms of the treatment that we provided. "What was the impact on the overall health and well-being of the patients from their perspective?" (Administrator)

An administrator further elaborated on the importance of clinical outcomes and facilitated telemedicine's potential to enhance the availability and access to treatment, which is paramount for underserved populations.

I think administration certainly supports [telemedicine] ... anytime you're producing quality outcomes and value, good clinical care is really a desire and a mission of what we do. If you can combine opioid addiction therapy, at the same time, you cure them of their hepatitis, you're achieving two goals ... preventing fibrosis, hepatocellular carcinoma ... then the clinic turned into a "medical home" type of environment where you're providing all those services, not only treatment for their addictions, but also the infectious disease part. (Administrator)

THEME 3: COVID-19 DISRUPTING THE STATUS QUO

Participants described pandemic-associated challenges as "breaking the mold" and facilitated telemedicine as creating a health care delivery modality that "crosses all borders" (Staff). Another participant remarked:

COVID changed the game ... When we started the PCORI [study], obviously we weren't exposed or living in a pandemic, but the whole delivery of healthcare has changed, and this is the future to deliver care. ... This model is here to stay, and it has proven effective. (Administrator)

One participant commented on pandemic-induced changes at opioid treatment programs:

I've been throughout the country for the last 15 years accrediting various opioid treatment programs. Nobody was doing telehealth, even hospital-embedded opioid treatment programs that had the resources. This [COVID] crisis has really wedged innovation. (Administrator)

One participant described a private office with equipment permitting telemedicine sessions between patients and their counselors. "[Telemedicine] was something that we could offer the clients. If you have issues, then you can use telemedicine with your own personal provider" (Staff). Training on telemedicine was increased during the COVID-19 pandemic, as one staff member commented,

Training on how to utilize the phone, how to engage people [with] voice inflection [is important] ... to be aware of how you're speaking. It takes practice and some got really good at it fast. (Staff)

Participants also described how telemedicine became the norm during the pandemic, "With the pandemic, they still came. They didn't come daily ... but it didn't stop them from getting treated" (Staff).

Reimbursement was described as a leading factor in facilitated telemedicine sustainability. "At the end of the day, I think what it's going to be dictated is reimbursement. A lot of effort went into developing the billing aspect" (Administrator). Reimbursement for telemedicine was referred to as "peanuts" compared to in-person visits until COVID-19:

There is revenue that drives the [telemedicine] modality ... Prior to COVID, we didn't have all of the additional supports that are required from the state's perspective to provide telehealth, [so] we did not receive reimbursement for [telemedicine]. (Administrator)

COVID-19 increased reimbursement for telemedicine encounters:

Where I could see [telemedicine] would be a sustainable model is that during these times the rates have been adjusted, and we get paid the same for an in-person visit versus a telehealth visit. (Administrator)

Administrators expressed enthusiasm to continue telemedicine reimbursements, although they expressed uncertainty about their permanence.

CONSTITUTIVE PATTERN: SUSTAINING FACILITATED TELEMEDICINE TO UNDERSERVED POPULATIONS

We investigated the meanings and practical advice for sustaining facilitated telemedicine for underserved populations. Figure 1 illustrates three themes. Participants described their experiences with facilitated telemedicine focusing on organizational capacity needs, including workforce, education, and marketing (Theme 1: Telemedicine as a Technical Innovation in Opioid Treatment Programs). Participants embraced the convenience of technology to transcend

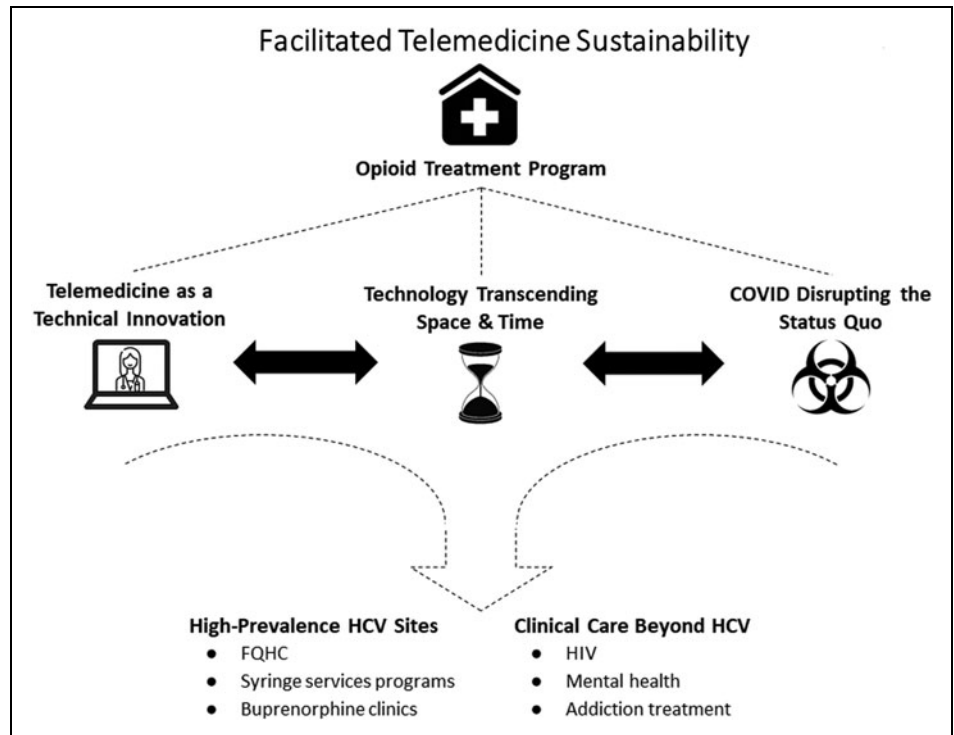


Fig. 1. Facilitated telemedicine sustainability. Important themes for sustainability of facilitated telemedicine identified from interviews with opioid treatment program staff and administrators. Theme 1: Telemedicine as a Technical Innovation in Opioid Treatment Programs; Theme 2: Technology Transcending Space and Time; and Theme 3: COVID-19 Disrupting the Status Quo. Participants identified the potential for expansion of facilitated telemedicine to other high prevalence sites for HCV infection care, including FQHC, syringe services programs, and buprenorphine clinics. They also identified the potential for facilitated telemedicine to provide care beyond HCV for HIV infection, mental health, and addiction treatment. FQHC, federally qualified health center; HCV, hepatitis C virus; HIV, human immunodeficiency virus.

temporal and geographical obstacles. They also identified that the facilitated telemedicine model can be extended, simultaneously with the opioid treatment program mission, to serve as a medical home for people who use drugs (Theme 2: Technology Transcending Space and Time). Participants commented on the effects of COVID-19 in promoting innovation and enhancing telemedicine reimbursements to maintain health care access and delivery in a heavily regulated environment (Theme 3: COVID-19 Disrupting the Status Quo). The lessons learned can be helpful in sustaining facilitated telemedicine for underserved populations.

Discussion

The goal of this study was to understand staffs' and administrators' experiences of facilitated telemedicine for HCV when integrated into opioid treatment programs, and their visions for sustainability. Three themes explicate the experiences of administrators and staff. Theme 1 reflected the participants' organizational capacity needs related to sustaining facilitated telemedicine, including adaptation of staffing patterns to accommodate facilitated telemedicine and workflow considerations. Participants also spoke about the vital importance of a dedicated case manager, necessary ongoing education of new HCV treatments and technological training support, operating telemedicine equipment, and appropriate infrastructure. These observations are in agreement with others who reported similar requirements for telemedicine sustainability^{16,17} and are similar to the attributes introduced by the sociotechnical system framework.¹⁸

In the current study, participants also highlighted that the unique peer pipeline within the opioid treatment program was instrumental to program success, and they noted that an external marketing campaign to report treatment outcomes would support sustainability. Participants also recommended that facilitated telemedicine integration into the electronic medical record would provide necessary treatment documentation, and they elaborated on the necessity of a private room for confidential facilitated telemedicine encounters. When these factors are integrated, sustainability success increases significantly, benefiting the program's empowerment strategies, team building, and open communication.¹⁹ James and colleagues view sustainability of telemedicine programs "as the sum of multiple implementations rather than distinct processes required to achieve widespread adoption,"¹⁶ a sentiment that was shared by our study participants.

On-site facilitated telemedicine in opioid treatment programs expands treatment access for an underserved population with high levels of health inequities. Indeed, the human factor, including relevant stakeholders within opioid treat-

ment programs inclusive of patients and clinic staff, and engagement across clinical and administrative roles have been identified as key to facilitated telemedicine integration and subsequent program sustainability.² Participants also felt that facilitated telemedicine provided an innovative patient care experience for the staff as well as opportunities to enrich competencies, which enhanced staff's acceptance of telemedicine.

Since methadone dispensing requires frequent in-person attendance, situating facilitated telemedicine encounters in the opioid treatment program expanded health care access and was utilized to address health care disparities and inequalities beyond HCV, especially during the COVID-19 pandemic. This point was highlighted in Theme 2 where participants described the attributes of facilitated telemedicine to transcend geographic and temporal boundaries to expand health care access for people who use drugs. These attributes facilitated achieving the overall mission of opioid treatment programs as medical homes.²⁰ Our findings are consistent with the goal of sustainability to, "allow a program to leverage resources to effectively implement and maintain evidence-based policies and activities."²¹

We also had the opportunity to understand the impact of the pandemic on facilitated telemedicine conduct. Before COVID-19, regulation restricted financial remuneration for telehealth. COVID-19 was the catalyst for regulatory and reimbursement modifications, which promoted the widespread adoption of telemedicine, as described in Theme 3. Future policies on remuneration may alter the landscape of facilitated telemedicine. Participants also described how their experiences, afforded by the study, prepared them to quickly convert health care encounters to telemedicine when COVID-19 limited in-person visits.

For underserved communities, telemedicine encounters are frequently not accessible outside the opioid treatment program setting due to limited broadband, lack of equipment, or limited virtual connectivity. Contemporaneously, however, participants acknowledged the potential growth in telemedicine services outside the opioid treatment program as important future considerations. Participants' suggestions regarding telemedicine sustainability and scalability are consistent with recent observations promoting behavioral health integration into different venues^{22,23} as well as with recent reviews promoting the role of telemedicine in primary care.²⁴⁻²⁶

We utilized hermeneutic phenomenology to understand contextual experiences and the meaning of facilitated telemedicine sustainability, which provides insight into designing future applications in similar settings and populations. As our telemedicine encounters were conducted as clinical research,

we were limited in our ability to draw conclusions about reimbursement practices in other settings; however, transferability may be possible in similar contexts. In terms of telemedicine limitations, backup connectivity should be available for telemedicine encounter interruptions, which are associated with lower participant satisfaction.²⁷ Lack of broadband access and the inability to operate telemedicine equipment are limitations noted by others^{28,29} that we circumvented by integrating facilitated telemedicine into health care venues considered safe and destigmatizing environments.

Conclusions

A paucity of data exists on the factors required to sustain telemedicine especially in venues whose primary function is methadone dispensing. We sought to understand the experiences of opioid treatment program administrators and staff in integrating facilitated telemedicine for HCV treatment. Participants made several recommendations regarding future growth and sustainability of facilitated telemedicine, including integrating flexible workflows and infrastructure. They also understood the potential of telemedicine as a health care delivery modality beyond HCV and indicated how the pandemic changed virtual health care delivery.

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Authors' Contributions

A.H.T.: Conceptualization, data curation, funding acquisition, investigation, project administration, formal analysis, resources, supervision, validation, visualization, writing—original draft, writing—review and editing. A.D.: Data curation, formal analysis, software, visualization, writing—original draft, writing—review and editing. S.J.G., A.V.: Formal analysis, investigation, visualization, writing—original draft, writing—review and editing. S.S.D.: Conceptualization, data curation, formal analysis, investigation, methodology, resources, software, supervision, validation, visualization, writing—original draft, writing—review and editing.

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Supplementary Material

Supplementary Material

Analytical process and rigor statements as well as Standards for Reporting Qualitative Research (SRQR) checklist.

REFERENCES

- Savaya R, Spiro S, Elran-Barak R. Sustainability of social programs: A comparative case study analysis. *Am J Eval* 2008;29:478–493.
- Talal AH, Sofikitou EM, Jaanimagi U, et al. A framework for patient-centered telemedicine: Application and lessons learned from vulnerable populations. *J Biomed Inform* 2020;112:103622.
- Talal AH, Markatou M, Sofikitou EM, et al. Patient-centered HCV care via telemedicine for individuals on medication for opioid use disorder: Telemedicine for Evaluation, Adherence and Medication for Hepatitis C (TEAM-C). *Contemp Clin Trials* 2022;112:106632.
- Patient-Centered Outcomes Research Institute. Comparing Ways to Provide Hepatitis C Treatment for People Who Take Methadone. 2017. Available from: <https://www.pcori.org/research-results/2016/comparing-ways-provide-hepatitis-c-treatment-people-who-take-methadone> [Last accessed: November 22, 2022].
- Talal AH, McLeod A, Andrews P, et al. Patient reaction to telemedicine for clinical management of hepatitis C virus integrated into an opioid treatment program. *Telemed J E Health* 2019;25:791–801.
- Gadamer H-G. *Truth and Method* (Revised 2nd ed.). Continuum: New York, NY; 1998.
- Smythe EA, Ironside PM, Sims SL, et al. Doing Heideggerian hermeneutic research: A discussion paper. *Int J Nurs Stud* 2008;45:1389–1397.
- Heidegger M. *Being and Time*. Harper and Row: New York, NY; 1962.
- Dibley L, Dickerson S, Duffy M, et al. *Doing Hermeneutic Phenomenological Research: A Practical Guide*. SAGE: Thousand Oaks, CA; 2020.
- Smith JA. Beyond the divide between cognition and discourse: Using interpretative phenomenological analysis in health psychology. *Psychol Health* 1996;11:261–271.
- Brocki JM, Wearden AJ. A critical evaluation of the use of interpretative phenomenological analysis (IPA) in health psychology. *Psychol Health* 2006;21:87–108.
- Smith JA. Reflecting on the development of interpretative phenomenological analysis and its contribution to qualitative research in psychology. *Qual Res Psychol* 2004;1:39–54.
- Charmaz K. *Constructing Grounded Theory*. Sage: London, UK; 2014.
- Dickerson SS, George SJ, Ventuneac A, et al. Integrating Facilitated Telemedicine for Hepatitis C Virus Treatment Within Opioid Treatment Programs: Staff Experiences [Poster #31]. 2023 American Telemedicine Association Conference and Expo. San Antonio, TX; 2023.
- Talal AH, Jaanimagi U, Davis K, et al. Facilitating engagement of persons with opioid use disorder in treatment for hepatitis C virus infection via telemedicine: Stories of onsite case managers. *J Subst Abuse Treat* 2021;127:108421.

16. James HM, Papoutsi C, Wherton J, et al. Spread, scale-up, and sustainability of video consulting in health care: Systematic review and synthesis guided by the NASSS framework. *J Med Internet Res* 2021;23:e23775.
17. Segato F, Masella C. Telemedicine services: How to make them last over time. *Health Policy Technol* 2017;6:268–278.
18. Sittig DF, Singh H. A socio-technical approach to preventing, mitigating, and recovering from ransomware attacks. *Appl Clin Inform* 2016;7:624–632.
19. Maia MR, Castela E, Pires A, et al. How to develop a sustainable telemedicine service? A Pediatric Telecardiology Service 20 years on—An exploratory study. *BMC Health Serv Res* 2019;19:681.
20. Talal AH, Sofikitou EM, Wang K, et al. High satisfaction with patient-centered telemedicine for hepatitis C virus delivered to substance users: A mixed-methods study. *Telemed J E Health* 2022;29(3):395–407.
21. Schell SF, Luke DA, Schooley MW, et al. Public health program capacity for sustainability: A new framework. *Implement Sci* 2013;8:15.
22. Bornstein S. The challenges of behavioral health integration: The persistence of the mind-body problem. *Ann Intern Med* 2020;173:151–152.
23. Malatre-Lansac A, Engel CC, Xenakis L, et al. Factors influencing physician practices' adoption of behavioral health integration in the United States: A qualitative study. *Ann Intern Med* 2020;173:92–99.
24. Albritton J, Ortiz A, Wines R, et al. Video teleconferencing for disease prevention, diagnosis, and treatment: A rapid review. *Ann Intern Med* 2022; 175:256–266.
25. Totten A, Hansen R, Wagner J, et al. Telehealth for Acute and Chronic Care Consultations. Comparative Effectiveness Review No. 216. Report No.: Publication No. 19-EHC012-EF. PMID 31577401. Agency for Healthcare Research and Quality: Rockville, MD; 2019.
26. Totten A, Womack D, Eden K, et al. Telehealth: Mapping the Evidence for Patient Outcomes from Systematic Reviews. Report No.: 16-EHC034-EF. PMID: 27536752. Agency for Healthcare Research and Quality: Rockville, MD; 2016.
27. Rose S, Hurwitz HM, Mercer MB, et al. Patient experience in virtual visits hinges on technology and the patient-clinician relationship: A large survey study with open-ended questions. *J Med Internet Res* 2021;23:e18488.
28. Curtis ME, Clingan SE, Guo H, et al. Disparities in digital access among American rural and urban households and implications for telemedicine-based services. *J Rural Health* 2022;38:512–518.
29. Hser YI, Ober AJ, Dopp AR, et al. Is telemedicine the answer to rural expansion of medication treatment for opioid use disorder? Early experiences in the feasibility study phase of a National Drug Abuse Treatment Clinical Trials Network Trial. *Addict Sci Clin Pract* 2021;16:24.

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