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## Video Telemedicine Experiences In COVID-19 Were Positive, But Physicians And Patients Prefer In-Person Care For The Future

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### Abstract

To help inform policy discussions about postpandemic telemedicine reimbursement and regulations, we conducted dual nationally representative surveys among primary care physicians and patients. Although majorities of both populations reported satisfaction with video visits during the pandemic, 80 percent of physicians would prefer to provide only a small share of care or no care via telemedicine in the future, and only 36 percent of patients would prefer to seek care by video or phone. Most physicians (60 percent) felt that the quality of video telemedicine care was generally inferior to the quality of in-person care, and both patients and physicians cited the lack

of physical exam as a key reason (90 percent and 92 percent, respectively). Patients who were older, had less education, or were Asian were less likely to want to use video for future care. Although improvements to home-based diagnostic tools could improve both the quality of and the desire to use telemedicine, virtual primary care will likely be limited in the immediate future. Policies to enhance quality, sustain virtual care, and address inequities in the online setting may be needed.

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The increased use of telemedicine during the COVID-19 pandemic has been hailed as key to ensuring health care access in future pandemics, as well as a boon for patients who generally cannot easily access in-person care.<sup>1,2</sup> However, the expansion of telemedicine during the pandemic was driven by a series of temporary regulatory and payment changes that will likely expire at the end of the nationwide public health emergency declaration.<sup>3</sup> There is ongoing debate about postpandemic telemedicine policies, particularly in primary care, where telemedicine can facilitate access to preventive services, management of chronic conditions, mental health screening, and triage for infectious disease.<sup>3,4</sup> One key factor in this debate is the perspective of providers and patients. Depending on their interest in using video-based care, policies to sustain telemedicine in the postpandemic era may need to adapt to demand.

Prior studies examining physicians' and patients' perceptions of telemedicine during the pandemic have largely found high overall satisfaction with telemedicine for primary care during the pandemic, but there are important limitations. Many examined care in single systems or settings for specialized populations<sup>5-7</sup> or relied on a relatively broad definition of satisfaction, such as willingness to recommend a practice to others.<sup>8</sup> Few studies have been national in scope or asked providers or patients to make direct comparisons between in-person and virtual care. Further, only a few studies addressed the perceived quality of clinical care.<sup>5-9</sup> Quantifying perceptions of the quality of care by video is central to understanding factors that could drive patients and physicians to continue with some virtual care after a pandemic.

To address gaps in understanding, our study used national surveys of primary care physicians and patients to examine not only overall perceptions of video-based telemedicine and its value during the COVID-19 pandemic but also perceptions of quality in direct comparison with in-person care. The surveys measured perceptions of quality overall and critical subcomponents, including rapport and time spent with a provider, as well as the operational features of the experience, including technical challenges. We also measured respondents' preference for continuing with virtual care or returning to in-person care after the pandemic, and we determined predictors of that preference.

## Study Data And Methods

### STUDY POPULATION AND SURVEY DESIGNS

We conducted dual nationally representative surveys: one among primary care physicians who had video visits with their patients during the COVID-19 pandemic and the other among patients who had a video visit with a primary care physician during this time. Video

visits were defined identically in both survey instruments: “a visit that you had using a computer, tablet or other device where you could see and talk to the patient/doctor live, and they could see and talk to you.” Both surveys were designed and analyzed by researchers at the Harvard T. H. Chan School of Public Health, as part of technical assistance to inform rapid-response communication efforts about telehealth by state and local public health departments through the Association of State and Territorial Health Officials and the National Public Health Information Coalition. The study was determined to be exempt by the Harvard T. H. Chan School of Public Health’s Institutional Review Board.

## DATA COLLECTION

The physician survey was conducted from February 12 to May 24, 2021. A random sample of physicians was obtained from the American Medical Association (AMA) Masterfile of all physicians in the US, limited to those with primary care specialty designations (family medicine, internal medicine, or general practice) who also indicated that their practice was office based. Respondents were invited by mail and could participate by return mail or online through a secure website, with reminders by mail, email, and telephone, based on available contact information.<sup>10,11</sup> Respondents in this analysis were screened for having any experience providing video visits during the pandemic. Participation was encouraged through a financial incentive, which was randomly assigned to be either \$25 cash up front or a \$75 check upon completion, as part of a separate study to examine the impact of incentives on response rate that was nested within the survey project.

The patient survey was conducted from April 30 to May 11, 2021. All respondents were drawn from the SSRS Opinion Panel, a nationally representative probability-based web panel of adults ages eighteen and older whose members are recruited using mailing address-based sampling and random-digit-dialing methods and who complete the survey online. To ensure that the sample included patients who did not have access to the Internet (but could have been assisted by a family member for a video visit, for example), a supplemental sample of people were contacted via random-digit dialing and completed the survey by phone. Respondents in this analysis were screened for experience with video visits with primary care physicians. Participation was encouraged with an incentive of \$5 (online participants) or \$10 (telephone participants) (see the online appendix for details).<sup>12</sup>

## SURVEY INSTRUMENTS AND MEASURES

The survey instruments included questions addressing four areas for this analysis: overall satisfaction and perception of the value of video-based care during the pandemic; perceptions of quality, including overall quality as well as rapport and time spent in the visit; experience with technical problems; and preference of modality for future visits. Questions about satisfaction and perceptions of quality used five-point Likert scales to assess direct comparisons between video and in-person experiences. Where possible, questions were designed to be parallel between the populations, but wording sometimes differed because of the context of each population. The patient survey was offered in both English and Spanish.

The content, question wording, response options, and flow of the questionnaires were informed by a review of prior surveys on similar topics both within and outside the

COVID-19 context<sup>9,13–15</sup> and with input from public health department staff, based on their experience working with physician groups on telehealth initiatives. In addition, the questionnaire was tested using live telephone interviews with each population, and subsequently, minor revisions were made to improve the clarity of questions and response categories. Survey questions are in the appendix.<sup>12</sup>

## STATISTICAL ANALYSIS

To mitigate the risk for nonresponse bias, the total physician sample was weighted to match the distribution of key demographics among primary care, office-based physicians in the AMA Masterfile, including age, gender, race and ethnicity, and geographic region, as well as to account for different incentives and the availability of contact information for reminders. The total patient sample was weighted on population parameters (sex, age, race and ethnicity, education, marital status, metropolitan status, census region, and civic engagement) to account for different selection probabilities and recruitment methods.<sup>16–18</sup> Population parameters were taken from the March 2020 Current Population Survey,<sup>19</sup> the 2020 census Planning Database,<sup>20</sup> and the 2017 Current Population Survey: Volunteering and Civic Life Supplement.<sup>21</sup> The final, weighted data for each population had a similar distribution of demographic measures as the parameter sources (see the appendix).<sup>12</sup>

We first calculated univariate point estimates for responses to all questions. We then estimated which characteristics were associated with a preference for in-person visits in the future (for physicians, “all” or “most” patient visits in person; for patients, “visits for this type of care in-person”), using logistic regression models, controlling for sex, age, race and ethnicity, and education (patients only), as well as the quality of care, time spent, rapport, and technological difficulties, such as problems with connectivity. We used these models to estimate adjusted rates of preference for continuing care in person after the pandemic for each predictor, keeping all other variables set at their means. Item nonresponse was less than 2 percent for any substantive question. Analyses were performed with Stata, version 17.0, using weighted data and the margins command. Estimates were considered statistically significant if  $p < 0.05$ .

## LIMITATIONS

This study had limitations. First, respondents may have been different from the total sample invited to complete the survey; weighting the data did not eliminate the possibility of nonresponse bias if nonresponders differed in meaningful ways from responders and in ways uncorrelated with demographics. Even though invitees were not given information about the topic in the invitation, physicians were mailed a copy of the survey, so it is possible that those who felt more strongly about telemedicine—either positively or negatively—were more likely to respond. Second, there could have been social desirability bias, such that respondents felt indirect pressure to report positive experiences. Results may therefore represent a high-water mark of positive views about video-based care, which would serve to reinforce the overall conclusion drawn from these data that there are important reservations about telemedicine. Third, the survey of physicians focused on those in office-based practices; in contrast, the survey of patients included experience with primary care physicians in all settings, as we felt that it would not be possible for patients

to accurately determine whether their provider was office based or not. Thus, results from the two surveys are not entirely parallel, and findings from physicians are generalizable only to a subset of primary care providers. We nonetheless believe that these physicians are particularly important for policy, as they may have the fewest resources to sustain virtual care. Fourth, all data were cross-sectional, so findings could not be interpreted as causal. Finally, the analysis did not include data about telephone-based visits, which may be viewed differently from video visits in terms of quality, for example, and could be examined in the future to form a complete picture of perceptions of telemedicine.

## Study Results

### STUDY SAMPLES

► **PHYSICIANS:** The physician survey had a 52 percent response rate, using the American Association for Public Opinion Research formula for a postscreener questionnaire.<sup>22</sup> Our analyses focused on 337 primary care physicians who had conducted video-based patient visits during the COVID-19 pandemic. Few (10 percent) conducted these visits with an on-demand telehealth company such as Teladoc (data not shown). More than half of respondents were male (55 percent), with approximately 40 percent being younger than age fifty (appendix table A1).<sup>12</sup> The majority (65 percent) were in smaller practices (five physicians or fewer).

► **PATIENTS:** In total, 14,320 people were invited to participate in the patient survey; 6,645 completed the survey (46 percent), of whom 1,417 had a video visit and were assigned to answer questions about video visits. Few (17 percent) had this visit with a telemedicine firm such as Teladoc (data not shown). More than half of these patients were female (57 percent), and the vast majority (81 percent) were younger than age sixty-five (appendix table A2).<sup>12</sup> The majority (60 percent) identified as White, and 56 percent had an income of \$50,000 or more. Nearly half (44 percent) said that they were in excellent or very good health.

### OVERALL PERCEPTIONS

Nearly all physicians (90 percent) said that their video visits during the pandemic went well (exhibit 1), and the same fraction of patients (90 percent) said that their most recent video visit went well.

Majorities of both physicians and patients felt that video visits were an important resource for accessing care during the pandemic. Nearly all physicians (86 percent) felt that video visits were important in reaching their patients, and half of patients (50 percent) reported that without access to video visits, they would have delayed care (39 percent) or not seen a doctor at all (11 percent) (data not shown).

### PERCEPTIONS OF QUALITY AND VISIT EXPERIENCE

More than half of physicians (60 percent) said that the quality of care when seeing a patient by video was worse than what they could provide in person during the pandemic, whereas 29 percent said that it was equivalent (exhibit 1). In comparison, 33 percent of patients

reported that the quality of their video visit was worse than in-person care, and 51 percent reported that it was equivalent.

Physicians' perceptions of quality varied by the type of care provided. A majority felt that the quality by video was worse than quality in person for routine or preventive care (66 percent) and urgent health needs unrelated to COVID-19, such as back pain (63 percent). About half (46 percent) said that it was worse for managing chronic conditions (appendix table A3).<sup>12</sup> In contrast, only 25 percent and 12 percent, respectively, said that mental health care or triage of patients with COVID-19 symptoms was of worse quality, meaning that majorities felt that the quality of care provided by video was equivalent or better for these types of care.

Among both physicians and patients, the most common reason for perceived lower quality of video care, by far, was challenges around conducting a physical exam (92 percent of physicians, 90 percent of patients) (appendix table A3).<sup>12</sup> The next most frequently mentioned reasons were also related to physical exams, such as difficulties in getting vital signs (67 percent among physicians) or concern about accuracy when patients had to take their own temperature or blood pressure (32 percent among patients).

Nearly half (45 percent) of physicians felt that rapport was worse by video than in person, whereas one in five patients (20 percent) felt that rapport was worse (exhibit 1). Among patients, 58 percent reported that they felt about as comfortable talking to the doctor on video as in person. In terms of time spent with the patient or doctor, a plurality of physicians and most patients said that they spent equivalent time in video visits compared with in-person visits (41 percent of physicians, 51 percent of patients).

Half of physicians (52 percent) noted very or somewhat frequent problems with video or audio quality, and more than a third said that they (very or somewhat) frequently experienced other internet connectivity problems (39 percent) or found that the video platform or software was not working well (34 percent) (appendix figure A1).<sup>12</sup> Reflecting on their most recent video visit, about a quarter of patients (23 percent) said that they had problems with video or audio quality, and nearly a fifth said that there were other connectivity problems (17 percent) or that the video platform was not working well (18 percent).

## **FUTURE PREFERENCES FOR VIRTUAL OR IN-PERSON CARE**

Only a fifth of physicians said that they would prefer to have a majority of visits after the pandemic by video or audio (9 percent said “as many as possible” and 10 percent said “most”), whereas 80 percent said that they would prefer to provide a majority of care in person (9 percent said “all” visits and 71 percent said “most patient visits in-person, with a smaller share by video or audio”) (exhibit 1). Only a third (36 percent) of patients said that they would prefer to have care for the same issue by video or audio after the pandemic—31 percent who preferred video visits and 5 percent who preferred telephone visits—whereas 64 percent preferred returning to in-person visits.

In adjusted analyses, physicians who experienced major technological challenges were more likely to want to return to having a majority of care in person than those who experienced no such difficulties (adjusted marginal probability, 95 percent versus 84 percent;  $p = 0.02$ ) (exhibit 2). However, negative experiences in any other dimension of their experience (that is, perceived quality, amount of time spent, and rapport) were not significantly associated with wanting to return to a majority of care in person. For example, the adjusted probability of wanting to return to in-person care for physicians who thought quality was worse by video was not statistically different from the probability of wanting to return to in-person care among those who thought quality was equivalent by video (adjusted marginal probability, 93 percent versus 89 percent;  $p = 0.47$ ).

Patients who were older, patients with lower educational attainment, and Asian patients were more likely than their counterparts to prefer returning to in-person visits for the same type of care after the pandemic (exhibit 3). For example, those who were age 65 or older, as well as those ages 55–64, were more likely than those ages 18–34 to want to return in person (adjusted marginal probability, age 65 or older versus ages 18–34: 85 percent versus 61 percent;  $p < 0.001$ ).

In adjusted analyses, patients who perceived video visits to be of worse quality or to provide worse rapport were more likely to prefer returning to in-person care for the same type of care after the pandemic compared with those who thought that video and in-person care were equivalent (quality: adjusted marginal probability, 89 percent versus 65 percent [ $p < 0.001$ ]; rapport: adjusted marginal probability, 92 percent versus 70 percent [ $p < 0.001$ ]) (exhibit 3). Conversely, those who felt that rapport and quality were better by video were more likely to prefer future visits by video. There was no evidence that technological challenges in their most recent visit affected patients' future modality preferences.

## Discussion

In these nationally representative surveys of primary care physician and patient views of telemedicine during the COVID-19 pandemic, we found that physicians and patients were satisfied with video visits for primary care and appreciated their value during a pandemic. Nonetheless, both groups preferred in-person care in the postpandemic world. Few physicians indicated a preference to continue telemedicine as their main modality of care, although many saw a role for a small share of care provided this way, particularly for mental health. In parallel, few patients would choose a video visit if in-person visits were available. These findings help explain the contrast between studies showing high satisfaction with virtual care and other evidence that observed a surge in online visits early in the pandemic followed by a decline in telemedicine visits of more than 60 percent.<sup>5–8,23</sup> Results suggest that in the long term, telemedicine can play a role in providing access to care during health emergencies, but it will likely play a smaller role in primary care, at least in the immediate future, with a focus on patients who prefer or need this modality and on specific conditions such as behavioral health.

Most physicians felt that the quality of care provided by video was generally worse than what they could provide in person, even in a pandemic. That said, perception of quality

varied across visit types, with behavioral health seen as largely equivalent. Further, the most common concern about quality was the lack of a physical exam. Together this evidence suggests that perception of quality may vary even within categories such as management of chronic conditions, such that visits for which a physician feels a physical exam is important are the least likely to be seen as high quality in the video setting. This relatively straightforward metric could be used as a guide for identifying which visits could be accomplished with high fidelity in a video setting. It may also be that improvements to home tools that can facilitate the physical exam (for example, automated blood pressure cuffs, oxygen monitors, digital stethoscopes, and devices that facilitate a remote electrocardiogram) could improve perceptions of—or actual—quality of care from the physician’s perspective. However, there may be limits to the appeal, as most physicians wanted to provide a majority of care in person in the future, even among those who thought that the quality of care was equivalent between video and in-person visits. Our results also suggest that having multiple technology challenges (for example, connectivity) was associated with reduced interest in video-based care. Thus, improvements to the technology may be of some benefit, although this finding was limited to physicians who faced multiple, frequent challenges. Collectively, then, these findings suggest that there may be more fundamental barriers to physicians providing a majority of care virtually. For physicians to do this, even from within an office, might mean less human interaction, less physical movement, and perhaps less enjoyment in practicing medicine.<sup>15</sup>

Patients had a more positive view of quality of care in the video care setting, with more patients than physicians thinking that quality and rapport were equivalent in that setting. Results may reflect the fact that patients were evaluating only a single visit and thus made a more neutral judgment in the absence of more experience, or perhaps that they did not face cumulative burdens from video care in the way that physicians may have. Consistent with this idea, for patients, quality of care in the video setting was linked to the appeal of virtual care in the future. Because concerns about quality were connected to not having a physical exam, this reinforces the possibility that some kinds of care are better suited to video care even from the patient’s perspective and that improvements to home tools such as blood pressure cuffs could improve perceived or actual quality from the patient side and facilitate willingness to seek virtual care when appropriate.

What we did find is that older respondents, those with less education, and those who were Asian were less likely to want to continue using video visits. This is consistent with concerns about a “digital divide” in telemedicine use that favors those who are younger, wealthier, and White, both in the COVID-19 pandemic and more broadly.<sup>24</sup> Although the digital divide in telemedicine is often conceptualized as differential access to internet-based services, our findings suggest a digital divide even among those who already have access to video-based care, given that all respondents successfully completed a video visit, and even accounting for technological challenges.<sup>25</sup> Plausibly, these inequities could reflect respondents’ comfort level with technology or concerns about discrimination in the online environment, even among those with basic access to video-based care.



## Implications For Policy And Practice

From a public health perspective, a future health system with a meaningful minority of care delivered virtually may be a significant improvement compared with the prepandemic status quo. Ensuring that a small portion of video-based care can continue means that physicians will be able to expand telemedicine relatively easily, if needed, during future waves of COVID-19 or in other infectious disease outbreaks.<sup>26,27</sup> There is also a small fraction of physicians who want to continue providing a majority of their care virtually, and there are some types of care, particularly care not requiring a physical exam, that a majority feel can be appropriately addressed virtually. Although our data here focused on video care, it may be that telephone visits are also appropriate in some of these cases. Finally, having virtual care options, by either video or phone, may also be important to meet the needs of patients who have trouble accessing care in person.<sup>5</sup> Policies intended to support virtual care during the COVID-19 pandemic may be needed in the longer term to ensure that there is a business case for small-scale, virtual care in medical practices. Previously proposed policies that may support the continued availability of telemedicine include ensuring sufficient provider reimbursement, easing of regulations on interstate practice, allowing for providers to serve out-of-state patients, and developing new models of health care delivery that enable the seamless integration of virtual care into clinical workflows.<sup>4,25</sup>

In addition, important policy shifts may be needed to enhance the quality of virtual care as a goal in its own right. In particular, more exploration of the technologies that can support a distanced, virtual physical exam are needed. Policies to pay for remote monitoring tools such as blood pressure cuffs, pulse oximetry, and electrocardiograms may be helpful.<sup>28</sup> Moreover, as such policies are considered, care should be taken to address the existing digital divide and avoid exacerbating it. Beyond policies aimed at improving online access in underresourced communities, such as the Federal Communications Commission's COVID-19 Telehealth Program and Connected Care Pilot Program fund,<sup>29,30</sup> additional approaches may be needed. For example, training and support for patients who feel less comfortable with the technology may be needed, and medical practices may need funding for staff time and other resources to help these patients and overcome barriers to continued use. In addition, there should be an examination of potential age-based or race and ethnicity-based bias and discrimination within video care visits themselves.

## Conclusion

We found that telemedicine was widely accepted and appreciated by patients and physicians early in the COVID-19 pandemic; however, majorities of both groups expressed a preference for in-person visits in the future. Thus, sustaining the share that do wish to provide or seek virtual care is important, from both a public health preparedness perspective as well as a clinical perspective, insofar as those patients might not have easy access to care outside the virtual setting. More physicians see the quality of care by video as inferior, with concerns about limitations on physical examinations that are mirrored by patients. Investing in tools that enhance the virtual physical may be beneficial both in their own right and in terms of facilitating virtual care when needed. Policies should be mindful of the risk of exacerbating

differences in high-quality experiences among those with different educational, income, and racial and ethnic back-grounds.

## Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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Perceptions of the quality of care for video visits compared with in-person visits during the COVID-19 pandemic among primary care physicians and patients, February–May 2021

**EXHIBIT 1**

	Physicians who conducted video visits (n = 337)		Patients who attended video visits (n = 1,417)	
	No.	Weighted %	No.	Weighted %
Overall assessment of video-based visits: how well visit(s) went				
Very well	131	41	822	56
Somewhat well	175	49	489	34
Not too well	27	9	72	7
Not well at all	1	0	34	3
Perceived quality of video-based visits compared with in-person visits				
Much better	6	2	56	6
A little better	12	4	106	10
About the same	96	29	777	51
A little worse	164	49	394	26
Much worse	46	12	84	7
Perceived rapport during video-based visits compared with in-person visits				
Much better	10	4	110	10
A little better	22	7	158	12
About the same	154	45	886	58
A little worse	126	38	210	15
Much worse	23	7	53	5
Perceived time spent during video-based visits compared with in-person visits				
Much more	21	7	73	8
A little more	46	16	152	12
About the same	146	41	771	51
A little less	99	28	329	23
Much less	23	7	92	6
Preference for future visits				
All or most visits by video or audio	58	19	518	36
All or most visits in person	272	80	899	64

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**SOURCE** Authors' analysis of data from the Harvard T. H. Chan School of Public Health Physician COVID-19 Telehealth Poll, February–May 2021, and from the Harvard T. H. Chan School of Public Health Patient COVID-19 Telehealth Poll, May 2021. **NOTE** Totals might not add to 100 percent, and percentages added manually may be different from sums reported in the text or exhibits, because of rounding or item nonresponse. Both physicians and patients were asked to respond to survey questions based on their experience, but question wording could not be identical. Patients were asked to respond based on their only or most recent visit, while physicians responded based on their collection of visits.

**EXHIBIT 2**

Adjusted probability of preference for in-person future visits (postpandemic) among primary care physicians, by characteristics and perceptions regarding video visits, February–May 2021

	Physicians who prefer all or most future visits in person (n = 306)	Adjusted marginal probability	Adjusted odds ratio	p value
Gender				
Female	119	96%	Ref	Ref
Male	187	86	0.26	0.02
Age, years				
25–49	113	88	Ref	Ref
50–59	111	92	1.58	0.39
60 or older	82	93	1.85	0.25
Race and ethnicity				
Non-Hispanic White	204	95	Ref	Ref
Non-Hispanic Black	13	59	0.08	0.002
Non-Hispanic Asian	56	84	0.29	0.02
Non-Hispanic other <sup>a</sup>	12	60	0.08	0.005
Hispanic	21	88	0.40	0.28
Perceived quality of video visits				
Much or a little better than in person	16	84	0.63	0.57
About the same as in person	93	89	Ref	Ref
A little or much worse than in person	197	93	1.49	0.47
Perceived time spent with patients during video visits				
Much or a little more time than in person	61	75	0.29	0.02
About the same amount of time as in person	113	91	Ref	Ref
A little or much less time than in person	110	96	2.40	0.19
Perceived rapport with patients during video visits				
Much or a little better than in person	29	54	0.13	0.001
About the same as in person	143	90	Ref	Ref
A little or much worse than in person	134	95	2.19	0.17
No. of frequent technological challenges <sup>b</sup>				
0	61	84	Ref	Ref

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	Physicians who prefer all or most future visits in person ( <i>n</i> = 306)	Adjusted marginal probability	Adjusted odds ratio	<i>p</i> value
1–2	119	89	1.65	0.33
3–4	126	95	3.79	0.02

**SOURCE** Authors' analysis of data from the Harvard T. H. Chan School of Public Health Physician COVID-19 Telehealth Poll, February–May 2021. **NOTE** Adjusted odds ratio reference value is 1.00.

<sup>a</sup>Includes providers who identify as American Indian/Alaska Native, Native Hawaiian or other Pacific Islander, or other or multiracial and those who did not answer.

<sup>b</sup>Respondents were asked to select from four challenges: the video platform or software not working, patients not being able to use the video platform, problems with video or audio quality, and other internet connectivity problems.



**EXHIBIT 3**

Adjusted probability of preference for in-person future visits (postpandemic) among patients, by characteristics and perceptions regarding video visits, April–May 2021

	Patients who prefer future visits in person (n = 1,376)	Adjusted marginal probability	Adjusted odds ratio	p value
Gender				
Female	782	71%	Ref	Ref
Male	580	71	0.99	0.96
Age, years				
18–34	276	61	Ref	Ref
35–44	318	59	0.92	0.78
45–54	247	71	1.59	0.14
55–64	236	79	2.44	0.007
65 or older	299	85	3.69	<0.001
Race and ethnicity				
Non-Hispanic White	926	66	Ref	Ref
Non-Hispanic Black	163	74	1.48	0.18
Non-Hispanic Asian	70	88	3.89	<0.001
Non-Hispanic other <sup>a</sup>	36	75	1.51	0.34
Hispanic	181	76	1.58	0.17
Education				
High school or less	208	81	Ref	Ref
Some college or two-year college degree	383	68	0.50	0.01
Four-year college degree	323	64	0.42	0.004
Postgraduate education	462	61	0.38	0.001
Perceived quality of video visits				
Much or a little better than in person	158	38	0.34	0.001
About the same as in person	756	65	Ref	Ref
A little or much worse than in person	462	89	4.29	<0.001
Perceived time spent with doctor during video visits				
Much or a little more time than in person	219	70	0.93	0.82
About the same amount of time as in person	751	71	Ref	Ref

	Patients who prefer future visits in person ( <i>n</i> = 1,376)	Adjusted marginal probability	Adjusted odds ratio	<i>p</i> value
A little or much less time than in person	406	71	1.00	0.99
Comfort talking to doctor during video visits				
Much or a little better than in person	263	41	0.29	<0.001
About the same as in person	865	70	Ref	Ref
A little or much worse than in person	248	92	4.96	<0.001
No. of frequent technological challenges <sup>b</sup>				
0	998	69	Ref	Ref
1–2	284	73	1.19	0.52
3–4	94	77	1.44	0.34

**SOURCE** Authors' analysis of data from the Harvard T. H. Chan School of Public Health Patient COVID-19 Telehealth Poll, May 2021. **NOTE** Adjusted odds ratio reference value is 1.00.

<sup>a</sup>Includes patients who identify as American Indian/Alaska Native, Native Hawaiian or other Pacific Islander, or other or multiracial and those who did not answer.

<sup>b</sup>Respondents were asked to select from four challenges: the video platform or software not working, patients not being able to use the video platform, problems with video or audio quality, and other internet connectivity problems.