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Research and Applications

Crossing the digital divide: a veteran affairs program to distribute video-enabled devices to patients in a supportive housing program

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ABSTRACT

Objective: Evaluate an initiative to distribute video-enabled tablets and cell phones to individuals enrolled in Veterans Health Affairs supportive housing program during the COVID-19 pandemic.

Materials and Methods: In September 2020, individuals in the Veteran Health Affairs (VA) Housing and Urban Development-VA Supportive Housing (HUD-VASH) program were offered either a video-enabled tablet or cellphone to support their communication and health care engagement needs. We examined sociodemographic and clinical characteristics of device recipients, and compared engagement in in-person, telephone, and videobased visits (categorized as primary care, specialty care, rehabilitation, HUD-VASH, mental health care, and other) for 6 months prior to (March 1, 2020–August 31, 2020) and following (September 1, 2020–July 30, 2021) device receipt.

Results: In total, 5127 Veterans received either a tablet (n=4454) or a cellphone (n=673). Compared to the 6 months prior to device receipt, in the 6 months following receipt, in-person and video engagement increased by an average of 1.4 visits (8%) and 3.4 visits (125%), respectively, while telephone engagement decreased (-5.2 visits; -27%). Both tablet and cellphone recipients had increased in-person visits (+1.3 visits [8%] and +2.1 visits [13%], respectively); while tablet users had a substantially larger increase in video-based engagement (+3.2 visits [+110%] vs. +0.9 [+64%]). Similar trends were noted across all assessed types of care.

Discussion: Providing video-enabled devices to Veterans in a supportive housing program may facilitate engagement in health care.

Conclusions and Relevance: VA's device distribution program offers a model for expanding access to healthrelated technology and telemedicine to individuals in supportive housing programs.

Key words: telemedicine, health services accessibility, Veterans Health Administration

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LAY SUMMARY

In September of 2020, the Veteran's Health Affairs (VA) initiated a program to distribute video-enabled tablets and cellphones to Veterans who were enrolled in the Housing and Urban Development-VA Supportive Housing (HUD-VASH) program. The goal of this program was to maintain communication and health care engagement during the pandemic. After receiving either a tablet or cellphone, we compared in-person, telephone, and video-based engagement among the 4454 tablet recipients and the 673 cellphone recipients. We found in the 6 months following receipt, that overall in-person and video engagement increased by an average of 1.4 visits (8%) and 3.4 visits (125%), while telephone engagement decreased (-5.2 visits; -27%). Both tablet and cellphone recipients had increased in-person visits (+1.3 visits [8%] and +2.1 visits [13%], respectively); while tablet users had a substantially larger increase in video-based engagement (+3.2 visits [+110%] vs. +0.9[+64%]). This study suggests that providing video-enabled devices to Veterans in a supportive housing program may facilitate engagement in health care.

INTRODUCTION

As the largest integrated health provider in the United States, the Veterans Health Administration (VA) is charged with maintaining consistent and equitable access to care for over 9 million Veterans. Many of the individuals the VA serves live in remote locations, have multiple medical and mental health conditions, require complex multispecialty care, and experience a number of social vulnerabilities, such as social isolation, homelessness, and economic insecurity. In recent years, and prior to the COVID-19 pandemic, the VA heavily invested in health information technologies and used video-based telehealth devices (e.g., tablets) as a means of maintaining access across these social and geographic barriers.¹ During the pandemic, the VA shifted large portions of care from in-person to virtual-based to maintain safe and consistent access.²⁻⁴ The VA recognized that this shift in the provision of care had the potential to exacerbate the digital divide among certain vulnerable populations, including individuals experiencing homelessness and housing instability.

To care for marginally housed and Veterans experiencing homelessness, the VA has maintained a long-standing partnership with the US Department of Housing and Urban Development (HUD) and has established the Housing and Urban Development-VA Supportive Housing (HUD-VASH) program to provide permanent supportive housing for eligible individuals.⁵ In addition to providing rental assistance vouchers for private housing, Veterans in the HUD-VASH program are provided case managers and other supportive services such as primary care, mental health treatment, and substance use counseling. Because many Veterans within the HUD-VASH program have complex social, medical, and mental health needs, maintaining their access to and engagement with services during the COVID-19 pandemic was a high priority.

In response to building evidence that targeted access to mobile devices can help mitigate potential digital health inequities among socially vulnerable populations,¹ in September 2020 the VA initiated a nationwide program to specifically distribute video-enabled tablets and cell phones to HUD-VASH participants during the COVID-19 pandemic. We performed a descriptive evaluation of this program to characterize device recipients and to assess in-person, telephone, and video-based engagement patterns across a variety of clinical settings. Findings from this work may be informative for other large-scale initiatives that look to engage high-risk patient populations in virtual-based care.

MATERIALS AND METHODS

Tablet and phone distribution

Beginning in 2016, the VA initiated a program that provided videoenabled tablets to any Veteran who was deemed to have an access barrier to necessary clinical services, and a technologic need.¹ In September 2020, the VA expanded this program to offer HUD-VASH participants a cell phone option as an alternative device. This evaluation focuses on devices distributed after September 2020 to HUD-VASH participants. The VA-issued tablets and cellphones were Apple© products with WiFi or 4G mobile data connectivity and had prepaid access to a national wireless provider's network. Both types of devices were preconfigured to be compliant with VA Office of Information and Technology requirements and were loaded with video-conferencing software and VA mobile applications.

All Veterans in HUD-VASH ($n = 83\ 684$) were eligible for a device, regardless of their time in the program.⁶ VA providers referred eligible Veterans through a standardized consult in the electronic health record. A social worker would receive the order and screen the applicant and complete an assessment note that captured the Veterans' need for a device. A Veteran could choose either a cell-phone or a tablet based upon their needs, though it is noted that some Veterans could have received a tablet through the prior tablet initiative. Following completion and verification, the chosen device was shipped to the Veteran. For Veterans located in temporary housing or not yet housed through HUD-VASH, devices could also be shipped to their local VA for pick-up.

Data sources and study population

Data on tablet and cell phone distribution were obtained from the VA's Denver Acquisition and Logistics Center which ships digital devices to Veterans. Clinical data (sociodemographics, clinical characteristics, and engagement outcomes) were obtained through the VA's Corporate Data Warehouse.⁷ To examine trends in in-person and virtual (telephone and video-based) clinical engagement we analyzed outpatient healthcare encounters that took place in the preintervention period (March 1, 2020, through August 31, 2020) and the postintervention period (September 1, 2020, through July 30, 2021). The analytic cohort for tablets consisted of 4454 individuals while the cell phone cohort consisted of 673 individuals, totaling 5127 individuals overall. We analyzed only individuals who had a device for at least 6 months through July 30, 2021.

Veteran patient characteristics

Patient characteristics associated with virtual and in-person visits were assessed among individuals who were actively receiving care from the VA (having at least 1 outpatient encounter in the previous year, per VA definitions) and who were enrolled in the HUD-VASH program. Patient-level data included sociodemographic and clinical characteristics, as presented in Table 1. All characteristics were ascertained in the 6-month period prior to receiving a device (March

Table 1. Sociodemographic and clinical characteristics by type of device

	Either device $N = 5127$	Cellphone $N = 673$	Tablet N = 4454	P-value
Age (years), mean (SD)	57.7 (10.8)	58.2 (10.7)	57.6 (10.8)	.16
Gender	× ,		. ,	.12
Female	628 (12.2%)	70 (10.4%)	558 (12.5%)	
Male	4499 (87.8%)	603 (89.6%)	3896 (87.5%)	
Race ethnicity		()	,	<.01
Hispanic or Latino	264 (5.1%)	29 (4.3%)	235 (5.3%)	
Non-Hispanic Black	2073 (40.4%)	216 (32.1%)	1857 (41.7%)	
Non-Hispanic White	2397 (46.8%)	367 (54.5%)	2030 (45.6%)	
Other	138 (2.7%)	26 (3.9%)	112 (2.5%)	
Marital status	× 7	X P	× ,	.11
Married	582 (11.4%)	62 (9.2%)	520 (11.7%)	
Other	4489 (87.6%)	601 (89.3%)	3888 (87.3%)	
Rurality	(0.00)			<.01
Rural	757 (14.8%)	126 (18.7%)	631 (14.2%)	(101
Urban	4254 (83.0%)	532 (79.0%)	3722 (83.6%)	
Priority status	.201 (0010 /0)	002 (///0/0)	0,22(0010,0)	<.01
No service disability (7,8)	223 (4.3%)	20 (3.0%)	203 (4.6%)	<.01
Low/moderate disability (2,3,6)	1188 (23.2%)	154 (22.9%)	1034 (23.2%)	
High disability (1,4)	1174 (22.9%)	93 (13.8%)	1081 (24.3%)	
Low income (5)	2436 (47.5%)	392 (58.2%)	2044 (45.9%)	
Region	2430 (47.378)	572 (38.278)	2044 (43.278)	<.01
Continental	674 (13.1%)	99 (14.7%)	575 (12.9%)	<.01
Midwest	1404 (27.4%)	269 (40.0%)		
Northeast	()	(/	1135 (25.5%)	
Pacific	1250 (24.4%)	117 (17.4%)	1133 (25.4%)	
	757 (14.8%)	36 (5.3%)	721 (16.2%)	
Southeast Chronic conditions	1042 (20.3%)	152 (22.6%)	890 (20.0%)	: 01
	215 (4 29()	5((0, 20/)	150 (2 (0/)	<.01
0	215 (4.2%)	56 (8.3%)	159 (3.6%)	
1-2	713 (13.9%)	114 (16.9%)	599 (13.4%)	
3-4	1319 (25.7%)	168 (25.0%)	1151 (25.8%)	
5+	2848 (55.5%)	325 (48.3%)	2523 (56.6%)	
Comorbidities	2 (2 (5 10())	20 (1.20())	225 (5.20())	22
Asthma	263 (5.1%)	28 (4.2%)	235 (5.3%)	.22
Cardiovascular disease	1006 (19.6%)	118 (17.5%)	888 (19.9%)	.14
Cancer	331 (6.5%)	31 (4.6%)	300 (6.7%)	.036
Stroke	285 (5.6%)	33 (4.9%)	252 (5.7%)	.43
Lung disease	900 (17.6%)	125 (18.6%)	775 (17.4%)	.46
Chronic pain	2414 (47.1%)	270 (40.1%)	2144 (48.1%)	<.01
Diabetes	1132 (22.1%)	126 (18.7%)	1006 (22.6%)	.024
Neurologic disorder	707 (13.8%)	77 (11.4%)	630 (14.1%)	.058
Gastrointestinal/liver disease	862 (16.8%)	107 (15.9%)	755 (17.0%)	.50
Hyperlipidemia	1800 (35.1%)	201 (29.9%)	1599 (35.9%)	.002
Dementia	80 (1.6%)	5 (0.7%)	75 (1.7%)	.066
Hypertension	2471 (48.2%)	294 (43.7%)	2177 (48.9%)	.012
Kidney disease	444 (8.7%)	59 (8.8%)	385 (8.6%)	.92
Tobacco use disorder	2279 (44.5%)	289 (42.9%)	1990 (44.7%)	.40
Anxiety	1744 (34.0%)	194 (28.8%)	1550 (34.8%)	.002
Psychiatric disease	1441 (28.1%)	158 (23.5%)	1283 (28.8%)	.004
Post-traumatic stress disorder	1685 (32.9%)	169 (25.1%)	1516 (34.0%)	<.01
Depression	3004 (58.6%)	349 (51.9%)	2655 (59.6%)	<.01
Substance use disorder	2940 (57.3%)	368 (54.7%)	2572 (57.7%)	.13

Note: Missing data ranged from 0.5% to 4.9%.

1, 2020, through August 31, 2020). Nineteen chronic conditions and diagnosis were defined using International Statistical Classification of Disease-10 Codes (ICD-10). Urban and rural definitions were derived from US Census Bureau criteria. We utilized the VA's priority-based enrollment score—which categorizes patients into 8 groups based on their service-connected disability rating, income, recent military service, and other factors.⁸ Veterans with high disability were those in group 1 (>50% service-connected disability) and 4 (catastrophically disabled). Veterans with low/moderate disability include groups 2 (30–40% service-connected disability), 3 (10–20% service-connected disability), and 6 (military exposures). Veterans with low income include those in group 5 (annual income below area-adjusted income threshold). Finally, Veterans with no service-connected disability included those from groups 7 and 8 (0% service-connected disability). Veterans who qualify for more than 1 priority group are preferentially placed in the highest priority group

P-value <.01 .59 .14

Table 2. Engagement characteristics of months following device receipt				
Types of encounters	Either device	Cellphone	Tablet	
Video-based	3308 (65.9%)	305 (45.3%)	3003 (67.4%)	
Phone-based	4998 (97.4%)	654 (97.1%)	4344 (97.5%)	
Video- or phone-based	5065 (98.7%)	661 (98.2%)	4404 (98.8%)	

Table 2. Engagement characteristics 6 months following device receipt

based on percent service connectedness, thus those with low income may be underestimated.

Classification of VA outpatient encounters

All encounters were classified into types of care using VA managerial cost accounting stop codes—which are used to characterize all VA outpatient encounters. Encounters are categorized into 6 mutually exclusive groups: primary care, mental health, subspecialty care, rehabilitation, HUD-VASH, and other (dental, pharmacy, laboratory, health screening visits, etc.). Based on the stop code and/or stop code pairing, each encounter was also categorized as in-person care, telephone-based, or video-based care. Changes in clinical engagement were defined by differences in the overall number of clinic visits that occurred 6 months prior to receiving a device to the 6month period after receiving a device.

Statistical analyses were performed using SAS Analytic Software (Version 9.4). Between group differences were assessed using chisquare testing for categorical variables and Student's *t* tests for continuous variables. To examine potential variation by VA priority status, we conducted secondary stratified analyses. This evaluation was conducted as part of a quality improvement initiative, and was designated as nonresearch.

RESULTS

Among the 5127 individuals who received either a tablet or cellphone, most were male (87.8%), with a mean (SD) age of 57.7 (10.8) years. Most identified as either non-Hispanic White (46.8%) or non-Hispanic Black (40.4%), were unmarried (87.6%) and lived in an urban setting (83.0%). Almost half of all recipients had low income (47.5%) and had 5 or more chronic medical condition diagnoses (55.5%). Most devices were distributed in the Midwest (27.4%), Northeast (24.4%), or the Southeast (20.3%) regions of the United States. Comparing those who received a tablet (n = 4454) to those who received a cellphone (n = 673), the mean age (SD) (58.2 [10.7]) years vs. 57.6 [10.8] years; P = .16) and gender distribution (male: 89.6% vs. 87.5%; P = .12) were similar, while a larger proportion of those who received a tablet were White (54.5% vs. 45.6%; P < .01), lived in a rural community (18.7% vs. 14.2%; P < .01) and had low income (58.2% vs. 45.9%, P < .01). There was a higher prevalence of mental health disorders, such as anxiety (34.8% vs. 28.8%; P < .01), psychiatric disease (28.8% vs. 23.5%; P < .01), posttraumatic stress disorder (34.0% vs. 25.1%; P < .01), and depression (59.6% vs. 51.9%; P < .01) among those who received a cellphone, compared to those who received a tablet (Table 1).

Engagement following receipt of a device

Engagement characteristics were similar between those who received a tablet or a cellphone, though fewer individuals with a cellphone had video encounters after receiving a device (45.3% vs. 67.4%; P < .001), compared to those who received a tablet (Table 2).
 Table 3. Change in absolute and relative number of visits after receiving a device

Type of engagement	Change in mean number of visits following device (rela- tive change [%] in number of visits)			
	Either device	Cellphone	Tablet	
In-person visits	$^{+1.4*}_{(+8\%)}$	+2.1 (+13%)	$^{+1.3*}_{(+7\%)}$	
Telephone visits	()	(-1.8*) (-12%)	-4.6^{*} (-23%)	
Video visits	+3.4* (+125%)	+0.9* (+64%)	+3.2* (+110%)	

Note: *P < .01 comparing pre- to postdevice 6-month period.

Compared to the 6-month period prior to receiving a device, among individuals who received any device, in-person and video engagement increased on average 1.4 visits (8%) and 3.4 visits (125%), respectively, while telephone engagement decreased (-5.2 visits; -27%). Compared to those who receive a cellphone, those who received a tablet had a smaller increase in in-person (+1.3 visits [8%] vs. +2.1 visits [13%]) visits and a greater decrease (-4.6 visits [-23%] vs. -1.8 visits [-12%]) in telephone visits. Simultaneously, those who received a tablet had a substantially larger increase in video-based engagement (+3.2 visits [+110%] vs. +0.9 [+64%]) than those who received a cellphone (Table 3).

Engagement based on care type

Among recipients of either device, there was a small increase in the mean number of in-person visits in subspecialty care (+0.4 visits), rehabilitation (+0.7 visits), HUD-VASH (+0.5 visits), and other (+0.6 visits) clinical services (includes diagnostic and ancillary services), with an average increase of 1.5 visits in in-person visits when all care types were combined. Similarly, there were small increases in the mean number of video visits among all clinical services, with the most notable increase of 2.9 visits in video-based care across combined care types. The mean number of telephone visits decreased for all assessed clinics but was most pronounced for HUD-VASH (-1.8 visits) and mental health (-1.9 visits) clinics. When all care types were combined, telephone visits decreased by 4.2 visits (Table 4).

Trends in in-person, telephone, and video-based engagement were similar in stratified analyses focused on individuals who received a tablet (Supplementary Table S1) or a cellphone (Supplementary Table S2). We performed stratified analyses based upon priority status (e.g., no service disability, low/moderate disability, high disability, and low income) and found similar trends (Supplementary Tables S3–S6).

DISCUSSION

The VA's initiative to distribute video-enabled tablets and cellphones among Veterans in the HUD-VASH program during the

Table 4. Engagement characteristics following receipt of a device based on clinical service

Forms of engagement	Mean number of vi	sits (SD) (<i>n</i> = 5127)	Change after receiving any	P-value
	Predevice	Postdevice	device (cellphone or tablet)	
In-person				
Primary care	1.4 (6.6)	1.3 (4.7)	-0.1	.60
Subspecialty care	1.6 (4.5)	2.0 (4.9)	+0.4	<.01
Rehabilitation	1.1 (2.0)	1.8 (2.4)	+0.7	<.01
HUD-VASH	3.3 (5.2)	3.8 (5.9)	+0.5	<.01
Mental health	9.1 (16.0)	9.0 (16.1)	-0.1	.87
Other	4.3 (7.3)	4.9 (8.2)	+0.6	<.01
Combined care	18.3 (26.3)	19.8 (26.8)	+1.5	<.01
Telephone				
Primary care	0.1 (0.8)	0.1 (0.7)	-0.1	>.01
Subspecialty care	0.7 (2.0)	0.7 (2.0)	0.0	.16
Rehabilitation	2.0 (2.7)	1.6 (2.5)	-0.2	<.01
HUD-VASH	8.6 (8.6)	6.8 (7.6)	-1.8	<.01
Mental health	14.8 (13.1)	11.3 (11.2)	-1.9	<.01
Other	1.2 (2.7)	1.0 (2.8)	-0.2	<.01
Combined care	19.1 (15.0)	14.9 (13.0)	-4.2	<.01
Video				
Primary care	0.1 (1.2)	0.2 (1.9)	+0.7	<.01
Subspecialty care	0.1 (0.3)	0.1 (0.5)	+0.2	<.01
Rehabilitation	0.1 (0.4)	0.2 (0.6)	+0.2	<.01
HUD-VASH	0.3 (1.6)	1.2 (3.2)	+1.6	<.01
Mental health	2.3 (7.3)	4.8 (10.5)	+3.2	<.01
Other	0.1 (0.8)	0.2 (1.5)	+0.7	<.01
Combined care	2.7 (7.9)	5.6 (11.2)	+2.9	<.01

Note: Subspecialty care includes: cardiology, pulmonology, nephrology, gastrointestinal, infectious disease, rheumatology, and surgical specialties; Rehabilitation includes: Physical therapy, speech-language pathology, spinal cord injury, mobility, prosthetics, and audiology clinics. Other includes: Diagnostic (i.e., imaging) and ancillary services (social work, nutrition, pharmacy).

HUD-VASH: Housing and Urban Development-VA Supportive Housing.

COVID-19 pandemic is, to our knowledge, one of the nation's largest programs focused on improving access to care for high-risk individuals by dispensing digital devices. We found that following receipt of these devices, in-person and video-based visits increased, while telephone visits decreased. These engagement trends were similar for tablet and cellphone recipients and were consistent across clinical setting (e.g., primary care, subspecialty care, etc.). These findings suggest opportunities for how health care systems can utilize video-enabled devices to support individuals with complex medical and social needs, such as those served in the HUD-VASH program.

First, we observed a "substitutive effect"—where telephonebased engagement decreased while in-person and video-based engagement increased at a commensurate rate. This finding suggests that the devices may have encouraged patients and/or their providers to conduct visits by video rather than phone. Prior studies have found that mobile technologies are feasible methods of communicating with marginally housed individuals,⁹ can improve medication adherence,¹⁰ and improve clinic no-show rates.¹¹ Such findings are not surprising as virtual-based care has, at the health care systems level, shown to decrease costs and improve health outcomes in a variety of settings and, at the patient level, improve access to specialty care and decrease travel times and patient costs.^{12–14} Other work in dispensing cellphones to socially vulnerable populations during the pandemic has appeared to be successful (results pending), but were performed on a much smaller scale.¹⁵

The shift in engagement patterns could also relate to systemslevel issues and rapidly shifting policies during the height of the pandemic. This assessment covered a time span 7–16 months into the pandemic, which was a period when health care systems, patients, and providers had become more accustomed to providing and receiving video-based care. The small increase in in-person engagement could also represent the liberalization of in-person access as COVID mitigation strategies (e.g., face masks and vaccines) were more widely implemented.¹⁶ Additionally, the increased amount of video-based engagement could subsequently be triggering the need for further in-person evaluations. These shifting engagement characteristics could also be a product of participants being a part of the HUD-VASH program, in which participation has been shown to lead to more health care engagement.¹⁷

Second, we observed that tablets may foster more use of videobased care than cellphones-regardless of the type of care being provided (primary care, subspecialty, mental health, etc.). Various factors likely influence the choice between a video and telephone-based visit, including patient and provider preferences, a health care system's telemedicine infrastructure, and a patient's access to video-enabled devices. Qualitative studies among patients and providers found that video-based care was seen as superior to telephone based care in that it provides visual cues, enables better rapport building, and leads to improved communication between providers and patients.¹⁸ Studies have also found that many Veterans report that video-based care was equivalent to, or preferred over in-person care.¹⁹ Importantly, others have highlighted that telephone visits remain an instrumental tool in addressing access disparities among those who lack access to videoenabled devices and should not be dismissed as a means of maintaining access to vulnerable populations.²⁰

Finally, our observations further support prior research that shows that individuals with complex medical and social needs have the capacity and interest to engage through virtual platforms. For example, previous work within the VA and other populations has found that Veterans experiencing homelessness frequently welcome digital-based care and believe that it has the potential to improve their health care engagement, access to care, and abilities to navigate the health care system.^{21–23} Moreover, a recent study found that early on in the COVID-19 pandemic, Veterans with higher disability and more chronic conditions were more likely to have video visits compared to their counterparts.²⁴ Yet, despite technologies potential to support health and wellbeing of at-risk populations, there still remain challenges in maintaining connectivity to the internet, improving digital literacy, and establishing trust between patients and providers in this developing medium of health care delivery.^{23,25,26}

Limitations

This assessment has several limitations. First, the changing landscape of how health care was provided during this pandemic likely impacted how individuals engaged with the health care system and likely influences our findings. Second, this study focused on Veterans within the VA health care system and may not be generalizable to other populations. Third, we only examined a 6-month period of postdevice engagement, which may not be long enough to obtain a true, long-term signal on how individuals will use these devices moving forward. Fourth, this assessment lacked a control group, so we were unable to determine whether in-person and virtual engagement increased among those who did not receive a video-enabled device. Fifth, we were unable to link the provided devices to clinical visits, which could overestimate the programs' impact, particularly among phone interactions given their overall ubiquity. Finally, we are unable to ascertain the impact of the ancillary services provided through the HUD-VASH program, which may affect how a Veteran engages with the health care system.

CONCLUSIONS

The distribution of video-enabled devices to Veterans in the HUD-VASH program during the COVID-19 pandemic may represent a promising model to provide virtual care to high-risk populations. While health care systems grapple with digital barriers, this program suggests that providing digital devices to patients with digital access needs may be one mechanism to overcoming certain aspects of the digital divide. As health care systems look for ways to bridge the digital divide among high-risk populations, future work should continue to explore how distributing video-enabled devices impacts health engagement and outcomes. In addition, studies should focus on cost-effectiveness evaluations among such programs to test financial feasibility, assess the need for other supportive structures and interventions that may be needed to improve engagement with digital health tools, and assess the longitudinal use of such devices during nonpandemic times.

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AUTHOR CONTRIBUTIONS

All below authors meet criteria for authorship per ICMJE requirements and made the following contributions. CMW: design, data analysis, authorship, editing. JVC: design, data analysis, authorship, editing. JH: design, data analysis, editing. CS: design, authorship, editing. LH: data analysis, authorship, editing. DZ: design, data analysis, authorship, editing.

SUPPLEMENTARY MATERIAL

Supplementary material is available at JAMIA Open online.

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The views expressed in this article are those of the author(s) and do not necessarily represent the views of the Department of Veterans Affairs.

CONFLICT OF INTEREST STATEMENT

None declared.

DATA AVAILABILITY

The data underlying this article cannot be shared publicly due to Veterans' Health Affairs policy on sharing patient data (e.g. for the privacy of individuals that participated in the study).

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