



Original article

Technology Access and Perceptions of Telehealth Services Among Young Adults Involved in the Court System



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ABSTRACT

Purpose: This study examined access to technology and telehealth among young adults (ages 18–24) who were court-involved and were recruited from an alternative sentencing program in New York City.

Methods: Using sequential mixed methods design, we examined demographic factors linked with access to technology and perceived usefulness of the Internet among $n = 321$ young adults who were court-involved (75% male, 65% African American, 35% Latinx). We then conducted in-depth interviews with 27 young adults to elicit first-person account of their access to, interest in, and experience with technology and telehealth.

Results: Although most participants had access to a phone with a data plan, a substantial proportion reported inconsistent access to the technology critical to telehealth. Certain young adults were more likely to lack consistent access to the technology needed for telehealth, including Black young adults, males, those with less than a high school diploma, those with a history of homelessness, and those who had difficulties paying for basic necessities. Qualitative interviews revealed that most had a strong self-efficacy using technology, while distrust of technology,

IMPLICATIONS AND CONTRIBUTION

Despite the potential benefits of telehealth, significant barriers limit its use and effectiveness for young adults with court-involvement. There is a distinct need to address discomfort with and mistrust of telehealth to be a viable service modality with this underserved population.

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inexperience with and skepticism of telehealth, low perceived need for care, and medical mistrust were common significant barriers in this underserved population.

Discussion: Findings underscored the critical need to address medical mistrust and increase access to and utilization of care among young adults who are court-involved. Results can inform the development and implementation of interventions designed to improve accessibility and acceptability of telehealth.

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The COVID-19 pandemic has disproportionately impacted the health and well-being of historically disenfranchised communities, including young adults who were arrested and are involved in the court system yet remain in the community (referred to as court-involved young adults [CIYA]) [1]. Another major consequence of the pandemic has been rapid acceleration in telehealth adoption to ensure continued delivery of health-care services by expanding accessibility amidst decreasing provision of in-person services. Telehealth—the remote delivery and facilitation of health-related services via technology (e.g., video conference, phone call)—is often cited as a means of providing more efficient services, enhancing access, and promoting utilization [2], including for underserved populations such as CIYA [3].

CIYA experience a disproportionate burden of medical and behavioral health conditions, yet face significant barriers to accessing and receiving health care [4,5]. Prior studies demonstrate that CIYA report higher rates of diagnosed chronic health conditions, comorbid substance use, and health risk behaviors compared to other young adults. For example, CIYA report higher rates of asthma, heart disease, and diabetes; infectious diseases like HIV and tuberculosis; and substance use disorders and other mental health conditions—largely due to social determinants of health rooted in unequal distribution of societal power and resources that underlie health inequities [5]. Despite elevated health needs, CIYA access and are retained in care at lower rates [6–8] due to myriad barriers, especially stigma and medical mistrust [9], low perceived need for care, and practical barriers (e.g., unaffordability). Additional system-level barriers include poor identification of need, low referral, and limited availability and access [10–12]. Because unmet health needs are associated with reduced well-being [5] and heightened recidivism risk [13], innovative approaches to expand access are needed.

Although telehealth may represent a possible solution to poor health-care access and engagement among CIYA [14–16], it is important to consider whether its expansion could instead exacerbate already considerable disparities in access and engagement. A recent systematic review found that 21 of 26 studies supported effectiveness of telehealth in treating or assessing CIYA [17]. However, CIYA may lack access to technology, phone, or Internet due to insufficient financial resources, which is problematic since the effectiveness of telehealth is predicated on consistent, reliable access [18]. Beyond access, exploring acceptability is essential. For example, CIYA may experience discomfort with digital communication given concerns related to lack of privacy or limits to confidentiality (e.g., parental, legal system supervision). A recent study found significantly more missed and cancelled appointments for telehealth visits among youth of color compared to white youth [19]. As people of color are vastly overrepresented in the legal system

[20], these disparities are concerning and suggest a need for further exploration of telehealth acceptability and feasibility.

Current Study

As telehealth becomes increasingly widespread [21,22], it is important to understand its viability for reaching underserved populations. This study sought to characterize and provide rich descriptions of experiences accessing technology and the Internet and perceived feasibility and acceptability of telehealth for medical care needs, inclusive of behavioral health, among CIYA. We used mixed methods for the purpose of expansion [23] to increase the breadth of inquiry. Using a partially mixed, sequential, equal status design, we leveraged data collected before and during the COVID-19 pandemic. We first quantitatively assessed access to technology and perceived usefulness of the Internet in relation to participants' demographic characteristics. Given that number and type of devices used for telehealth have been found to be strongly linked with access [24]—and that smartphones and mobile devices have been described as centrally important means of access [25], particularly for marginalized low-socioeconomic communities of color [24,26]—this study focused on number of ways to access the Internet, having a data plan, and having consistent access to a phone as indices of telehealth access. Amidst post-March 2020 COVID-19 shutdowns, we used qualitative interviews to elicit participants' experiences in their own words.

Methods

Quantitative sample

Data were drawn from baseline interviews with $n = 321$ CIYA from an intervention trial that began recruitment in December 2017, which sought to test an intervention to reduce HIV and substance use risk behaviors and increase motivation for and linkage to services [27]. Most participants were male (75%) and Black/African American (65%). One-third were Latinx (35%). Participants' ages ranged from 18–24 ($Mage = 20.57$; $SD = 2.01$). Table 1 includes quantitative sample characteristics.

Qualitative sample

In-depth interviews were conducted with a subset of 27 young adults ($Mage = 20.85$; $SD = 1.99$) who participated in the baseline survey. Most were male (74.1%) and Black/African American (77.8%). Approximately 25.9% were Latinx. Table 2 includes qualitative sample characteristics.

Table 1
Sample characteristics of participants who completed the quantitative survey

Demographic variable	Frequency (n)	Percentage
Age ($M = 20.57, SD = 2.01$)		
Race		
Black or African American	209	65.1%
More than one race	60	18.7%
White	19	5.9%
American Indian or Alaskan Native	13	4.0%
Asian or Asian American	5	1.6%
Native Hawaiian or Pacific Islander	4	1.2%
Ethnicity		
Latinx	113	35.2%
Non-Latinx	205	63.9%
Sex		
Male	239	74.5%
Female	79	24.6%
Educational level		
High school diploma (or equivalent) or higher	154	48.0%
Less than a high school diploma	158	49.2%
History of homelessness		
Yes	93	29.0%
No	198	61.7%
Financial distress		
Never or almost never	133	41.4%
Sometimes	122	38.0%
Often	43	13.4%
Always or almost always	22	6.9%
Single way to access the Internet		
Yes, only one way to access the Internet	146	45.5%
No, more than one way to access the Internet	167	52.0%
Has a cellular data plan		
Yes	248	77.3%
No	55	17.1%
Lost access to cell phone in the past month		
Yes	123	38.3%
No	183	57.0%
Usefulness of the Internet in connecting with medical or mental health resources		
Not at all useful	50	15.6%
Slightly useful	57	17.8%
Moderately useful	32	13.4%
Very useful	82	25.5%
I don't use the Internet for this purpose	80	24.9%

$N = 321$ quantitative sample.

Procedures

Participants were recruited from an alternative sentencing program (ASP) of a courthouse in a large metropolitan Northeastern U.S. city. Participants were eligible if they were: between ages 18–24; enrolled in the ASP; engaged in past-year unprotected vaginal or anal sex; HIV-negative; and conversant in English. Individuals were informed of the study by research team members or ASP staff, including peer recruiters. If eligible, a baseline in-person survey interview was scheduled, during which trained research assistants obtained written informed consent, administered the survey, and entered responses directly into Qualtrics survey software.

At approximately the halfway point of the intervention trial, participants were recruited for in-depth qualitative phone interviews on a rolling basis from March 2020–April 2021. A target sample of $n = 30$ was set, a number estimated to allow sufficient sampling to reach saturation based on research questions [28] and accommodate stratified recruitment by sex (50% male), frequency of substance use (50% daily use), and treatment access (50% treatment-engaged). Participants were

Table 2
Sample characteristics of participants who completed the qualitative in-depth interviews

Demographic variable	Frequency (n)	Percentage
Age ($M = 20.85, SD = 1.99$)	-	-
Race		
Black or African American	21	77.8%
More than one race	5	18.5%
American Indian or Alaska Native	1	3.7%
Ethnicity		
Latinx	7	25.9%
Non-Latinx	20	74.1%
Sex		
Male	20	74.1%
Female	7	25.9%
Educational level		
High school diploma (or equivalent) or higher	14	51.8%
Less than a high school diploma	13	48.1%
History of homelessness		
Yes	8	29.6%
No	17	63.0%
Financial distress		
Never or almost never	10	37.0%
Sometimes	9	33.3%
Often	5	18.5%
Always or almost always	3	11.1%
Single way to access the Internet		
Yes, only one way to access the Internet	14	51.9%
No, more than one way to access the Internet	13	48.1%
Has a cellular data plan		
Yes	19	70.4%
No	7	25.9%
Lost access to cell phone in the past month		
Yes	12	44.4%
No	14	51.9%
Usefulness of the Internet in connecting with medical or mental health resources		
Not at all useful	4	14.8%
Slightly useful	7	25.9%
Moderately useful	4	14.8%
Very useful	7	25.9%
I don't use the Internet for this purpose	5	18.5%

$N = 27$ qualitative sample.

consecutively invited to participate in order of enrollment; recruitment continued until saturation was reached at $n = 27$, determined based on consensus that no new themes emerged in recent interviews. Interviews were digitally recorded and transcribed. Inclusion and exclusion criteria for qualitative interviews included: baseline survey participation; and no current medical/psychiatric illness requiring hospitalization, acute psychotic features, or serious homicidal/suicidal ideation.

Instruments and Measures

Quantitative survey. The quantitative survey included questions on demographic background and technology and Internet use. Given limited research with CIYA and few existing psychometrically supported measures of telehealth feasibility and acceptability at the time of this study, variables were selected from literature reviews of technology and Internet access and adapted from prior surveys of Internet use [29]. Dependent variables included three dichotomous one-item questions to assess whether participants had: (1) a single way to access the Internet (0 = No, 1 = Yes); (2) a data plan or not (0 = No, 1 = Yes); and (3) loss of access to their phone in the past month (0 = No, 1 = Yes).

The item assessing single way to access the Internet was comprised of an open-ended question that asked participants, “How do you get online? Tell me all that apply.” Response options were provided (e.g., family/household, personal, workplace, school, or library computer; cellphone; computer/gaming device; tablet device; other). Given that participants in this sample had near-universal smartphone access, yet only about half had at least one additional way to access the Internet, we dichotomized the single way to access the Internet variable (0 = *No, more than one way to access the Internet*, 1 = *Yes, only one way to access the Internet*). The fourth dependent variable was an item that used a 4-point Likert-type scale to assess (4) perceptions of how useful the Internet was for connecting with medical or mental health resources (1 = *Not at all useful*, 4 = *Very useful*), defined as using the Internet to identify, access, and connect with medical or mental health system resources (i.e., not simply reading health-related information).

Independent variables assessed demographic backgrounds, including: race, ethnicity, sex, educational level, history of homelessness, and perceptions of financial distress (i.e., problems paying for basic necessities; 1 = *Never or almost never*, 4 = *Always or almost always*).

Qualitative interview guide. The qualitative interview guide, informed by Andersen’s Behavioral Model [30], Social Cognitive Theory [31], and a Social Determinants of Health Framework [32], included open-ended questions to gain a depth of understanding about access to and use of technology and perceptions of and experiences with telehealth for medical and behavioral health-care needs. Questions were developed by the study team through literature reviews, clinical experiences, and consensus discussions. Notably, several court-involved young adults were hired as staff (i.e., peer recruiters and research assistants) to provide input throughout the process of formulating and pre-testing interview questions, generating the guide, and reviewing transcripts and initial results. Questions elicited descriptions of technology resources; perceptions of data plan sufficiency; the impact of the pandemic on phone usage and participation in phone/video health-care appointments; access to or interruption of health care; perceptions of telehealth; and difficulty paying phone bills. Within the interview, participants were provided with a general definition of telehealth (i.e., health-care appointments over phone or video) written to be jargon-free and comprehensible to young adults.

Data analytic plan

Quantitative analysis. Through four quantitative models, we examined associations between independent variables and the following dependent variables: (1) single way to access the Internet, (2) access to a data plan, (3) lost access to a phone in the past month, and (4) usefulness of the Internet for connecting with medical or mental health resources. For the first three models with dichotomous dependent variables, logistic regressions were conducted. Multiple linear regression was used for the fourth model, which had a one-item dependent variable to assess perceptions of usefulness on a 4-point Likert-type scale. Prior to analysis, data were examined for missingness and adherence to the requisite assumptions. Descriptive statistics and correlations were calculated. No correlations exceeded multicollinearity thresholds. Missing values were analyzed for patterned occurrences. Little’s test revealed nonsignificant

findings, indicating failure to reject the null hypothesis and suggesting data were missing completely at random, $\chi^2 = 125.42$ (121), $p = 0.37$. Because of the small amount of missing data (i.e., less than 5.9% across all variables), and as data were missing completely at random, we proceeded with list-wise deletion.

Qualitative analysis. An inductive, rapid qualitative content analysis within a thematic analysis inquiry framework [33] was used to systematically organize, code, and generate themes. An inductive approach allows for themes to emerge from the data [34]. Thematic analysis entails the identification and interpretation of recurring patterns of themes in six phases: familiarizing with the data, generating codes, developing themes, reviewing potential themes, defining and naming themes, and writing the report [35]. Three coders coded all interviews based on emerging themes and according to research questions using a framework method to analyze themes across participants based on research questions [36]. The team met biweekly and engaged in consensus discussion to resolve discrepancies.

Mixed methods analysis. Quantitative and qualitative data were analyzed independently. Three trained coders met and discussed the strategic integration and combination of findings to draw on each method’s strengths, which allowed for the creation of an overall interpretation consistent with a partially mixed methods equal status design [23]. The mixed methods analysis allowed us to build a comprehensive understanding of findings, explain results in depth, crystallize findings to assess convergence, and broaden the breadth and range of inquiry [23,28,37].

Results

Quantitative descriptive statistics and correlations

Almost all (96%) of CIYA had a smartphone; this was the predominant method of Internet access. Other methods included: personal computer/laptop (33%); computer/gaming device (24%); iPad/tablet device (20%); household computer (9%); or computers at schools (7%), libraries (5%), or workplaces (4%). Approximately 40% reported inconsistent access in the past month. On average, CIYA found the Internet to be moderately-to-very useful for connecting with medical or mental health resources. See Table S1 of the Supplemental Materials for correlations among quantitative variables.

Quantitative results

Participants without a high school diploma ($p = .008$) or with a history of homelessness were at increased odds of having only a single way to access the Internet ($p = .03$). Participants who reported financial distress ($p = .02$), were Black ($p = .01$), or were without a high school diploma had lower odds of having a data plan ($p = .05$). Male participants ($p = .04$) and participants without a high school diploma were at increased odds of losing phone access in the past month ($p = .02$). Being female ($p = .002$) was associated with increased perceived usefulness of the Internet to connect with medical or mental health resources. Table 3 includes a summary of regression results.

Table 3

Multiple logistic and linear regressions predicting access to and use of technology needed for telehealth

Predictor variables	Model 1: $\chi^2(6) = 14.71$, $p = .02$		Model 2: $\chi^2(6) = 23.51$, $p = .001$		Model 3: $\chi^2(6) = 13.80$, $p = .03$		Model 4: $F(6, 298) = 2.28$, $p = .04$	
	Single way to access the Internet		Access to a data plan		Lost access to phone in past month		Usefulness of the Internet for connecting with medical/mental health resources	
	O.R.	95% C.I.	O.R.	95% C.I.	O.R.	95% C.I.	B (SE)	p Value
Race	0.07 (0.30)	[0.60, 1.93]	−1.19 (0.46)	[0.12, 0.75]	0.16 (0.31)	[0.64, 2.15]	0.10 (0.14)	ns
Ethnicity	0.14 (0.29)	[0.65, 2.03]	−0.16 (0.40)	[0.39, 1.86]	0.24 (0.30)	[0.71, 2.28]	−0.14 (0.14)	ns
Sex	0.20 (0.28)	[0.71, 2.09]	−2.77 (0.37)	[0.36, 1.58]	0.59 (0.29)	[1.02, 3.22]	−0.40 (0.13)	.002
Educational level	−0.64 (0.24)	[0.33, 0.85]	0.64 (0.33)	[1.00, 3.59]	−0.60 (0.25)	[0.34, 0.89]	0.07 (0.11)	ns
History of homelessness	0.97 (0.44)	[1.11, 6.23]	−0.94 (0.49)	[0.15, 1.03]	−0.24 (0.45)	[0.33, 1.88]	0.04 (0.20)	ns
Financial distress	−0.23 (0.14)	[0.61, 1.04]	−0.40 (0.17)	[0.49, 0.93]	0.20 (0.14)	[0.93, 1.59]	−0.04 (0.06)	ns

Significant associations are represented in bold.

O.R. = odds ratio; C.I. = confidence interval.

Qualitative results

Several themes emerged from the in-depth interviews, identifying facilitators and barriers to use of technology and feasibility and acceptability of telehealth (see Table 4).

Barriers to feasible and acceptable use of technology and telehealth
Lack of access due to financial distress. It was common for participants to report having a phone with an unlimited data plan. However, some participants had “pay-as-you-go” phones (i.e., limited talk and data plans) or a phone shut off due to nonpayment. Participants whose phones were shut off due to nonpayment or who lacked a sufficient data plan described using Wi-Fi to access the Internet.

Distrust of technology. Participants commonly reported being distrustful of technology, often related to governmental or law enforcement surveillance. Some participants' phone use patterns did not always directly reflect their distrust. Others reported refraining from frequent use or the use of certain apps for fear of surveillance.

Inexperience with telehealth. Few participants reported previously making or attending a telehealth appointment. Only one participant reported having a video telehealth appointment previously. The lack of knowledge and familiarity with the option of telehealth for medical and mental health care was reported by several participants. Additionally, a few participants reported unsuccessful attempts to schedule an appointment.

Preference for in-person care. The few participants who had experience with telehealth voiced a preference for in-person care and positioned it as superior for a variety of reasons, including perceived increased accuracy and effectiveness of in-person health assessments compared to phone or video assessments. One participant who attended a telehealth appointment for her child reported its usefulness to avoid COVID exposure, yet a preference for in-person services where possible.

Low perceived need for care. Most participants reported not being connected to any health-care providers or resources. Participants who did receive care tended to report use of walk-in or emergency services—for example, use of health care that was not reflective of a strong patient-provider relationship through

an established and consistent general practitioner who followed the patients' care. Additionally, low perceived effectiveness of care was common (i.e., for those who received care, they reported it was unhelpful).

Medical mistrust. Multiple participants reported mistrust toward medical providers and active avoidance of medical care when possible. Participants' statements regarding mistrust were often nonspecific, although some identified concerns with exposure to COVID-19 or previous medication side effects as a reason. However, there was variation among responses of medical mistrust, in that some reported being open to seeking medical services if absolutely necessary.

Facilitators of feasible and acceptable use of technology and telehealth

Self-efficacy with using technology. Although nearly all participants engaged in frequent phone and Internet use, there was variation in the level of comfort and reliance on their phones—or self-efficacy to use technology for distinct purposes. Many participants reported using numerous applications for a wide variety of reasons (i.e., calls, texts, video chatting, social media, gaming, shopping, reading, accessing news, online dating, work, financial planning, organization, time management, applying to jobs, listening to music, photography, academics, entertainment). Attitudes and behaviors also reflected an ability to adapt to change and overcome lack of access. For example, in the context of lack of sufficient data, participants reported using a Wi-Fi connection to continue to use devices without data.

Potential to reduce in-person care barriers. Some participants reported willingness to try telehealth because of the infrequent and inconsistent accessibility of in-person care early in the pandemic. Others noted that telehealth appointments may make care more accessible by eliminating travel or reducing the challenges of reaching a provider.

Discussion

Findings of this mixed methods study provided insights into the use, benefits, and challenges of telehealth and can directly inform efforts to improve access and quality of care with CIYA, an

Table 4
Themes and illustrative quotes from semi-structured interviews

Theme	Illustrative quote
<i>Theme 1: Barriers to feasible and acceptable use of technology and telehealth</i>	
Lack of access due to financial distress	<p>“An iPhone. It’s off right now. I have to pay the bill.” (19-year-old Black/African American male)</p> <p>“Yeah. Definitely. My phone is the only source [of Internet connection]. ... When I didn’t have my phone... I had Wi-Fi though, so I was still able to text everybody. Yeah, it [my phone] wasn’t on.” (20-year-old American Indian/Alaskan Native male)</p> <p>“Sometimes I do [have issues paying my phone bill]. This in the – even before [the pandemic] sometimes. Well, like I was mentioning about my income, the little income I get, a monthly – that as far as that was just the main—the really—the only income I get really is that and my SNAPs.” (21-year-old Black/African American male)</p> <p>“Yeah, [I had issues paying my phone bill] probably like once or twice, but like since I’ve been, you know, like trying to, you know, work harder, it hasn’t really been that big of a bill.” (22-year-old Black/African American female)</p> <p>“Not really, the same, because I’m not really too—I know how to focus without—I know how to survive with a phone, do you feel me? I done been through that before a lot of times.” (23-year-old Black/African American male)</p> <p>“Yeah. But it’s coming to—it should be coming together. So like the phone—the only thing that’s been hassling me is the fact that I, it’s the first time I took a phone out on contract. And I have to pay it off at all with the bill. And it’s been strenuous. But I’m getting through it. It should be the last two months to do that.” (23-year-old Black/African American male)</p> <p>“Yes, I have [had difficulty paying my phone bill] sometimes. Yeah... Because I don’t have really a bank account and what I do is cash app, and the only way I can get money on my cash app is by having a friend use their bank to kind of send it to me. Other than that, my SSI credit/debit card, I think I can use to take off some money into that one and use it online, but I really don’t use any of that money for online. I’d rather just take out the money to go eat.” (24-year-old Latinx, Multiracial male)</p>
Distrust of technology	<p>“To be honest, I don’t really use it at all. I’ve noticed social media and stuff like that has gotten so many people in trouble, not just with like—I don’t know if you know, but there’s a rap artist who got swept up in an indictment because of social media. Then social media’s known to ruin relationships. Then there’s also a lot of drama you can get yourself into on social media. I’m just not the type of person for that type of stuff. Probably I’d say less.” (20-year-old Multiracial male)</p> <p>“That stuff’s just for the cops. I mean, yeah, I do that [use Facetime] sometimes. Nah, I just use like Facebook.” (18-year-old Latinx, Black/African American male)</p>
Inexperience with telehealth	<p>“No. If anything, I’ve been trying to make one for dentist and doctor. And it’s not going so well, they’re not even answering me.” (24-year-old Latinx, Multiracial male)</p> <p>“I didn’t even know they could do that.” (18-year-old Latinx, Black/African American male)</p>
Preference for in-person care	<p>“Yeah, [for] my kids, over the phone. It was just a general appointment. Yeah. I’m a little bit of both, but it would be better if they went in, so they could actually see. And, like, do what they had to do. But I’m so glad that we’re on, so they wouldn’t get no virus or anything.” (19-year-old Black/African American male)</p> <p>“No. I had one over the phone for my daughter. And stuff like that. Like, video calls for my daughter. Yeah. I didn’t really like it, cause it’s dumb, like it’s pointless. How are you going to check her body if you can’t hear her heart, or how she’s breathing? Or check if the little lumps and bumps that she has on her—and it’s pointless. How are you going to draw blood? What is y’all just looking at her. Oh, yeah, she’s had her in-person, and she got all her updated vaccines and everything.” (23-year-old Black/African American female)</p>
Low perceived need for care	<p>“I haven’t been to the doctors in quite a while.” (23-year-old Black/African American male)</p> <p>“I don’t even get sick because my immune system is very strong. I don’t get sick at all. I haven’t got sick in two years. So... I don’t have to worry about no cold or nothing in two years. So I’m good with that.” (21-year-old Black/African American male)</p> <p>“No. No, if I needed it—I can’t even say that, cause I’ve never needed it, so I’ve never really tried to access it. But I would hope so. I would hope I would be able to access it in case I needed it.” (20-year-old Multiracial male)</p>
Medical mistrust	<p>“No. To be honest, no. To be honest, no. But I don’t like to sit here because, honestly, I ain’t going to lie. I’ve been on medication since I was six years. When I was 18, I had to get off of it because it messed up my body. I don’t want to ever get back on it again. For me, I don’t even like medicine. This is why I stay to myself. So I don’t have to worry about no health issues, no nothing.” (21-year-old Black/African American male)</p> <p>“Yeah. [I] avoid going to the doctor. And like, I haven’t had—I was lucky enough to not really feel sick.” (20-year-old American Indian/Alaskan Native male)</p>
<i>Theme 2: Facilitators of feasible and acceptable use of technology and telehealth</i>	
Self-efficacy with using technology	<p>“I use my phone really often. I use it for anything I need to do. I have to face the facts, I’ve got used to it... Keep things organized, like my phone is pretty much my life organized, anything I want to do or wanted to do I could use, my phone can help me make it happen.” (24-year-old Latinx, Multiracial male)</p> <p>“I always be using my phone. That’s one thing. That’s me. My phone is my TV. It’s my everything. It’s my TV, my radio. It’s anything. It’s my PlayStation.” (21-year-old Black/African American male)</p> <p>“I basically use my phone for everything, because I don’t have a TV, I don’t have a TV, I don’t really—what do I do all that for, because everything I watch, I can watch on my phone. So, I basically use my phone for everything. ... I have some games up there. I have some photo editing apps. So yeah, I basically use my phone for everything. ... I don’t really put my phone down too much anymore.” (23-year-old Black/African American female)</p>

(continued on next page)

Table 4
Continued

Theme	Illustrative quote
Potential to reduce in-person care barriers	<p>“No, I had [the telehealth appointment] over the phone. I kind of like it more [than in-person appointments] because you wouldn't have to really worry about rushing to the doctor, especially if it's far.” (21-year-old Latina, Multiracial female)</p> <p>“Yes. Sometime this week actually, I had a health-care video call. It was for me and my daughter actually to just check on my well-being, check on how she's doing. I still have therapy from my doctor to make sure that I'm okay, my mental health is okay. After giving birth, I feel like all the support, the better because again being a new mom is overwhelming. So if I have someone that's there to want to hear about my well-being, to check-in on me, to see how I'm doing, to see if I'm overwhelmed then, yeah, that's great. [These appointments have been] on the phone. They're okay. I mean, again, I don't mind going to into the doctor's, but if I don't need to, then I don't feel like I should. It was fine. We talked some—we talked more about my mental state, and she just wanted to see my daughter, you know, see how she looks because the last time they seen her she was a newborn, so to see her grow. They see that she's very healthy, she's doing fine, so, yeah, it was fine.” (18-year-old Black/African American female)</p> <p>“It was just a phone call. Yeah. We'll speak—when I didn't really need to go into the office, we would just speak over the phone. That was about it. My doctor's always accessible by phone. So, even before the pandemic I would like—not call him randomly—but I was to call him personally to set up appointments.” (23-year-old Black/African American male)</p>

Ages here are represented at the time of the completion of the baseline interview.

underserved population less likely to access and be retained in care [4]. Consistent with research documenting smartphone access as nearly universal among general samples of young adults [19], almost all CIYA (96%) had access to a smartphone. Yet, access was not reliable or consistent. Qualitative and quantitative findings highlighted lower socioeconomic status as a key barrier to technology and Internet access. In qualitative interviews, participants described access being disrupted due to difficulty paying bills, which posed a significant barrier to Internet access, particularly for those whose smartphone was their primary or only way of access. In quantitative analyses, youth without a high school diploma consistently reported less access, including being more likely to only have one way to access the Internet, to lose phone access in the past month, and being less likely to have a data plan. Additionally, CIYA with a history of homelessness were more likely to have only one way to access the Internet, and those who reported financial distress were less likely to have a data plan. Because access may be determined by socioeconomic status and associated financial resources [10], overreliance on telehealth may deepen existing disparities in engagement with care for CIYA. As having a data plan has been noted as necessary to support the technical aspects of a telehealth visit by phone [24], Black and male participants also reported less access to critical technological infrastructure for telehealth.

Although encouraging that a majority of CIYA demonstrated access to technology and sufficient digital competence, qualitative findings suggest feasibility and acceptability of telehealth is limited. A primary barrier to comfort with telehealth consistently reported by participants was medical mistrust. For CIYA, many of whom are young adults of color who demonstrate medical mistrust due to longstanding legacies and contemporary manifestations of racism in medicine [38], distrust of telehealth is a prominent challenge. Some CIYA expressed distrust of technology and worries about privacy or even police surveillance. Nearly all CIYA interviewed had not attended a telehealth appointment due to factors such as disinterest in telehealth as a result of mistrust and low perceived need for care, reported lack of knowledge and familiarity with telehealth, or numerous unsuccessful attempts at navigating appointment systems. Finally, consistent with prior research indicating digital competency does not automatically translate into comfort with telehealth [39], of the few CIYA who had attended a telehealth appointment, a preference for in-person care was expressed due to perceptions of more accurate, effective care. Given that some

participants described perceptions of greater utility of in-person care compared to telehealth for their children's medical needs, future research should consider acceptability and feasibility of telehealth for families across various medical concerns.

Limitations

This sample, recruited in a large Northeastern U.S. city, may not represent experiences of CIYA outside this area. The researcher-administered quantitative survey and qualitative interviews may have influenced participants' willingness to respond openly compared to a self-administered survey or other methods [40]. Quantitative analyses used several single-item measures to assess technology access; future research should use empirically supported measures where available. As qualitative data were obtained via phone interviews during COVID lockdowns, participants likely had better access to technology, increasing the likelihood of overrepresentation of individuals with more access or increased comfort. Interviews took place from March 2020–April 2021, during which perceptions may have substantially changed as individuals became more accustomed to telehealth. As such, responses may have been impacted by the time and context of interviews. Participants were limited to individuals participating in the larger trial, for which eligibility criteria may have excluded important population segments, thereby reducing generalizability. Particularly for non-English-speaking CIYA, who may face greater barriers to health care, studies should identify and address unique concerns regarding telehealth acceptability and feasibility.

Implications

Results suggest telehealth may not be a panacea to increase access and retention in care. Rates of engagement with health care remain low for this population. There is a distinct need for targeted efforts to increase digital access to promote equitable benefits of health care and telehealth [4]. Education from peers and trusted community partners may address mistrust and enhance the likelihood of telehealth utilization by teaching CIYA how to download software and schedule appointments. Public and community agencies or courts may find it cost-effective to subsidize the provision of technological devices and/or data plans for CIYA to address disparities in health-care access. Multi-level interventions may be necessary, including structural-level

interventions to promote technology and telehealth access (e.g., universal, free phone, and broadband Internet access), institutional-level interventions to train providers to deliver telehealth care with CIYA, and individual-level interventions to reduce medical mistrust and address low perceived need for care.

Conclusions

This mixed methods study revealed inconsistent access to the technology critical for telehealth, particularly among CIYA who were Black, male, had less than a high school diploma, had a history of homelessness, or reported financial distress. Qualitative findings suggested skepticism of telehealth as a modality and medical mistrust as a significant barrier to health care in general—and telehealth in particular. Results inform development and implementation of interventions designed to improve accessibility and acceptability of telehealth among CIYA.

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Study conception and design: SC, MO, ST, PW, RC, ATC, KSE; Data collection: AJ, RH, IA, SC, KSE; Data coding and analysis: MME, AJ, RH, CES, SC, KES; Manuscript preparation: MME, AJ, RH, IA, SLGE, CES, KES; Manuscript review and editing: MME, AJ, RH, IA, SLGE, CES, SC, MO, ST, PW, RC, ATC, KSE.

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Supplementary Data

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