Benefits and Challenges of Telehealth Use during COVID-19: Perspectives of Patients and Providers in the Rural South

Dana DeHart
Aidyn Iachini
L. Bailey King
Elana LeCleir
Melissa Reitmeier
Teri Browne

Abstract: *Social workers and other health care researchers have examined benefits and challenges of telehealth in rural communities before the COVID-19 pandemic. Yet, experience with virtual platforms and other technologies have rapidly evolved during the pandemic. The research team interviewed 14 health care providers and 17 patients after the onset of the pandemic in a predominantly rural state to examine perceptions of telehealth. MaxQDA analytic software was used to identify benefits and challenges in the use of telehealth. Findings identified commonly discussed benefits of telehealth including convenience for patients, increasing patient access to care, improved patient experience of care, and ability of telehealth to attract/retain patients. Challenges identified in this study included concerns about quality of care being compromised, patients' comfort and access to technology, policy challenges for providers, and the impersonal nature of telehealth visits. Persistent issues warrant research, education, and policy advocacy to improve access for rural populations. Social workers should play a key role in educating the emerging and existing workforce around barriers such as quality of care and patient comfort with technology, convening professionals and patients to establish sustained and effective reimbursement models, and advocating for structural access via enhanced broadband and other resource allocations.*

Keywords: *Telehealth; COVID-19; rural health care; patient perspectives*

The COVID-19 pandemic generated a rapid proliferation of telehealth as social workers and other health care providers attempted to maintain continuity and quality of services amidst stay-at-home orders, isolation of infected persons, quarantining of exposed persons, and social distancing (Adepoju et al., 2021; Meyer et al., 2020). The pandemic and its corresponding expansion of telehealth services resulted in disparate impacts across urban and rural communities, with rural communities suffering from the digital divide in access to technology due to limited broadband connectivity, scant community resources, and a larger population of aging residents who often have limited familiarity with technology (Funk, 2021; Lieneck et al., 2021; Meyer et al., 2020; Segal et al., 2021; Wilson et al., 2021). Social work and other health care researchers have examined the benefits and/or challenges of telehealth implementation in rural communities before the pandemic (e.g., DeHart et al., 2022; Graves et al., 2021). For instance, DeHart et al. (2022) identified

Dana DeHart, PhD, Research Professor, and Aidyn Iachini, PhD, MSW, Associate Dean for Research, College of Social Work, University of South Carolina Columbia, SC., L. Bailey King, MSW, Grants and Corporate Giving Officer, AID Atlanta, Atlanta, GA. Elana LeCleir, LMSW, Wish Assist Coordinator, Make a Wish Foundation, Honolulu, HI. Melissa Reitmeier, PhD, LMSW, Field Director, and Teri Browne, PhD, NSW-C, Interim Dean, College of Social Work, University of South Carolina, Columbia, SC.

benefits of increased coordination among providers and time savings, as well as challenges in organizational capacity and patient/provider skills. Yet, experience with virtual platforms evolved during the pandemic as schools and services went online and the public increasingly relies on digital communication. In the current study, the research team examined perceptions of telehealth after the onset of the pandemic, with interviews conducted in the summer and fall of 2021 among a sample of social workers, other health care providers, and patients in a predominantly rural southeastern state.

Telehealth Defined

Telehealth is a term used to describe a spectrum of methods to provide health care services, education, and administration through telecommunications technologies (Chang et al., 2021; Chen et al., 2020; Wosik et al., 2020). Examples include phone or video consultations, apps or computer programs that enable scheduling or medication refills, messaging through emails or secure portals, and remote monitoring of patient vital data (Chang et al., 2021; Substance Abuse and Mental Health Services Administration [SAMHSA], 2021). A growing body of evidence suggests that patients are generally satisfied with the convenience and accessibility of telehealth (Bashshur et al., 2020) and that telehealth can improve quality and costs of delivery (Chen et al., 2020). In a pre-pandemic qualitative study of patients in a primary care setting, Powell et al. (2017) noted patients enjoyed the convenience of not having to miss work, travel, or change clothing, as well as decreased wait times relative to in-person visits. Convenience and collaboration among patients and providers were prominent benefits in a variety of pre-pandemic studies of social work and other telehealth settings, ranging from schools (Reynolds & Maughan, 2015) to behavioral health (Saeed, 2015) and video group support (Serwe et al., 2017). Telehealth may support treatment engagement and empower patients by allowing more time for quality health discussion and collaborative planning from the familiarity of the patients' home environments (Gerber et al., 2020), while giving social workers and other health care providers a glimpse into patients' living conditions.

Accessibility of Care

Importantly, telehealth is designed to improve accessibility of care, which is crucial in the context of addressing health care gaps for rural populations. Approximately 72% of the United States' land mass is considered rural, yet it is inhabited by only 15% of the total population (Chen et al., 2020). Researchers have noted that the rural population of approximately 46 million people tend to be older and more medically vulnerable (Myers et al., 2021) with greater likelihood of chronic medical conditions, suicidality, substance use disorders (Douthit et al., 2015; Young Choi, 2012), and decreased physical access to primary and specialty care (Shura et al., 2021). Higher incidence of health disparities in rural areas (Chen et al., 2020) are further perpetuated due to a shortage of local providers, as less than 12% of primary care physicians and 8% of specialists practice in rural settings (Hempel et al., 2015; Rosenblatt et al., 2010). Rural communities also have a shortage of psychiatrists, psychologists, and master's level social workers (Mohatt, 2018; New American Economy, 2017). Given geographic isolation, significantly reduced economic

opportunities, and more reliance on public insurance (SAMHSA, 2021), telehealth may enable rural residents to receive care when resources such as transportation, money, and time are limited. Telehealth expansion in rural communities may also reduce stigmatization of seeking care (SAMHSA, 2021) and improve access to primary care while facilitating better integration with specialty care (Nagata, 2021). Health care delivered via telehealth may also foster greater compliance in care management (Almallah & Doyle, 2020) and greater adherence to care when rural residents may otherwise postpone or forego care due to economic, geographic, cultural, or technological barriers (Bashshur et al., 2020).

In a pre-pandemic study, we surveyed social workers and other health care providers, examining perspectives on telehealth in the rural south (DeHart et al., 2022). The study identified benefits of increased inter- and intra-agency coordination and savings in time and travel for both patients and providers. However, barriers for rural social workers and other providers persisted, including those pertaining to organizational capacity to implement telehealth (e.g., broadband connectivity, office space, sustainability), limitations in rural patient comfort with technology, and limitations with the providers' own technological skills. Similarly, in a systematic review of telehealth across a range of providers working with rural tribal communities, Kruse et al. (2016) found that telehealth reduced time and costs and increased accessibility of health services for Indigenous communities, but that lack of technological infrastructure, problems in connectivity, and frustrations with usability by both patients and providers were challenges. Thus, improvements in infrastructure are a salient need for rural communities, but even with such improvements, training and education for both patients and providers are essential.

Telehealth and the COVID-19 Pandemic

With the onset of COVID-19, there have been striking changes in health care, which likely has affected perceived benefits and challenges of telehealth utilization in rural communities. Telehealth utilization was historically low and limited in scope and range prior to the pandemic (Guitton, 2021), often attributable to logistical and financial limitations, limited access and skills related to technology, and low rates of reimbursement coverage for both patients and providers (Tewksbury et al., 2021). A Duke University study examined statistics from U.S. healthcare organizations, including its own (Wosik et al., 2020). These researchers concluded that even systems with relatively high telehealth use prior to COVID-19 typically conducted less than 100 video visits per day, which during the pandemic rose to greater than 600 video visits daily (Wosik et al., 2020). The pandemic also resulted in less restrictive regulatory conditions for reimbursement of services provided via telehealth (Lieneck et al., 2021). Such rule changes allowed telehealth visits to be reimbursed at the same rate as in-person visits, expanded services that could be delivered via telehealth, and no longer required patients to be in a licensed facility to use telehealth (Meyer et al., 2020). Under the confluence of pandemic conditions in the United States in March of 2020, telehealth claims were 4,347% higher than in March of 2019, and almost half of all Medicare primary care visits occurred via telehealth in April of 2020, which was a 350% increase from pre-pandemic Medicare data (Chang et al., 2021).

This drastic, unexpected shift to telehealth has potential for both benefits and challenges for rural communities. Segal et al. (2021) note that rural communities may face more severe impacts of COVID-19 due to older populations with more chronic conditions, residents who may be required to work in close quarters for industrial jobs, geography requiring further travel for in-person care, reduced community capacity for receipt of testing and supplies, and hospitals operating on smaller margins of finances and staffing. Similarly, Bashshur et al. (2020) note the threat presented by COVID-19 to stability of rural hospitals, but these researchers see promise in the benefits that might necessarily arise from regional collaborations to help distribute health resources across urban-rural networks.

Purpose of the Study

Since the pandemic's onset, there have been few in-depth examinations of how perceptions of telehealth may have changed for rural social workers, other rural health care providers (e.g., counselors, nurses), or patients, with most of the extant studies instead addressing general rates of telehealth usage or customer satisfaction levels. The purpose of the current study was to examine the perspectives of social workers, other health care providers, and patients regarding telehealth usage in a predominantly rural southeastern state after the onset of the COVID-19 pandemic. Given the evolution of technology use during the pandemic, the research team wanted to examine: 1) What are current perceptions of benefits of telehealth among providers and patients? and 2) What are current perceptions of challenges of telehealth among providers and patients?

Methods

All procedures were approved by the University of South Carolina Institutional Review Board.

Recruitment

Members of the research team were doctoral and master's level social workers who received funding from a state center on rural and primary health care to perform a statewide needs assessment. The funding agency had previously conducted an online survey of telehealth implementation by health care providers across the state. The research team was tasked with recruiting providers for interviews from among interested participants who completed that survey. The research team also asked these providers to post a study flyer on-site in their offices as well as to share the interviewers' contact information with any patients they thought would be willing to share their experiences about receiving telehealth services. Several additional patients were recruited via word-of-mouth and through one of the authors' related social work studies (Browne, in progress) which embedded identical prompts in a broader interview. Thus, the research team used a non-probability sampling method called snowball sampling to recruit providers and patients for these virtual interviews. To be eligible for participation, both patients and providers had to have used telehealth since the onset of the pandemic. Participants were practicing social workers and

other health care providers (n = 14) and telehealth patients (n = 17) recruited from hospitals, clinics, and counseling centers. Participants were interviewed during summer and fall of 2021.

Measures

All participants provided informed consent prior to the interviews, and all completed a demographic survey which was orally administered at the time of the interview and noted sex, age, race, and highest level of education. Providers also responded with their field of practice, practice setting, and number of years in practice. For providers, interviews were held via Zoom video conferences. Most were interviewed individually (n = 9). Additional staff attended group Zoom conferences for two agencies (group 1, n = 3; group 2, n=2). Patients were provided the option of choosing phone or video interviews, with all being completed individually (n = 17). Interviews included approximately 15 major prompts with some follow-up questions and ranged from 18 to 87 minutes (M = 40 minutes). Prompts addressed experiences and perspectives of telehealth prior to and throughout COVID-19, challenges with telehealth implementation, thoughts on what would support continued telehealth use, and lessons learned. Example prompts for providers included "What were your biggest challenges in initiating telehealth?" and "Describe any major changes in your use of telehealth since COVID-19." Example prompts for patients included "I'm going to ask you to think about your most recent telehealth visit. How did the telehealth visit experience compare to in-person appointments for you?" and "What do you wish was different about your recent telehealth visit?" All participants received a $25 Visa gift card for their participation.

Analyses

Analyses of sociodemographic data were conducted via SPSS v.26 (IBM), while narrative interview data were audio-recorded, transcribed, and coded via MaxQDA software (Verbi). Early coding began with provisional codes corresponding with interview prompts followed by further open coding of emerging themes and subthemes. Axial and selective coding were used next to allow differentiation and organization of codes (Saldana, 2009) with specific attention to the benefits and challenges of telehealth implementation. Several benefits and challenges to telehealth use were identified by providers and patients. Findings begin with the most discussed themes across the data set; this can include multiple mentions per interview. However, to shed light on the representativeness of themes across interviews, findings provide a dichotomized tally of whether the theme was present or absent in each interview, represented by percentage of provider interviews or patient interviews that mentioned each theme.

Multiple strategies were used to promote trustworthiness. First, the research team used established interview and analytic methods including qualitative content analysis (Schreier, 2012) and built upon our team's previous qualitative needs assessment and expertise in rural social work, health care, and telehealth use (Browne et al., 2016; DeHart et al., 2022; Iachini et al., 2015). While members of the research team did not have prolonged interaction with participating patients and providers, the funding organization did have

established relationships with providers. Both patients and providers willingly chose to participate, promoting genuine and forthright responses. Shenton (2004) indicates that engaging a range of interviewees from a variety of settings and backgrounds supports triangulation of individual perspectives and geographic locales, resulting in a diverse set of responses for analysis. Frequent team reflections and iterative data coding provided additional opportunities to refine codes and thoroughly describe our conclusions in connection to the raw data. Some quotes have been minimally edited for increased clarity and to remove identifying speech patterns (e.g., "you know"). Characteristics of the sample are reported to enable a better understanding of the context of the findings (Shenton, 2004).

Findings

Participants

Of the 76 health care providers contacted via email, 14 providers responded and participated in an interview (see Table 1 for provider sociodemographic characteristics). Of those, three identified as male and 11 identified as female with the mean age of participants being 47 years. Providers self-identified as white (86%) or African American (14%). All providers reported having a bachelor's degree (7%) at minimum, while most had a graduate degree or professional license (93%). While some of the providers' offices were located in rural and urban communities, 92% indicated providing services to rural populations. The providers worked in a range of six practice settings, with most working in community non-profits (29%) or mental health services (29%). The practice fields of the providers included social work (36%), mental health counseling or therapy (21%), health administration (21%), public health (7%), nursing (7%) and special education (7%) within health care settings. The majority of providers had worked in their field for 20 years or more (57%).

Table 1. *Provider Demographic Characteristics* (n=14)

Provider Demographics	n (%)
Sex	
Female	11 (78.6 %)
Male	3 (21.4%)
Age (years)	
20-29	1 (7.1%)
30-39	3 (21.4%)
40-49	4 (28.6%)
50-59	4 (28.6%)
60-69	2 (14.3%)
Race	
Black	2 (14.3%)
White	12 (85.7%)
Highest Level of Education	
Bachelor's Degree	1 (7.1%)
Master's Degree	13 (92.9%)
Field of Practice	
Social Work	5 (35.9%)
Counseling or Therapy	3 (21.4%)
Health Administration	3 (21.4%)
Nursing	1 (7.1%)
Public Health	1 (7.1%)
Special Education	1 (7.1%)
Practice Setting	
Community Non-Profit	4 (28.6%)
Mental Health Services	4 (28.6%)
Children's Hospital	2 (14.3%)
Hospital Community Services	2 (14.3%)
Community Health Clinic	1 (7.1%)
Veteran Health Administration	1 (7.1%)
Time in Practice (years)	
0-1	0 (0%)
2-5	1 (7.1%)
6-9	1 (7.1%)
10-19	4 (28.6%)
20+	8 (57.2%)

Table 2. *Patient Demographic Characteristics* (n=17)

Patient Demographics	**n (%)**
Sex	
Female	11 (64.7%)
Male	6 (35.3%)
Age (years)	
20-29	1 (5.9%)
30-39	4 (23.5%)
40-49	4 (23.5%)
50-59	3 (17.6%)
60-69	4 (23.5%)
70-79	1 (5.9%)
Race	
Black	10 (58.8%)
White	7 (41.2%)
Income	
Less Than $20,000	6 (35.3%)
$20,001-$40,000	3 (17.6%)
$40,001-$60,000	1 (5.9%)
$60,001-$80,000	2 (11.7%)
$80,001 or Higher	5 (29.4%)
Marital Status	
Single	6 (35.3%)
Married	6 (35.3%)
Divorced	5 (29.4%)
Highest Level of Education	
Some High School	1 (5.9%)
High School Diploma	2 (11.7%)
Some College, No Degree	2 (11.7%)
Associate degree	2 (11.7%)
Bachelor's Degree	4 (23.5%)
Master's Degree or Professional License	6 (35.3%)
Employment Status	
Employed Full Time	7 (41.2%)
Employed Part Time	1 (5.9%)
Employed Part Time & on Disability	1 (5.9%)
Unemployed & on Disability	4 (23.5%)
Unemployed & Looking for Work	1 (5.9%)
Unemployed & Not Looking for Work	1 (5.9%)
Retired	2 (11.7%)
Health Insurance Coverage	
Medicare	2 (11.7%)
Private Employer Insurance	6 (35.3%)
Government Insurance	1 (5.9%)
Medicare & Gov't Insurance/VA Benefits	1 (5.9%)
Medicare & Medicaid	3 (17.6%)
Medicare & Private Insurance	2 (11.7%)
Medicaid	1 (5.9%)
Medicare, Medicaid, & Private Insurance	1 (5.9%)

The research team interviewed 17 patients who received telehealth services in the preceding two years from across the southeastern state (see Table 2 for patient sociodemographic characteristics). Twenty-nine percent resided in rural areas, and all resided in health-professional shortage areas. Of the patients interviewed, six identified as male and 11 identified as female, ranging in age from 26 to 70 with the mean age of 49. Patients self-identified as African American (58.8%) or white (41.2%). Patients' incomes ranged from less than $20,000 (35.3%) to greater than $80,000 (29.4%), with the mean income falling in the $40,001-60,000 range. Their marital statuses included single (n = 6), married (n = 6), and divorced (n = 5). The patients' levels of education varied, with a majority having a bachelor's degree (23.5%) or master's degree/professional license (35.3%). Most patients reported their employment status as employed full-time (41.2%), unemployed on disability (23.5%), or retired (11.7%). Patients disclosed a wide variety of health insurance coverage.

Benefits of Telehealth Use

The most commonly discussed benefits of telehealth use included convenience for patients, increasing patient access to care, improved patient experience of care, and ability of telehealth to attract or retain patients.

Convenience

Convenience was the predominant facilitator discussed by both providers and patients, and this theme was mentioned in 100% of provider interviews and 95% of patient interviews. Providers spoke of convenience for patients, who—because of the COVID-19 pandemic—were faced with the decision to use telehealth or forego appointments.

> *They literally freaked out and said, "If I can't come in and see you in person, then I don't know how this is going to work." And so I said, "I don't know how it's going to work either, but be my Guinea pigs and let's give this thing a try." But probably 85% embraced it right away, and some got really smart and started doing the math—and the math was, "I drive 45 minutes to your office to meet with you for an hour, and I drive 45 minutes back at $3.00 a gallon." They started doing that and thinking…"Let's make every session online."* (Provider 001)

Patients noted that telehealth provided the opportunity to make appointments easier to attend while taking little time out of their day.

> *I think that would end up saving a lot of time if it was like oh I could just run to my car and immediately get on the teleconference versus you know, go to the provider, stand in line, et cetera and then a lot of times you're waiting in the waiting room.* (Patient 004)

> *I mean, I didn't have to get in the car and drive out there and go through the traffic and do all that stuff. I just could be in my house and if there's anything I needed, I could just tell her over the phone; medications, refills, or any of that stuff.* (Patient 010)

For patients, the pandemic played a central role in considerations around convenience and being able to save oneself from a face-to-face visit.

> *Because A) it's hard for me to get there. And B) That's a fairly crowded lobby. I'm in the middle of a surge [pandemic]. I'm not all that thrilled about going in among those people where I'm already—I've got my own health issues to deal with.* (Patient 001)

> *Well, due to COVID, I liked it because I didn't have to actually go into the office and possibly expose—well, I'm vaccinated, but I have an eight-year-old that's not vaccinated, so I didn't have to potentially expose her by going into the office, having to sit in the waiting rooms with other patients. That made me feel better.* (Patient 005)

Many providers and patients described telehealth as meeting a need along a tiered progression of service options. Here, a provider, and then a patient, provide perspectives on when the use of telehealth may be suitable.

> *It's not designed to be emergency [care]. It's not designed to take the place of a medical home. What it does is allow the student [patient] to get a diagnosis while they're there, because the school nurse—all they can do is really just treat a symptom and recommend a treatment plan, but they don't have access to diagnose or to write a prescription. That's where we come in with telehealth.* (Provider 005)

> *I would use it for pretty much anything that didn't need necessarily hands-on evaluation. I definitely think, like I've used mental health services before in person. I think that that would be a beneficial thing, and also anything, like I said, that didn't require physical, hands-on type of evaluation.* (Patient 004)

Several patients mentioned the convenience of their health care provider's telehealth app (e.g., MyChart) in scheduling appointments and coordinating care.

> *A lot of the regular communications is already being handled by MyChart. "I need a prescription refill" or, "Is there a problem with taking this medicine with that." You put that in there and they respond fairly quickly.* (Patient 006)

> *With MyChart, I can go in and request medication refills from my doctor. I can see when upcoming physical therapy appointments and all that are.* (Patient 001)

Increased Access for Patients

The next most discussed theme was that telehealth increased access for patients. This theme was overwhelmingly discussed by providers (100% of provider interviews), but also was mentioned by nearly a third of patients (30%). Providers noted, in particular, that telehealth facilitated access for patients who were in geographically remote locations.

> *I'm able to reach more people…I think it's a lot more convenient. Because there were a couple times where, especially like, with college kids that they went home. So instead of them having to come all the way back… it was accessible for them to do that instead of trying to schedule.* (Provider 014)

Geographic access was mentioned by a few patients, as well.

> *You have to take time off from work, take time to drive there, and in the rural setting—driving anyways—it's going to take 30 minutes at least. It was much more convenient and time-effective for me to just get on the phone since I really did need to see [the doctor].* (Patient 007)

Beyond geography, telehealth also allowed for increased access to services for underserved populations such as persons for whom English is not their primary language, persons with disabilities, or persons with certain medical conditions. This was noted by both providers and patients.

> *We have a number of bilingual staff. And so for us, we also targeted not just rural kids or kids who are not able to get into services, but we targeted kids that had language access challenges and were able to use telehealth to extend that arm across the state.* (Provider 011)

> *Right now I've just had surgery on my left leg. I can't drive so until that heals up. I have a stick shift car with a clutch.* (Patient 001)

Improved Experience of Patient Care

The bulk of providers (82% of interviews) and some patients (18%) noted that telehealth improved the experience of patient care. One such area of improved patient experience of care was for services directed at families, mentioned here by providers.

> *Typically, it might just be the mom or the dad, so telehealth has made it made it easier or more conducive maybe to doing the whole family.* (Provider 014)

> *Families that in terms of learning social skills to be in a meeting or be in a discussion with a doctor or a health care provider—a lot of people with autism or the virtual environment need to really take advantage of the turn-taking that occurs. You can't talk over each other, and there's embedded set of rules in this virtual conference, which makes them way more successful than if they're in person. So really for a lot of them, they really liked this environment. Once they got comfortable with it, it really benefitted them.* (Providers 002, 003, 004)

Attracting and Retaining Patients

A theme discussed only by providers (82%) was the importance of telehealth in attracting and retaining patients.

> *We're seeing a lot of kids across the state, but we definitely increased our reach with adults.* (Provider 011)

> *If you're thinking about canceling because you can't get out here, telehealth is still an option for you. So I do remind them of that. And that gives them more flexibility. And it really helps me to be able to retain clients, because sometimes you lose them.* (Provider 010)

Challenges to Telehealth Use

Challenges included concerns about quality of care being compromised by telehealth, patients' comfort and access to technology, policy challenges for providers, and the impersonal nature of telehealth visits.

Limitations on Quality of Care

The most frequently mentioned barrier to telehealth use centered on quality of care, which both providers (64%) and patients (70%) felt could be compromised compared to face-to-face visits. Providers often discussed this in terms of serving population-specific needs, like those of young children, teens, or older adults.

> *Maybe you could do play therapy, but I think that would be really hard.* (Provider 014)

> *There is one population that it's not worked well with, and that is teenagers. Teenagers have not wanted it. They want to see me in person, and I think I know why. I think it's being at home, there's not privacy.* (Provider 001)

> *We had an independent living skills class that was just switched right over online. The problem is that I would assess their abilities and assess their strengths and weaknesses, where I really couldn't do it. We would cook weekly, and I couldn't ask them to do that. And trying to do that… we'd sent the recipe the week ahead, asked everyone to get the stuff and make sure to ask the parents to be involved that first night, because we're gonna use the oven and we're going to bake cookies.* (Provider 006)

Patients discussed limitations on what could be addressed without face-to-face contact. Most often, this was not seen as a major barrier, but rather a decision point in whether to use telehealth for specific types of visits.

> *I felt a little limited because you would like for them to hear your lungs, but there were questions regarding, "How's your breathing?" and that sort of thing. So I guess that kind of substituted in there.* (Patient 006)

For some patients or specific types of visits, the lack of hands-on services posed greater challenges.

> *Especially with the endo doctor, when you have a monitor for your blood sugars and things like that—trying to give them that data is really hard that way—trying to explain to them on this [Zoom]…They can just download the information when you go in the office, but when you have to break it down—so I checked my blood sugar six times today, and they want all the numbers and information. That's really hard.* (Patient 016)

> *We have a scale here at home, so we had to do the weight [for my child's telehealth visit] here at home…and I had a tape measurer. I had to measure her myself so we*

can make sure she was growing properly, and that was kind of a challenge, doing a well-child visit at home. (Patient 005)

At the height of the pandemic, there were no vaccines yet or anything, and my wrist had been bothering me really badly. And there was a lump on it… She did a video call with me, and she's like, "Oh, it's a ganglion cyst, and there's nothing really you can do about it unless it hurts, then we can cut it out," and I'm like, "Well, I don't think that's what it is." It turned out not to be what it was. She was wrong because she just looks at things and goes, "Oh, what's the most common thing?" and then you get charged $200 for that 38 seconds of time that you talked to her on the thing. (Patient 003)

Patient Comfort, Hardware Access, and Connectivity to Technology

Technology issues for patients were also viewed as a substantial barrier, both by providers (100%) and patients (59%). Providers were particularly concerned about connectivity (e.g., broadband, Wi-Fi) or hardware (e.g., smartphones, computers).

Bandwidth across the state still is something that we struggle with that a bit. And I know the legislature is working on that. But that is definitely something that I think needs improvement so that it's clean, clear, no matter where people are located. (Provider 011)

Reliability of service, and that is so dependent on so many factors. If someone is using a hand-held phone, its memory capacity is not like the computer. So, the computer is going to have a way better system to maintain a signal—maybe it could be the age of the computer. (Provider 001)

Providers also noted concerns about patients' technology skills and/or comfort with technology.

Some of our children, it was challenging, at first, to have to sit in front of the computer, which they've never done before. But they learned how to do that because of school as well, and it was a whole different world for them. (Providers 002, 003, 004)

The first time you logged on with someone, you just knew it was going to take 45 minutes. And then I got more and more detailed on the way that I'm going to explain it…"This is going to be hard. We're going to follow step-by-step and work together to get it…Click this link. You're going to try it on your phone, or you're going to try it on your computer, and there's going to be a problem. You need to download it, and your internet is too slow." There's always so many of those problems. (Provider 006)

Patients also described technology challenges associated with telehealth visits, but these were usually spoken of as part of the learning curve and as something that would not persist after one or more visits.

> *First you get the email, then you have to click on the link. And I know with this current day and age, it's always nerve-wracking. You don't want to install anything on your phone. You don't want to click a link in a text.... Once the app's installed, the doctor calls and then it takes you through what you have to click on, and then finally you do connect. And then the next challenge is to hold the phone such that you always see the doctor and she sees you. So you don't really know, "Can the doctor see me the way that I'm holding my phone?"...And sometimes the doctor's not quite calling yet because she's probably finishing off with another patient, et cetera. So you're kind of wondering, "Oh my goodness, what now? Did I do something wrong? Is the app not installed correctly?"* (Patient 007)

Some patients mentioned that links were sent via text, necessitating that they use their phone when they would have preferred to use a tablet or computer monitor for the visit. Screen size and getting phones to view at a proper angle were mentioned by patients in several instances.

> *I wish that she could've gotten a better view of it because I just did like this [shows wrist]... I held it up to the camera ... and you know as well as I do, but it's going to look not the same as what it looks like in person. So I can see how she could've made a bad diagnosis.* (Patient 003)

Policy Challenges for Providers

Policy challenges to telehealth were uniquely mentioned by providers (73%). Many providers noted challenges in reimbursement of telehealth services, but some of these had been alleviated by temporary adaptations due to the pandemic.

> *Especially with reimbursement—like in the beginning [of the pandemic], we did the business not knowing if we'd even get paid, because things were changing by the week and by the month, especially with CMS and Medicare.* (Provider 007)

> *Our anticipation right now is we will probably see most of our patients virtually--if it works within insurance reimbursement, which is going to dictate some of it, unfortunately. Right now, Medicaid is reimbursing. But prior to the pandemic, they didn't pay for social workers or psychologists to see telehealth patients.* (Provider 011)

Several providers noted policy issues that were longstanding issues in state and national politics.

> *Probably one of the challenges before [the pandemic] was just some of the regulations in place—as far as what types of telehealth visits are 1) covered by insurance, 2) what's allowed—what providers can conduct telehealth visits, what types of visits, where the patient can be versus where the provider must be.* (Provider 007)

> *Payment parity is one…Some plans are not paying at the same rate. So, that does become an issue in the long run. We have business, and we have to take care of patients in order to do that. We have to at least break even or make some money*

somewhere. So we don't have a payment parity law in [state], and if you're aware of that, some states do. There's no telehealth parity law here. So that's something that we advocate for. (Provider 007)

Impersonal Nature of Telehealth Visits

Finally, 36% of provider interviews and 53% of patient interviews mentioned impersonality of telehealth relative to face-to-face visits. This tested patient comfort with technology-mediated communication and sometimes left patients wondering whether providers were really engaged with them in the visit, noted here by two patients.

It's quick… It's on the [patient] to speak up about any issues, otherwise they would just breeze through the questions, ask if you have any other outstanding questions, then move on. Whereas if you have an appointment with a doctor, there's usually like two to three levels of people before you even get to the doctor. So whatever nurse is coming in or if I'm at sick call, it's usually some sort of medic and then a provider. Or it's like a nurse practitioner and then a specialist or whatever the situation is. So you have a lot more opportunity to ask questions and you have different sets of people asking you questions that they think are necessary. So I feel like there's more opportunity in the in-person appointments to either have your questions answered or there's just more opportunity for other people to ask different questions. (Patient 004)

Seemed impersonal. It didn't seem adequate, I guess 'cause you know, we go into a doctor's office, you can see body language and eye contact—which I'm not saying we didn't make eye contact, but I couldn't help but wonder, were they jotting things down, were they even listening or were they just playing a part?....I like to know that when I'm in a doctor's office my doctor is 100 percent attentive to me, and we can talk face-to-face where I was talking to them, but the whole time again it seemed so coerced. She just sat there, never really moved. It was weird, it was a really different experience. (Patient 016)

Discussion

The research team sought to understand provider and patient perceptions of the benefits and challenges of telehealth use. Our findings reveal numerous benefits and challenges, including some factors that may have been elucidated due to the COVID-19 pandemic. Social workers, other health care providers, and patients agreed that convenience was a key driver of telehealth use. Patients, in particular, enjoyed the convenience of telehealth, in that it saved them time, travel, and did not necessitate taking off work or procuring childcare for a brief appointment. This replicates the pre-pandemic work of DeHart et al. (2022), demonstrating that some benefits of telehealth have remained steadfast, despite the rapid implementation necessitated by COVID-19. Some patients specifically mentioned not wanting to risk exposure to COVID-19, thus not needing to sit in waiting rooms extended beyond mere convenience to include risk-reduction. Both patients and providers also viewed telehealth as an option among a tiered array of services, and while it presented

some limitations to hands-on care, they felt its benefits outweighed the challenges. As noted in Lieneck et al.'s (2021) systematic review of telehealth during the pandemic, the role of telehealth in triaging patients who needed in-person versus video visits seemed salient in our sample. These authors underscored that virtual visits might be interspersed with in-person visits to create touchpoints for service.

Social workers and other health care providers overwhelmingly found telehealth to increase access to care, and they appreciated the access that telehealth brought to services. This was particularly helpful to providers in keeping services continuous throughout the pandemic. Many providers noted aspects of telehealth that they believed improved the patient experience. Providers described benefits of telehealth to overall service experience, particularly in serving families, as telehealth can be used with a range of family members, including the whole family unit. They also noted that expanding telehealth technology allowed them to gain new patients as well as to retain those in their current services. Providers felt telehealth was an important technology for attracting and retaining patients, and many had concerns about policy limitations that restricted use.

Reimbursement was an overarching concern; social workers and other health care providers noted that pandemic adaptations had alleviated some previous reimbursement issues (i.e., allowing reimbursement for telehealth services that had not been reimbursable pre-pandemic). However, there was uncertainty if these adaptations would continue post-pandemic. Several providers underscored longstanding struggles with legislative and policy change that would facilitate greater telehealth implementation. Segal et al. (2021) suggest payment analyses be conducted to examine efficacy of the pandemic policy adjustments in order to provide recommendations on those that should become permanent in order to improve care in rural areas. They note that permanent policy changes would resolve uncertainty regarding the types of services that could be provided via telehealth and could assist provider organizations in planning for post-pandemic care as well as future public health emergencies. Researchers argue that patients, payers, boards, and regulators need to be engaged in reevaluation of regulations, policies, and reimbursement models post-pandemic, particularly around the assumption that health care must be provided face-to-face to merit compensation (Lieneck et al., 2021; Wosik et al., 2020).

Both providers and patients also had concerns about the limitations in how telehealth could be used, fearing that its use sometimes compromised quality of care. Providers tended to frame this in terms of services for specific patient populations, such as young children, teens, and older adults. Patients viewed this more as a decision point in when to use telehealth versus face-to-face services. Patients were also more vocal about the related concern that telehealth sometimes seemed impersonal, and they wondered how engaged their providers were in the interaction. Similarly, in a pre-pandemic study of persons with diabetes enrolled in veterans' health care, Gordon et al. (2020) found that patients were concerned about the potential for errors in care from video visits due to perceptions that the visit was more difficult to complete and that providers paid less attention. These patients also felt there were barriers to asking questions and establishing rapport with providers. The patients reported feeling less involved and sometimes felt rushed through the virtual appointment. Such concerns are exemplified by the disparity in perceptions of providers (82%) versus patients (18%) who felt that telehealth improved the experience of

care, laying bare the need for providers to make concerted attempts to support greater comfort among patients and engage in an active and responsive way while using telehealth technologies. Accordingly, Gordon et al. (2020) suggested that providers might address these issues through measures such as encouraging patients to speak up, providing verbal and nonverbal cues of attention as well as when looking away from the camera (e.g., "I'm going to look up your results"), providing patients with pre-appointment educational materials, and developing a "webside" manner for virtual interactions.

Patients' comfort, access, and connectivity with technology were concerns for both patients and providers. This aligns with concerns expressed in studies both before and during the pandemic (e.g., Hermes et al., 2021; Lieneck et al., 2021). While patient hardware access could be ameliorated by technology "loaner" programs (e.g., tablets, phones), patient comfort might be addressed through real-time coaching and education, not only regarding use of technology, but also regarding the safety mechanisms in place to protect patient privacy on virtual platforms.

Respondents also mentioned more substantial challenges involving access to broadband technology in rural areas. The latter, noted by providers, include policies that impact availability of state-level funding for broadband and types of restrictions on municipal broadband and cooperatives, which have been demonstrated to impact broadband availability (Whitacre & Gallardo, 2020). Further, internet and telecommunications companies operate on business models that are not set up to support deployment in low-density population areas (Stone, 2022). The lack of broadband service in rural areas has been noted in prior studies and is particularly a limitation for tribal communities (Graves et al., 2021). This crisis necessitates advocacy at a policy level to facilitate change, and fortunately, many groups are now actively addressing the issue (e.g., Broadband Connects America, Rural Assembly's Rural Broadband Policy Group, Brookings Institute). The Pew Charitable Trusts have developed a State Broadband Policy Explorer referencing state statutes, executive orders, and governing directives addressing broadband access (Whitacre & Gallardo, 2020). The Federal Communications Commission has also established a Universal Service Fund for rural and low-income improvements (Campbell et al., 2021), and many states are developing startup grant programs (Stone, 2022). New deployment options that move beyond fiber (e.g., satellite technology, fixed wireless) also create potential for internet expansion (and thereby expansion of telehealth) to rural communities (Stone, 2022).

Implications for Social Work

Despite advances made in the use of telehealth during the COVID-19 pandemic, many of the barriers to using telehealth that were identified in this study highlight areas in which social workers can lead the way to improve the telehealth experiences of health care providers and patients. The most frequently mentioned concern regarding telehealth was quality of care, particularly for vulnerable populations such as children, teens, and older adults. Given social workers' extensive training and expertise in addressing the needs of such patients, social work researchers, practitioners, and educators can play a central role in identifying and implementing strategies to enhance skills of both providers and patients

in these telehealth interactions. This could begin in U.S. schools of social work accredited through the Council on Social Work Education (CSWE). CSWE (2022) already acknowledges in its Educational Policy and Accreditation Standards the need and relevance to train our future generation of social workers in technology for delivery of social work services. Emphasis on patients living in rural areas deserves focused education due to their unique challenges and barriers. If points of discomfort and concern can be clarified, the emerging workforce and those working in the field can be educated around the most effective strategies for delivering services to these populations, encouraging patient engagement through verbal and non-verbal strategies, and ensuring appropriate follow-up to ensure health care options and next steps were understood and accessed. Similarly, overcoming the related challenge regarding impersonality of telehealth services (e.g., improvement in trust of telehealth and how to use it by those living in rural areas) could be a focal topic for workforce training going forward, and social workers might play a crucial role in helping patients grow to become more comfortable with technology. Specifically, social workers could assist in defining ways to better engage with patients around trust in telehealth providers and technology, particularly around privacy of the interaction, security of data, and rapport-building by providers. This may also require special training programs for patients in rural areas on how to use technology in their homes and communities. Social work schools must also be providing students with telehealth training in order to equip graduates with the skills needed to deliver telehealth.

In considering structural barriers to telehealth use, social workers' interprofessional ties as well as their depth of knowledge regarding policy advocacy are particularly salient strengths. The issues of broadband connectivity in rural areas as well as barriers posed by reimbursement schemes seem particularly suited to social work advocacy in this respect. Social workers are ideally situated to take the helm in convening patients, payors, boards, and regulators—as suggested by Wosik et al. (2020)—to examine reimbursement models, identify effective paths for moving forward, and facilitate implementation plans for post-pandemic services. While prior to the pandemic, vendors required HIPAA compliancy of videoconferencing technology as well as licensure in the location of both the social worker and the patient, these limitations were suspended during COVID-19 (Camper & Felton, 2020). Further, through the Council on State Governments, with funding from the Department of Defense, the Association of Social Work Boards has worked with the National Association of Social Workers (NASW) and the Clinical Social Work Association to develop model legislation to ensure licensure portability and interstate practice. Their efforts specifically address reexamination of how and where social workers engage with clients, including via telehealth. The effort has included input from organizational and state stakeholders and is anticipated to yield the model legislation prior to 2023 legislative sessions. Efforts such as these are essential to expansion of telehealth beyond the pandemic (NASW, 2022).

Limitations

The findings herein are limited, in that the research team spoke with a convenience sample of social workers, other health care providers, and patients—all of whom had utilized telehealth. Given that our interviews were conducted via distance technology, it is

likely that those who are less comfortable with such technologies did not choose to participate in the interviews. Further, our sample of providers included a mix of social workers and other health care providers, and patients were those who may have sought a range of services. Understanding concerns unique to telehealth use in social work practice is essential to improving delivery by providers, access by patients, and education of the emerging workforce. The research team spoke only to persons from a single, predominantly rural, southeastern state, so findings may not generalize to social workers, other health care providers, or patients in other locales or who use telehealth, as provider norms, patient comfort and access, and technology vendors are likely to vary regionally.

While most of the health care professionals in this study provided care to rural communities, only about a third of the patients recruited through these networks resided in rural counties. It is possible that rural patients were less comfortable participating in the study or did not have access to technology to do so. Thus, future research might seek to recruit a more homogenous sample of rural patients or seek a larger sample for comparative analyses of rural and urban patients to examine convergence or divergence of perspectives. This might include targeted outreach including mobile interview sites for in-person patient interviews in rural locales, or setting up interview outreach within existing rural settings such as rural clinics, federally qualified health centers, or rural libraries. Stratified sampling of participants from rural and urban locales across the U.S. could also provide insights into geographic and other demographic variations in telehealth experiences.

Access to technology for rural populations is also likely to increase due to infrastructure commitments from state and federal governments as well as internet service providers, with the home state for this study adding broadband to an estimated 100,000 homes via pandemic relief packages and other funding (Green & Phillips, 2022). This provides researchers with unique opportunities for examining how such efforts impact perceptions of telehealth in rural areas across the nation, including both before and after technology upgrades.

Future Research

Further research is needed to ascertain challenges perceived by rural patients and providers who have never tried telehealth, despite pandemic conditions. Probability sampling of patients would likely yield advantages over our snowball sampling technique regarding representativeness of those sampled, as would garnering a larger sample size of rural providers and patients across the U.S. Ascertaining how geographic and policy variations across locales influenced perceptions of telehealth would have strong implications for infrastructure and policy enhancements. Researchers may also wish to sample social workers and patients from dedicated types of agency settings, as this could yield insights into how setting-specific factors (e.g., school-based services) influence perceptions. Comparative research on social workers across settings could also improve understanding of how different agencies promote benefits or struggle with challenges in the delivery of telehealth. Further, given our limited sample size, larger comparative studies of rural versus non-rural patients and providers could elucidate a more nuanced understanding of the geographic variations in perceptions of telehealth.

Conclusions

As in pre-pandemic studies, some benefits and challenges of telehealth remained consistent, despite widespread implementation of distance technologies during COVID-19. Convenience was still an overarching benefit, with many patients and providers now recognizing that telehealth facilitated more of a triage or tiered system in which users could determine whether in-person visits were necessary, particularly in navigating risks of a highly communicable illness. Technology—including comfort, hardware access, and connectivity—was still a barrier for many. The pandemic elucidated the potential for telehealth to engage families in social work services and other health care, and the temporary regulatory changes created conditions that increased access to care for many. Thus, while telehealth helped social workers, other health care providers, and patients maintain some continuity of service during the pandemic, there were nevertheless conditions requiring sustained education, policy advocacy, and resource allocations to improve access for rural populations.

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Author note: Address correspondence to Dana DeHart, PhD, College of Social Work, University of South Carolina, Columbia, SC 29208. Email: dana.dehart@sc.edu

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