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Telehealth Access and Experiences of Older Adults with HIV during the COVID-19 Pandemic: Lessons for the Future

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Abstract

Background: Telehealth services are proposed to improve access and retention to care for people with HIV (PWH). Yet the rapid uptake of telehealth services during the COVID-19 pandemic created equity concerns, especially for already vulnerable populations. Older PWH may face a combination of barriers to telehealth but also stand to benefit given social isolation and the need for multimorbidity management. Few studies have focused on this population, and we aimed to assess the telehealth capability and experiences of older PWH at an urban HIV clinic.

Methods: We did this in two ways: 1) We contacted PWH aged ≥65 via telephone about telehealth capabilities and 2) we conducted focus groups with older PWH who transitioned from in-person to virtual classes affiliated with the clinic.

Results: Among 179 PWH aged ≥65, 80 answered the telehealth questions. Among those who answered, 91% were male with a mean age of 69 (SD 3.0), and 55% were White. One-third did not have internet access or an email address. 65% had at least one telehealth-capable device but 12.5% of respondents with a device did not know how to use it. Thirteen older PWH participated in focus groups with a mean age of 64 (SD 6.9) and 44% female. Themes were grouped into benefits (social/emotional connection and convenience) and challenges (technological barriers and missed in-person experience).

Author Contributions

M.G.[1] designed the study. M.G.[1], E.R, and J.S carried out the implementation of the study. E.R and M.G.[1] wrote the manuscript with consultation from M.G[3]. Y.S., E.R and M.G.[1] analyzed the data. All authors provided critical feedback and helped shape the research, analysis, and manuscript.

Conflict of Interest

Dr. Greene has received grant support from Gilead Sciences which has supported the Golden Compass program. Dr. Greene also receives support from the National Institute on Aging (K76AG064545-01) and (R03AG05634). All other authors have no relevant financial or non-financial interests to disclose.

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Conclusion: Participants preferred in-person classes but felt telehealth was a good alternative for mitigating isolation. Telehealth gave those with mobility and transportation issues improved access to supportive services. As the COVID-19 public health emergency ends, hybrid options should be considered to improve access for older PWH and address social isolation. Ensuring equitable access to devices and digital literacy training will be critical to ensure services can be utilized.

Keywords

Older Adults; Aging; HIV; Telehealth; COVID-19

INTRODUCTION

Telehealth services rapidly expanded in healthcare settings during the COVID-19 epidemic, particularly amid shelter-in-place orders [1]. Telehealth refers to “the delivery and facilitation of health and health-related services including medical care, provider and patient education, health information services, and self-care via telecommunications and digital communication technologies” [2]. While telehealth may improve access to care, it may also worsen inequalities in vulnerable populations, especially those without consistent video and internet access [3–8].

People with HIV (PWH), who are disproportionately from marginalized communities, often struggle to obtain video-capable devices and internet for telehealth video visits [7 9 10]. An HIV telemedicine (patient-provider medical visits) review during COVID-19 found mixed results on outcomes including viral suppression and retention in care [4–5 11]. The pandemic also exacerbated loneliness and social isolation, with HIV/AIDS service organizations closing or moving online. With the majority of PWH in the US over age 50, access to telehealth may also be hindered by age-related challenges such as sensory and cognitive impairment [12 13]. Yet, telehealth could be beneficial to this population who faces multimorbidity and frequent medical appointments [14 16].

Despite potential benefits and challenges of using telehealth video services, the experiences of older PWH with these services has not been closely examined. Exploring access and impacts of the transition to virtual platforms during COVID-19 may help address the digital divide and social isolation in this population. The purpose of this study was to assess the telehealth video capability and experiences of older PWH at an urban safety net HIV clinic during COVID-19 for medical and supportive services.

METHODS

Study Population and Procedures

Participants were from Ward 86, a safety-net HIV clinic at San Francisco General Hospital, which offers primary care and specialty services to PWH on public insurance. Many patients at Ward 86 face challenges such as unstable housing (30%), mental illness (38%) and substance use (35%) At the time of our study, the clinic’s overall viral suppression rate was 87% [30]. The clinic includes an HIV program for older adults, Golden Compass, which aims to provide comprehensive and tailored care to PWH age ≥50 to address health and

psychosocial needs [23]. The program offers specialized medical care, exercise class, and a support group. We assessed telehealth video capabilities and experiences in two ways: 1) outreach telephone calls to all community dwelling Ward 86 patients age ≥65, and 2) focus groups with Golden Compass exercise and support group participants who switched to telehealth video platforms.

Outreach calls

Between May and October 2020, we called patients age ≥65 due to continued concerns for social isolation and medical complications from service disruptions. We identified patients for outreach calls using clinic HIV registry reports and attempted to identify additional contact numbers for those without working phone numbers. A nursing student supervised by a geriatrician contacted patients to inquire about current telehealth video capabilities along with other health-related needs. Attempts to contact patients were based on student and staff availability on average ½ day per week given changing responsibilities in 2020. Of the patients with active phone numbers, we prioritized contacting those without recent appointments. To examine telehealth video capabilities, patients were asked if they had access to internet, email, a video-capable device (e.g., smartphone, tablet, computer), and access to MyChart®, the patient portal for the electronic medical record (EMR) system. During the calls, we updated email addresses in the EMR and offered MyChart® access to those not already enrolled. As another general proxy for telehealth capability, we abstracted MyChart® status for all community-dwelling adults aged ≥65 at Ward 86. Demographic information was obtained from clinic HIV registry reports.

Focus groups

We conducted focus groups with participants of the Golden Compass support group and exercise class to examine experiences in attending programs virtually via video. We conducted the first focus group with exercise class participants in August 2020 and the second in October 2020 with support group participants. We used Zoom™ to conduct the focus groups, the UCSF HIPAA-compliant platform also used to run the classes. Eligible participants were PWH age ≥50, who had participated in ≥1 class before shelter-in-place orders and continued with the transition to the virtual platform. A semi-structured interview guide with open-ended questions was created to reflect on virtual group experiences (Supplemental Interview Guide 1).

Demographic information was collected through a survey using Qualtrics XM© software. We verbally consented patients and provided a $10 gift card incentive. Focus group data was de-identified when transcribed. The UCSF IRB (20–31002 & 15–17859) approved all study procedures, and under Ward 86 IRBs 20–30520 and 10–03640.

Analysis

We used descriptive statistics to characterize participants and assess frequencies of telehealth video capabilities. We used thematic analysis to analyze the focus group data. Qualitative data was coded by two authors using a pre-existing framework surrounding positive and negative experiences related to the telehealth video platform. The overall participant group was small, however the themes across the groups were sufficiently similar, we did not

conduct further groups. Descriptive statistics for all data were performed by using IBM SPSS (Version 7). Quantitative analyses (Chi-square or Fisher's exact test) for supplemental tables were conducted using SAS 9.4 (SAS Institute).

RESULTS

Outreach calls

Ward 86 had 200 (85%) community-dwelling adults aged ≥65, and 179 (90%) had a working phone number. Among those with working numbers, 147 (82%) were called during the once-a-week outreach call sessions before the student's elective time ended, and 85 (58%) were reached. No statistically significant demographic differences were found between those with and without a working phone number or those who were called/not called (Supplemental Tables 1&2). Five older adults who answered the phone calls declined to participate (Figure 1). Of those who answered (the outreach questions) (n=80), the majority were male (n= 73 (91%), with a mean age of 69 (SD 3.0) years, 44 (55%) were White, 17 (21%) Black, 4 (5%) Asian, 11 (14%) Multiracial/Other Race and 6 (8%) were Hispanic/ Latino. No statistically significant demographic differences existed between those who were reached compared to those who were not reached (Supplemental Table 3). One-third (n=25) didn't have internet access and two (3%) had access but didn't know how to connect. Fifty-two respondents (65%) had a telehealth-accessible device however an additional 10 respondents (12.5%) had a device they didn't know how to use. At the time of outreach calls, 30% (n=24) didn't have an email address and 5% (n=4) had one but didn't know how to use email (Figure 2). During the calls, we added nine respondents (11%) emails to the EMR and sent instructions on how to activate MyChart® to twenty (25%) respondents. When we examined an active MyChart® account as another proxy for telehealth capability, only 65 (33%) of the original eligible 200 community-dwelling adults had an active account.

Focus groups

Thirteen participants participated in focus groups and nine completed the demographic questionnaires. The mean age was 64 (SD 6.9) years, four (44%) were female; three (33%) White, three (33%) Black, and two (22%) Native American/ Pacific Islander. Four themes emerged, highlighting the benefits and challenges of transitioning to a virtual video platform, with subthemes of missed in-person interactions and technological barriers, and positive social and emotional impacts. Quotes are presented in Table 1.

Pre-COVID-19 Participation—Before the start of the COVID-19 pandemic, participants expressed benefits of participating in classes. Participants reported improved mental and physical health and emphasized the value of shared experiences with other older PWH. Some participants reported forming new relationships and having a sense of community from the groups: "*This is a group for seniors, the common denominator is HIV and it's a very social group so you may end up seeing a lot of people that you seen before but never talked with…. You develop friendships and that's very nice and you get to tell your own story and you find common ground.*"

Challenges In Switch To Telehealth: Missed Aspects Of In-Person Interactions—After the switch to video, participants found benefits in video classes but missed the in-person connection. They missed tasks like arranging chairs and informal social activities like the "coffee club" in the cafeteria after class. Despite this, they acknowledged the shared experience of adjusting to Zoom™ and found it empowering, fostering resilience and a sense of togetherness: "*As things change we are all as a family working together and making that change on the growth and future choices, we are all on the same page I love that"*

Challenges- Technical Barriers—Despite the shared experience adjusting to telehealth, not all participants could connect online, leading to concerns about others' well-being. Decreased attendance was driven in part by technical barriers, especially access to larger-screened devices, the preference for exercise classes. Yet device access was not the sole concern as challenges with digital literacy were noted: *"(Participant) was having a big problem (virtually connecting), and she even went out to clinic and had 2 classes (troubleshooting help with a clinic social worker) …"*

Benefits- Social and Emotional Connection—Despite technical difficulties and general preference for in-person programming, social interaction was still possible through telehealth. Video platforms provided crucial connections especially for those with limited social connections or already isolated. One participant noted, *"Zoom™ has been a lifeline. Without Zoom™ I would be lost without this group, I would really miss everybody, it really is a lifesaver."*

Benefits- Convenience—Several participants noted joining from home saved time getting ready and traveling. Telehealth video even improved access to services for those with mobility or transportation issues. A participant with mobility impairment noted: *"For me, I am usually coming to group in a cab or in a wheelchair and having to leave my dog and it's a lot more convenient to be at home and be on Zoom™…."* Additional quotes are included in Table 1.

DISCUSSION

Our outreach surveys and focus groups suggest older PWH may face obstacles to telehealth due to lack of access to devices, connectivity, and digital literacy, as 14% of our outreach call respondents lacked internet or email and 13% didn't know how to use video-capable devices. Focus groups supported digital literacy challenges but showed that telehealth improved access to supportive services. Telehealth video provided positive social and emotional support, suggesting a role for ongoing use of telehealth to provide holistic care for older PWH post-pandemic.

Consistent with our findings, several studies on telehealth and PWH of all ages identified concerns with uptake and possible benefits [1 7–12 21 28 31–33]. Although telehealth in HIV care has been successful in many instances, disparities persist especially among racial minorities, older adults, and individuals with low digital literacy [31]. In a Texas based outpatient clinic, PWH identified a reduction in stigma as a potential benefit (not having to be seen going to an HIV clinic), but lacking devices and insufficient knowledge about

technology were identified as barriers [1]. In another San Francisco HIV clinic, a short-term (4 month) decrease in clinic non-attendance was found after switching to telehealth in 2020 and patients found telehealth convenient.[32] However, technical difficulties, as well as distrust of telehealth platform and limited human interaction were challenges [32]. In a survey of only older PWH (aged ≥50) in an urban Colorado clinic, 47% of participants expressed that telehealth video appointments could address healthcare obstacles including wait times, communication with providers and connection to resources [33]

Our findings also align with research findings from studies conducted among the general older adult population. One-third of people aged ≥65 in our clinic lack internet, comparable with a national Pew survey average of 40%, including rural areas [13]. A 2018 survey revealed 26% of Medicare beneficiaries lack access to digital technologies. Another pre-COVID California study found only 40% of adults aged ≥60 used the internet for health information, with lower socioeconomic status and race/ethnicity associated with decreased access and use [24 25]. Ward 86 serves low-income individuals on public insurance, 96% of whom receive Medicaid or Medicare and 4% covered by municipal insurance or uninsured[30]. HIV also affects communities of color disproportionately, explaining some of the results' parallels [30].

There are few prior articles examining telehealth video experiences of older PWH, focused on supportive services (not telemedicine). In South Carolina, HIV organizations reported that clients of all ages face challenges with medical and supportive telehealth services, including lack of devices, wi-fi, and digital literacy [9]. Our findings that older PWH face similar issues, highlights shared challenges across geographies and ages [9,10].

Telephone-only telehealth services, our clinic standard, could be an option for individuals without internet or video-capable devices. No current studies compare effectiveness of telephone vs. video telehealth services [24]. Notably, however, 10% of adults ≥65 at Ward 86 didn't have a working phone number after multiple attempts to identify one. Our clinic has previously described barriers to stable telephone access, especially for persons experiencing homelessness [4]. Telehealth visits will not be viable for some populations, and telehealth should be viewed as a supplement to in-person services.

Our findings indicate telehealth can enhance access to services for older PWH. As such, the support group adopted a hybrid format post-pandemic. The exercise class remains online, but a "coffee hour" is included for socializing after class. We engaged with community-based groups for digital literacy training and directed patients to local agencies that provided devices and one-on-one technology support.

Our study has limitations, including use of a small convenience sample at a single urban clinic. The demographics of the outreach call sample reflect the demographics of older people in the clinic, except for fewer Hispanic individuals. We initiated improved outreach to older Hispanic adults, and a monolingual Spanish-speaking support group was created. We did not find demographic differences between those called and those not called, or respondents reached. Focus groups consisting of solely successful Zoom ™ "transitioners" who were already engaged introduces potential bias and may not capture all barriers of those

who didn't connect. While most support group participants joined via video a few opted for telephone only connectivity into Zoom™. Additionally, the transition from in person to virtual may limit the relevance of our programs to solely virtual programming, particularly related to social connection.

IMPLICATIONS:

Rapid uptake of telehealth services, particularly in urban areas such as San Francisco, was only possible with federal policy changes, including the COVID-19 Aid, Relief, and Economic Security (CARES) Act [26]. With the end of the federal emergency, even with temporary extensions for telehealth, ongoing support needs to be guaranteed for older adults and those with mobility and transportation issues [27]. We agree with previous policy statements by the IDSA (Infectious Diseases Society of America) urging HRSA (Health Resources and Services Administration) to continue telehealth support [28]. Additionally, we endorse The Collaborative for Telehealth and Aging (C4TA)'s recommendation for telehealth programs to prioritize patient-centered equitable access and system-wide integration. Considering individual needs, barriers to care, and coordination among partners can advance effectiveness and sustainability [29]. It is also imperative to address concerns regarding affordability and access to video telehealth devices and reliable internet connectivity [7 31]. Despite numerous policy papers calling for funding to purchase devices, we add that patients will also need digital literacy training to address the digital divide.

CONCLUSION:

Although our study was conducted in the early phases of the COVID-19 pandemic, telehealth platform use has ongoing applications, especially as our study found that telehealth can help address social isolation experienced by older PWH. Instituting telehealth moving forward will need to be done with an emphasis on equity at the forefront to avoid furthering the digital divide. As services have resumed in person across medical care systems and HIV/AIDS service agencies, consideration should be given to hybrid options that can benefit those with mobility and transportation limitations.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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Key Points:

- The rapid adoption of telehealth services during the COVID-19 pandemic raised concerns about equitable access to services, especially for older adults with HIV, who are disproportionately from marginalized communities.
- In an urban area known for its technological innovations, one-third of older adults in our study did not have access to the internet or email.
- Those who did connect to telehealth video services reported benefits, including social isolation and improved access for those with mobility and transportation limitations.

Why does this matter?

Advocacy is needed for continued expanded access to telehealth and hybrid service options beyond the COVID-19 state of emergency. Future telehealth implementation should prioritize equity as a top concern to prevent widening the gap in access to digital healthcare services.

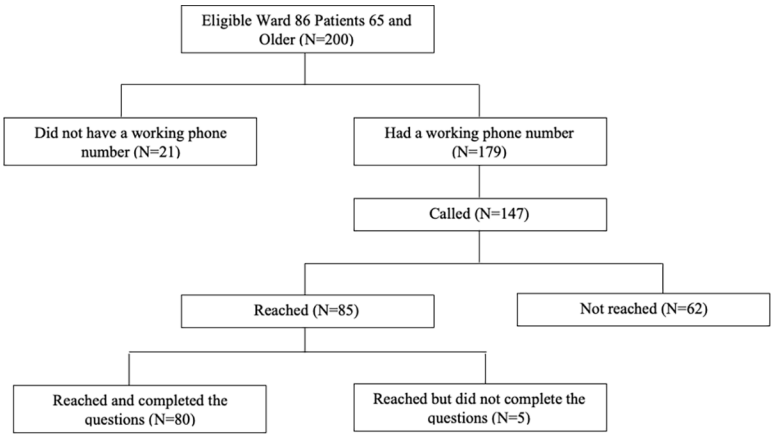

Figure 1. Outreach Calls Flow Sheet

This figure illustrates the process of identifying Ward 86 patients aged ≥65 based on whether they had working phone numbers, and subsequently whether they were reached and asked outreach questions or not. Footnote: No demographic differences were found between those with a working phone number and those without and those who were reached or not reached.

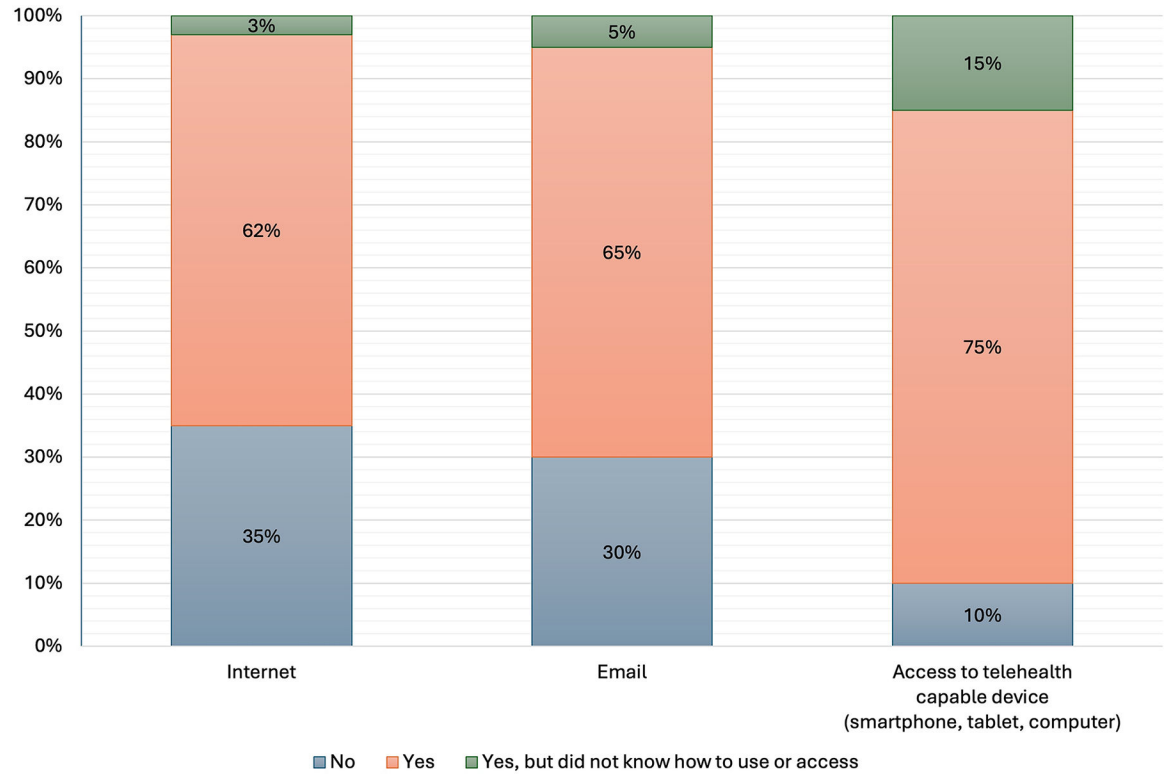

Figure 2. Telehealth Capability of Outreach Calls Patients

This figure illustrates the telehealth capability of Ward 86 patients age ≥65 who were reached and asked outreach questions. *N=80, Internet access: 8 had missing data, Access to telehealth capable device: 11 had missing data, percentages calculated accordingly.

Table 1.

Thematic Analysis of Perceived Challenges and Benefits of Virtual Groups

Theme	Sub-themes	Quotes
Challenges	Missed aspects of in-person interaction	Before COVID, I had friends there and had relationship with people that were special, and we were able to share. Yeah, it was a different experience to meet in one room. We were just starting to develop a good group, a family". "It is so great to see everybody, but it would be better to see them face to face because we would always "slap 5" or have a cup of coffee. I miss the touch; I miss all of that". "We divvied that stuff up and then put it all away and that sort of family thing we all have, that comradery thing where we would help pass it all out and put it away, I kind of miss that part. Can't pass out chairs (now) that we are all at home. I agree with (participant) there is that piece missing, that flow." "A lot of us would show up early, you know we travel by bus so we would sit in the cafeteria and have a "coffee club" like 20 minutes before the class would start. And that part we miss with the Zoom™." "You miss somebody when they didn't come (on Zoom™), you know who wasn't there."
Challenges	Technological barriers	"Some just don't have the media to get in. The iPad, the laptop or whatever". "We were all so relieved to see (other participant over Zoom™), we hadn't seen him since February." "The only problem I have is that I only have a certain amount of time to get the laptop. I have to turn it back in November so I don't know how long I will be able to use it". "I try to talk it up to a lot of people who used to come in person and a lot of people have said they have cell phones but they don't have access to a computer."
Benefits	Social & emotional impact	"It mentally uplifts me (participation) cause I have few social connections so all these groups that I go to and participate in are very very effective and helpful. When COVID hit, I used to have a volunteer that would see me and so when that (COVID) happened that knocked everything from meeting people on a one-on-one basis, so basically we were locked up in our apartment. So that's what I mean about a lifeline (the groups). Without this oh my god we'd be staring at the wall. I look forward to that Friday hour." "I just enjoyed it, the gut feeling that it gets out of me, I love to wake up in the morning and waiting for my time to come in so I can Zoom™ on in and hear everybody's voices, it makes me happy, it makes my day go through". "You can still have a good conversation (on Zoom™)". "Still look forward to it and good to see people and talk". "(The classes) Taught me more about my body. What I can expect at my age. It also shows me that I am not the only one that feels like I do. Helps to know someone else is going through the same things I am."
Benefits	Convenience	"For me, it's that I have something to look forward to. I couldn't go every Wednesday and I used to run to the bus to be there on time but now I know for a fact I can still do it (attend the class)" "(Attending this group) In person would be difficult for me because I'm living far out form the city". "Not having to wear face masks (because of virtual attendance), I can't breathe in those things". "What I like about Zoom™ is you can just push a button and you're there, and you can push a button and your home." "(Being able to) roll out of bed and go to class". "If it (in-person classes) opens back up, I think that for those that are sheltered in place or with mobility problems maybe the Zoom™ option still be there."