Patients' View of Their Primary Care Telemedicine During the COVID-19 Pandemic and Implications for Future Integration: A Multimethod Study

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ABSTRACT

Introduction: Telemedicine has become an integral part of primary care since the COVID-19 pandemic. This paper reports patients' assessments of their early telemedicine visits.

Methods: Adult primary care patients who had a telemedicine visit were identified from electronic medical records of a large Midwestern health system and randomly invited to participate in semi-structured interviews. Participants compared telemedicine visits (audio and video) to face-to-face visits on measures of satisfaction and answered open-ended questions about the technology, primary care relationships, and ongoing use of telemedicine. Interviews were recorded and responses transcribed for qualitative analysis.

Results: The quantitative results revealed participants valued convenience and judged telemedicine visits "about the same" as office visits on satisfaction measures. Participants were largely willing to have another telemedicine visit but were concerned with the technological challenges and lack of physical examination. The qualitative analysis found most participants reported that telemedicine care was best with a known clinician. Further, they judged telemedicine to be best for follow-ups and simple or single problems and believed it should be balanced with face-to-face visits.

Conclusions: Participants expect telemedicine will continue and have clearly articulated their telemedicine preferences. These preferences include telemedicine with a known clinician, the visits that they judged most appropriate for telemedicine, the need to balance telemedicine with face-to-face visits, and assured technologic access. The need for quality measures beyond patient satisfaction and the role of team-based telemedicine care emerged as areas for further research.

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INTRODUCTION

While improvements in technology and accessibility have increased the use of telemedicine over the last decade,[1] the COVID-19 pandemic triggered an exponential adoption of telemedicine.[2] Prepandemic studies of primary care telemedicine found that patients appreciated the convenience of telemedicine and judged the quality to be "good"[3] but expressed concerns about technology in terms of privacy and access, the lack of physical examinations, and barriers to the physician–patient relationship.[4,5] While office visits remain the reference standard,[4,5] the expanding role of telemedicine is defining a "new normal" in primary care.[6] The goals of this study are to describe patients' assessment of their beginning telemedicine experiences and highlight patients' opinions for the future use of telemedicine in primary care.

METHODS

Study Design

Semistructured telephone interviews were conducted with 52 patients who agreed to an interview after being randomly contacted from an electronic medical record database of those having had a primary care telemedicine visit early in the COVID-19 pandemic (Table 1). The consolidated criteria for reporting qualitative research (COREQ[7]) and the revised standard for quality improvement reporting excellence (SQUIRE 2.0[8]) guided this report. This study was considered quality improvement research using the University of Wisconsin Health Sciences Self-Certification Tool (https://irb.wisc.edu/is-it-research/).

Table 1. Path to Participant Engagement

	Family Medicine 4/1/2020–5/29/2020	General Internal Medicine 6/1/2020–6/12/2020
Patient population[a]	29,472	8,200
Eligible patients[b]	8,643	3,993
Total number of call attempts[c]	137	96
Patients who declined	21	12
Patients interviewed	30	22

[a] Patients were identified from the electronic health records identifying registered patients >18 years of age with no prior use of an interpreter.

[b] Eligible patients were >18 years of age with a telephone or video contact with a primary care provider during the respective study period.

[c] Unanswered calls, callbacks, and calls answered by others accounted for the difference in attempts and those patients who either declined or agreed to participate in the study.

Table 2. Demographics of the Study Population

	Total Eligible[a] Patient Population	Patients Interviewed
Patients	12,636	52
Sex		
Female	7,666	40
Male	4,970	12
Race/ethnicity[a]		
American Indian/Alaskan	40	2
Asian	244	4
Black	710	4
Hispanic/Latinx	360	2
Multiracial	72	2
Native Hawaiian/Pacific Islander	15	1
White	11,085	37
Unknown/not available	110	0
Age		
19–40 years	3,388	14
41–60 years	3,805	13
61–74 years	3,463	16
75+ years	1,980	9
Type of telemedicine visit experienced		
Audio only	9,068	24
Video only	3,035	16
Both formats	533	12
Rurality[b]		
Rural	-	17
Non-rural	-	33
Unknown/not available	-	2

[a] Eligible patients were >18 years of age, had no prior use of an interpreter, and had a telephone or video contact with a primary care provider during the study period.

[b] Population-level data on rurality were not readily available in the electronic health record; however, participants could self-identify as rural or non-rural in the study survey.

Study Sample and Setting

The study setting was a large Midwestern health care system serving both urban and rural populations from 27 primary care offices across 4 counties. Registered patients were eligible for participation if they were 18 years of age or older, did not need an interpreter, and had received at least 1 audio or video telemedicine visit in either family medicine (April 1, 2020–May 29, 2020) or general internal medicine (June 1, 2020–June 12, 2020). Primary care audio visits were introduced with pandemic lockdown in March 2020, and video visits began in April 2020.

Study Procedures

A semistructured interview guide was developed from the published literature, 2 clinician authors, and a second-year medical student who later conducted all interviews. It was reviewed and modified after other primary care clinician input (Appendix 1). The guide was then piloted by 1 author (VG) and the interview student (CE) with 5 selected primary care patients and further revised for clarity and flow. One member of the research team (VG) listened to interviews concurrently initially and then reviewed the recordings and interviewer notes within 24 to 72 hours for completeness, interviewer feedback, and emerging themes. Interviews were continued until data saturation was reached.

Eligible patients were identified from the electronic medical records and, using a random number generator, selected from within groups established by age, sex, race/ethnicity, telemedicine visit type (audio or video), and primary care offices (urban, rural, or small town and including 1 Federally Qualified Health Center). This process maximized variability based on the overall frequency of the groups in the total sample and, as a result, oversampled minority patients, patients older than 85 years, and those who had both audio and video visits. Telephoned patients verbally consented to participate and gave permission for recording of their interview. Responses were deidentified, and patients were not compensated for participation.

Semistructured Interview Guide

The interview guide consisted of both open- and closed-ended questions. Closed-ended questions for quantitative analysis included those describing the type and ease of the telemedicine visit, comparisons of telemedicine (audio or video) to face-to-face visits, comparisons of audio to video telemedicine visits, whether they would have a telemedicine visit again, and if it was important to have a visit with their primary care clinician. Comparison questions used the same 3-point Likert scale of "better," "just the same," or "worse"[3] on 9 indicators derived from the Press Ganey Outpatient Medical Practice Survey (https://www.pressganey.com/products/patient-experience). The Press Ganey Outpatient Survey is nationally the most common, validated measure of patient satisfaction and is used by the study organization. The 9 indicators were convenience, quality of care, ability to explain concerns, inclusion in decision-making, having needs met, enjoyment, overall satisfaction, overall communication, and overall comprehensiveness.

The qualitative data consisted of participants' verbalized reasons for their evaluations and their responses to additional, open-

ended questions. Participants were asked about their primary health care team, if the visit was with their known primary care clinician and if seeing a known clinician was important to them, why they made their telemedicine visit, and if their primary care visit had differed from any telemedicine visits with other professionals or specialists they may have had. Finally, participants were asked what they liked best and least about telemedicine visits and to describe what visits they deemed suitable for telemedicine.

Data Analysis

Quantitative: Frequencies and proportions were calculated to describe the sociodemographic characteristics of the sample (Table 2). Participants' comparisons (better, worse, or just the same) of any telemedicine visit to office visits (Figure 1) and a comparison of video and telephone telemedicine (Figure 2) also were reported. ***Qualitative:*** The qualitative data for analysis included patients' explanations for their evaluations and their responses to the open-ended questions. NVivo software (QSR International Pty Ltd, Version 12, 2018) was used to manage and organize the recorded transcriptions. Participant responses were initially assessed by 2 authors (VG and KN) using an inductive and iterative process. Content analysis was used to interpret and code the textual material, from which KN developed a codebook (reviewed by VG and EG), grouping codes and establishing higher order categories from which emerged themes.[9] Three qualitative researchers from different professional backgrounds, including a clinician (VG), social scientist (EG), and sociologist (KN), independently reviewed portions of the transcripts and assigned codes. All three then met weekly to refine interpretations, identify relationships within or across themes, and resolve discrepancies.

Figure 1. Patients' Self-Reported Perceptions Between Office Visits and Telemedicine Visits

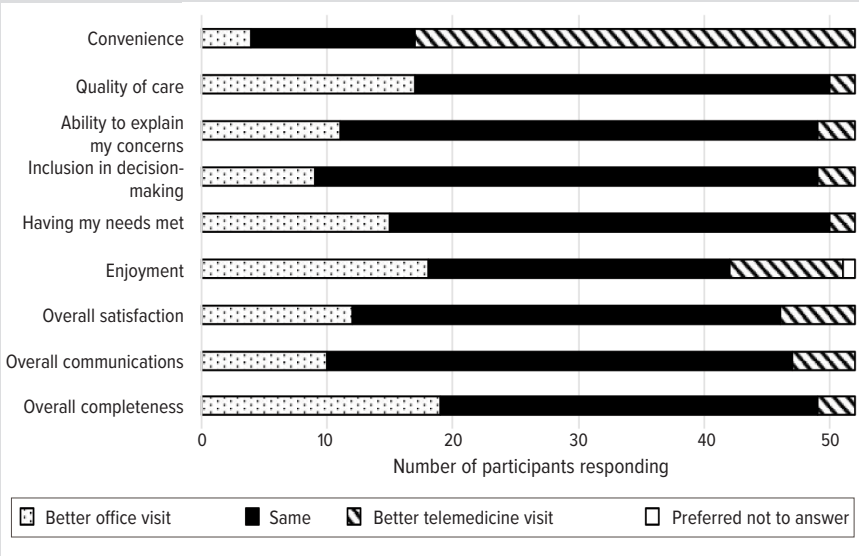
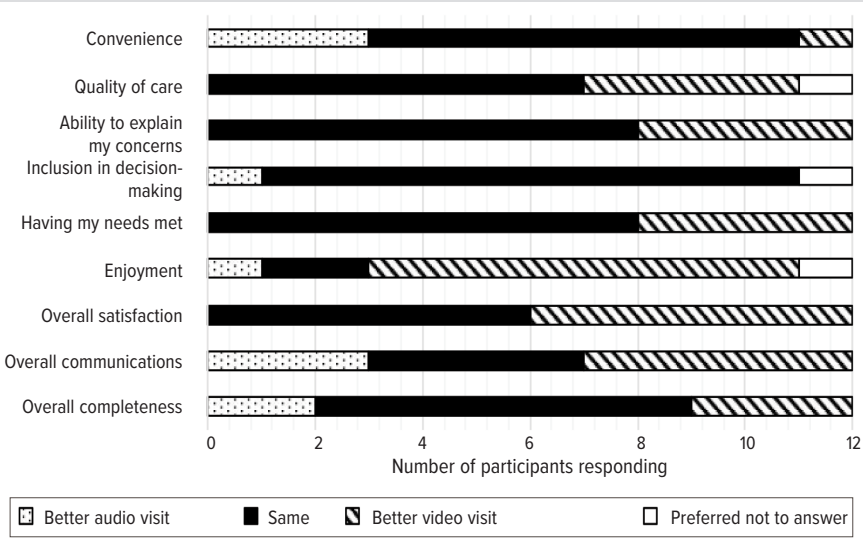


Figure 2. Patients' Self-Reported Perceptions Between Audio and Video Telemedicine Visits



RESULTS

Table 1 shows the pathway to the participant sample (N=52). Interviews lasting 10 to 43 minutes (median: 18–19 minutes) occurred in June and July 2020. Table 2 describes participant characteristics: majority female (76.9%), White (71.1%), and urban (65.3%), with a mean age of 54.3 years (range: 19–92 years). Participant views of their telemedicine experience and the emergent themes are described below, with more complete quotes in Table 3.

Technology

Most audio-visit participants (82%, n=31/38) used a cellphone, and video-visit participants used a computer (76%, n=19/25). While a majority of participants (73%, n = 38) reported the telemedicine process was "easy"—*"It was unbelievable. It was wonderful"* (Table 3.1 [49])—three experienced problems with audio visits (eg, poor connection), 4 video visits were converted to audio visits, and 7 required technical assistance from hospital support personnel or family members. When specifically asked, only 3 participants expressed privacy concerns, and none were concerned with the lack of access to laboratory or ancillary services because

Table 3. Study Participants' Self-assessment of Their Telemedicine Experience: Exemplary Quotes

3.1 TECHNOLOGY	
Easy	"It was unbelievable. It was wonderful…sitting in the kitchen, it was like the doctor was there. It was great. I could see her. She could see me." (49)
Link broken	"The one phone call was supposed to be a video chat, but I couldn't get it to work…It kept coming up that I had to have some kind of login, and they kept telling me that no login was required. And we finally just gave up and just had a phone visit, which was fine." (48)
Privacy	"Yes…if the call got dropped…if it's a major personal issue…[then you'd want that to be a very secure call]." (27)
Workflow	"Nobody told me to take my vitals before the visit." (48)
3.2 COMPARATIVE EXPERIENCES	
3.2.1 Telemedicine (Audio or Video) vs Face-to-Face Visits	
Prefers telemedicine: convenience	"I definitely like the convenience, especially since for me it was mental health services. It was really nice to just, you know, be cozy in my own bedroom and just feeling safe in that regard." (33)
Quality the same: primary care clinician efficiency	"I would say the same…the person doesn't change, and I don't either and we always have a very productive and good visit." (8)
Prefers face-to-face: examination	"I feel that my doctor gets more information from my actions, and she can look at things like…when my ankles are swollen…she can actually see [what] I might be complaining about…it's a little hard…to show my foot to her on a video call." (37)
Prefers face-to-face: relationship	"I like face-to-face…my doctor…she makes me more comfortable. She's like a friend." (31)
Prefers telemedicine: enhanced engagement	"I was so impressed with the quality of listening. In the office you're distracted…. So it was much more focused on what my concerns were and giving the information or asking me other questions. And I felt like both of those were almost falling into the phone, listening to each other, and communicating really thoroughly." (43)
3.2.2 Telemedicine Video vs Audio Visits	
Prefers video to audio	"If I am in a position that I feel the need to discuss something with my doctor it's helpful for [my doctor] to lay their eyes on me." (28)
Video: connection with clinician	"I feel probably a little better with the video, just, again, you get more of a connection with the provider that you miss, you know. You don't get…nonverbal cues [with audio]." (33)
3.3. RELATIONSHIP WITH CLINICIAN	
3.3.1 Preference for Primary Care Clinician	
Partnership	"If it's a decision, she always works with me." (8)
Efficiency	"Yes, it was faster, it was more efficient, it was because she knew the issues that I've had before." (19)
Personal relationship	"I would really lean towards my primary doctor actually because I think that they know me better. I know they can look at the charts and everything, but they do tend to know me as a person better." (10)
Affection	"She's like a family member, for God's sake. You don't get nothing by her, man. She will call it like she sees it. That's what I love about her." (14)
Trust	"And I know that my primary would not put me in bad hands." (14)
Comprehensive care	"I was dealing with alcohol abuse, and so he'd always make sure, checking in, and I went to rehab twice. He made sure I was following up." (12)
Continuity	"Well, usually, you know, because I've seen him for so many years that I think he knows more what's going on, really, on the call." (22)
3.3.2 No Preference for Primary Care	
Any clinician	"For me, it doesn't matter, just as long as I get my care." (26)
Equivalent care	"I have not noticed any difference of care because I've talked to a number of doctors through the phone, but I have not received any different quality of care from any of them." (32)
Depends upon needs	"I feel like if I had a pressing need and couldn't get in with my primary care provider, I probably wouldn't mind to be on a call with someone that I haven't met." (35)
Specialists	"Apart from the content, no. The experience was the same." (35)
3.3.3 Primary Health Care (PHC) Team	
Primary care clinician	"My primary health care team? Just my primary care provider." (35)
PHC and nurse	"I guess my doctor and then whichever nurse is working on that day." (40)
PHC and others	"I think of my primary care physician and this kind of rotating group of people around her." (19)
3.4 CONTINUED USE OF TELEMEDICINE	
Convenience	"Actually, [telemedicine is] more convenient because I don't have to wait if she runs late. If the doctor runs late, I'm affected when I'm in the office, but I'm not affected here." (8)
Access to labs, services	"Actually, I haven't had a problem with that, because they'll always get you in for bloodwork like right now. X-rays that they think you need, they always find a way. Yeah, you know, maybe not the same day, but, yeah." (12)
Safety	"I have been grateful, through having a pregnancy, that I've been able to not have to expose myself." (28)

Speaker number indicated by (#).

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Table 3. Study Participants' Self-assessment of Their Telemedicine Experience: Exemplary Quotes

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3.4.1 It Depends...	
Follow-up issues vs serious issues	"[If] it's just a follow-up, asking questions...yes or no or describe symptoms, then the phone call would be perfect...a video call...would be necessary for...more serious patients who [have]...something...[they] need to show the doctor without having to go into the hospital." (26)
New or serious complaint: face-to-face	"If I have a new complaint or something more serious, at least for the primary visit, I think it's important to be face-to-face. For follow-ups and check-ins or maybe I'm just sick...and it's...not a more complicated medical issue, I am fine with a tele-visit." (48)
3.4.2 Community Concerns	
Concern for providers	"The same day thing would be nice. I guess if it's an emergency, then...a telehealth visit...not during regular hours would be okay. But doctors have lives and need to go home." (1)
Concern for vulnerable patients	"I would preferably say for elderly, children, and women that are pregnant, they should be seen [in-person]." (25)
Accessibility	"You still have a section of people who aren't very computer savvy, and so that's a problem. Or they're sort of doing email, but they have an old system that just really has a lot of problems, and so video conferencing may not work very well." (21)
3.5 PATIENT SUMMATIVE REPORT	
3.5.1 Telemedicine Has Advantages and Limitations	
Advantage: Convenience	"Personally, I really like having the telehealth visits because...I don't have a car to get back, and it's very inconvenient to use the bus system." (44)
Limitation: lack of physical examination	"The big difference is in-person, he'll use a stethoscope...listen to his heart... take his blood pressure...check his feet, because he's diabetic, you know. Those things are missing on a teleconference." (18)
3.5.2 How will Telemedicine Fit in my Health Care Future	
Return to face-to-face	"Once there's a vaccine, and whenever that happens, I would want to return to face-to-face." (33)
Alternating assessments	"I'd be very open to video visits...but I still would like to...physically see a doctor probably once a year." (10)
Balance of in-person and telemedicine	"Well, my only comment on that, [name], is don't ever throw the baby out with the bathwater. I still feel that there is a place for the clinic visits." (29)
Need to improve monitoring technologies	"I'm of an age where...checking vital signs is something that does need to happen with some regularity.... I hope there will be some monitoring technologies that are easier to use and that they can get a constant read on a lot of things. That would be great. Until they do that, there's always going to be the need to go to the office." (19)
Future use of telemedicine	"I think there are new actions here, and...thinking as a physician as well as a patient, I think they should continue [telemedicine assessments]." (45)

Speaker number indicated by (#).

of telemedicine visits—*"they'll always get you in for bloodwork like right now.… They always find a way"* (Table 3.4 [12]).

Comparative Experiences

Comparisons of telemedicine to face-to-face visits and between audio and video telemedicine are demonstrated in Figures 1 and 2. There were no appreciable differences in the responses of family medicine and general internal medicine participants.

Participants reported that telemedicine (audio or video) and face-to-face visits were the same for all satisfaction indicators except convenience, which was characterized by a flexible location, decreased travel, and shorter wait times. The majority of participants (96%, n=50) reported that visit types were comparable because of an established relationship with their primary care clinician—*"I would say the same…the person doesn't change, and I don't either and we always have a very productive and good visit"* (Table 3.2.1 [8]). Notably, 31 participants stated that they felt safer with telemedicine during the pandemic—*"I have been grateful, through having a pregnancy, that I've been able to not have to expose myself"* (Table 3.4 [28]). They also expressed that telemedicine was better for specific concerns, *"especially since for me it was mental health services"* (Table 3.2.1 [33]). However, more participants preferred face-to-face visits because of the capacity for physical examinations and interaction with their clinician— *"she can actually see [what] I might be complaining about"* (Table 3.2.1 [37]).

Fewer participants experienced both audio and video visits (n = 12, 23%). Half of these participants (n = 6) reported that their overall experience of audio and video was the same, while the remaining 6 participants preferred video telemedicine. Participants reported that they benefited from their clinician being able to see them on video—*"you get more of a connection with the provider"* (Table 3.2.2 [33])—being able to view and discuss health information with their clinician and having others, such as family members, present.

Relationships With Clinicians

The relationship between participants and their primary care clinician was a recurrent theme throughout the interviews. The vast majority of the participants (96%) had their study visit with their regular primary care clinician, who were almost all physicians. There was a strong preference among participants for a known clinician. Participants reported that they felt comfortable, trusted their clinician, and that their shared history increased efficiency—*"it was more efficient…because she knew the issues that I've had*

before" (Table 3.3.1 [19]). Many participants spoke of their warm personal relationships with this clinician—*"She's like a family member, for God's sake"* (Table 3.3.1 [14])—and expressed concern for their clinician's schedule as telemedicine expands—*"But doctors have lives and need to go home"* (Table 3.4.2 [1]). Participants expressed features of physician–patient relationships foundational to quality primary care, such as continuity—*"because I've seen him for so many years that I think he knows more what's going on"* (Table 3.3.1 [22]); comprehensive care—*"I was dealing with alcohol abuse, and so he'd always make sure, checking in"* (Table 3.3.1 [12]); partnership—*"If it's a decision, she always works with me"* (Table 3.3.1 [8]); and trust—*"And I know that my primary would not put me in bad hands"* (Table 3.3.1 [14]). While the majority of participants expressed a preference for visits with their clinician, six reported that it was contingent upon their health care needs at the time—*"I feel like if I had a pressing need and couldn't get in with my primary care provider*" (Table 3.3.2 [35])—and three stated that it was not necessary to see a known clinician—*"For me, it doesn't matter, just as long as I get my care"* (Table 3.3.2 [26]).

When asked about their primary health care team, only their primary care clinician was identified. Nurses were acknowledged in relation to the physician—*"I guess my doctor and then whichever nurse is working on that day"* (Table 3.3.3 [40])—and other staff only after prompting, again in relation to the physician—*"I think of my primary care physician and this kind of rotating group of people around her"* (Table 3.3.3 [19]). Occasionally, family members or specialist physicians were included in the primary care team.

Several participants commented on community concerns, such as the limitation of telemedicine for some participants' access—*"You still have a section of people who aren't very computer savvy"* (Table 3.4.2 [21]), clinician workloads and, in the case of the pandemic, prioritizing resources—*"I would preferably say for elderly, children, and women that are pregnant, they should be seen"* (Table 3.4.2 [25]).

Continued Use of Telemedicine

The majority of participants (n = 41, 79%) were willing to have another telemedicine visit and expected telemedicine in the future—*"I think there are new actions here, and…thinking as a physician as well as a patient, I think they should continue"* (Table 3.5.2 [45]). Participants noted that telemedicine should be balanced with face-to-face visits—*"don't ever throw the baby out with the bathwater"* (Table 3.5.2 [29]). Participants indicated telemedicine was best for simple or singular problems, follow-up, medication changes, and chronic issues but was not suitable for serious or multiple concerns—*"If I have a new complaint or something more serious,…I think it's important to be face-to-face. For follow-ups and check-ins…I am fine with a televisit"* (Table 3.4.1 [48]). Several participants expressed concerns that the traditional office visit remain an available option—*"I'd be very open to video visits…but I still would like to…physically see a doctor, probably once a year"* (Table 3.5.2 [10]). Nine participants expressed a strong preference to return to face-to-face visits once it was possible (Table 3.5.2 [33]).

DISCUSSION

Telemedicine is estimated to provide up to 20% to 30% of primary care visits[10] in the future as one of the enabling technologies foundational for high quality primary care.[2,6,11,12] Although the COVID-19 pandemic rapidly pushed participants into telemedicine, the majority reported willingness to have another telemedicine visit. While participants' opinions were similar to prepandemic telemedicine studies of selected patients,[5] their comments provide recommendations for future telemedicine implementation and integration into ongoing primary care.

Convenient Care

Participants reported that they valued the convenience of telemedicine,[2,3,5,13] but that the lack of a physical examination posed a limitation.[3,5] For some participants, convenience overrode other features of care, suggesting that telemedicine may satisfy quality health care for some.[13] The evidence that convenience was universally appreciated by participants reinforces the need for more convenient and timely care for all primary care visits.[6]

Access to Telemedicine

Access to audio and video telemedicine requires a functioning internet connection, a smartphone or computer, and digital literacy.[14] At least 1 in 4 Americans may not have the digital literacy skills to access internet-enabled digital devices to engage in video visits,[15] and local technological infrastructure may be lacking.[12] One-quarter of participants from this study experienced some problems with technology, and most used a telephone. Telephone offers easier access and privacy, but the lack of visual interaction limits care.[12] Additionally, health insurance may either facilitate or create a barrier to telemedicine access.[16] Telemedicine brings the risk of increasing health care inequities by perpetuating the existing health care digital divide among marginalized populations who experience barriers to access, such as rural, elderly or racial minority populations and individuals with chronic conditions and/or low health and digital literacy.[2,6,12,15] There is an opportunity to mitigate barriers to telemedicine by increasing access using universal design solutions for a broad range of users, establishing robust implementation, programs of support, and evaluating outcomes across populations.[12]

Quality Telemedicine Care

Consistent with the prior literature,[3,4,13] this study's participants perceived that the quality of their telemedicine visit, based on satisfaction, was largely the same as face-to-face visits. This was likely a result of feeling taken care of by a trusted clinician.[17] Patients need to be satisfied with their care, which must be safe, effective, cost-efficient, respectful of patient preferences and values, and

accessible to reduce health care disparities.[14,16] However, the quality studies of telemedicine, including this one, are largely ones of process measures, not outcomes.

Studies of outcome measures for telemedicine are few;[16,18] however, observational studies have raised concerns about the overuse of antibiotics and diagnostic tests.[16] There are few randomized control trials, and these are largely from specialty care and are often noninferiority trials comparing telemedicine management to office management for 1 disease. Nonetheless, there are encouraging results for the geriatric population,[19] postsurgical follow-up,[20] and some mental health care.[21] Willis et al call for a telemedicine diagnostic research agenda considering the domains of the patient, physician, electronic medical record platform, clinical context, and health system.[22] Several of these domains were addressed by our participants, such as when patients discussed the challenge of telemedicine access and use, the clinician's change in workflow and team, and clinical context, meaning the prior knowledge of or relationship with a known clinician in contrast to having to establish rapport with a stranger. Consistent with prepandemic studies of primary care telemedicine, our participants described telemedicine as good for "simple problems," follow-up, basic questions, and remote treatment but considered face-to-face visits better for more serious or multiple problems.[4,5] Although outcome quality measures in primary care are often not well aligned with the goal of primary care to partner with patients to address a broad array of health care concerns,[11,18,23] matching the patient-perceived appropriate visit type and the outcomes of either telemedicine or face-to-face visits is an important future quality measure for primary care.

Relationship-Centered Telemedicine Care

Participants' positive evaluations of telemedicine were built on established relationships with their primary care clinician and, similar to prepandemic telemedicine studies, echoed participants' preference for interacting with their clinician,[13] notwithstanding the trade-off of convenience. This highlights the critical nature of the personal relationship within primary care.[4,11] Participant comments captured many of the core attributes of primary care that contribute to cost-efficiency and improved health care outcomes.[11,24,25] The strong preference expressed by participants for continuity in the patient–clinician relationship must be accommodated as telemedicine expands so that primary care relationships, built on trust, are reinforced rather than fractured.[26]

Primary Health Care Teams and Telemedicine

A core attribute of primary care is team-based care. Despite studies that have shown team-based care can improve quality, increase patient satisfaction, support primary care continuity, and lower clinician exhaustion and burnout,[11,27,28] it has proven difficult to implement due to an assortment of barriers.[28] Studies on patients' understanding of their primary care team are lacking. In our study, participants were almost universally unfamiliar with their primary care team, and their conception of continuity of care focused solely on their relationship with their clinician. When prompted, participants recognized contributing individuals beyond the clinician (eg, the nurse or medical assistant) but lacked personal relationships with these team members. A key attribute of a highly functioning team is continuity,[11] which was commonly lacking. Participants' lack of recognition of the medical team may be due to the differing roles, responsibilities, or turnover of team members.

Limitations

This study had several limitations. The interviews were conducted with a modestly sized sample from one Midwestern health care system in the first wave of the COVID-19 pandemic. Our participants were neither selected by their clinician nor preferentially self-selected for telemedicine visits; however, participants comprised a convenience sample, were English-speaking and, although roughly representative of our primary care clinic population, could not generalize to another more diverse population. We have no information from patients who avoided telemedicine visits. We did not inquire about the costs associated with telemedicine, including infrastructure, insurance coverage, and billing. Interviews were completed by 1 person (CE), who—as a White, male medical student—may have elicited different responses from some participants than another interviewer. Finally, this study reports participants' early perceptions and uses of telemedicine, within the pandemic, and almost all with their primary clinician. As telemedicine care evolves, the levels of satisfaction reported may change.

CONCLUSIONS

Findings from this study indicate participants recognized telemedicine as a technological advancement that can increase access to primary care. Participants received telemedicine positively; however, they wanted to interact with a clinician who was known to them. The situations most suitable for a telemedicine encounter were those that the participant considered to be simple problems or follow-up visits, which should be balanced with face-to-face visits. Further research is needed as telemedicine is integrated into primary health care delivery outside the COVID-19 pandemic, on the role of the primary care team in telemedicine, and on what constitutes quality care outcomes in telemedicine beyond patient satisfaction. Respecting patient preferences is a goal of person-centered care;[11,29] thus, the goal of integrating telemedicine into primary health care in the future should be to match delivery formats—face-to-face, video, or telephone visits—with individual needs and preferences and to ensure that emerging technologies can provide equitable access to quality care.

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