Factors Associated with Never Having Had A Video Visit

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Introduction: Disparities in access to video-visit services have been described during the COVID-19 pandemic. Thus, we aimed to examine factors associated with not having a video-visit among a medically high-risk ambulatory population.

Methods: In this cross-sectional study, our telephone-based survey was designed to understand the health-related challenges, social needs, and access to and attitudes toward video-visit.

Results: In the multivariable analysis, having fewer symptoms unrelated to COVID, more barriers to medications, and less confidence with video-visit software were significantly associated with an increased prevalence of not having a video-visit.

Conclusions: Our findings suggest that additional efforts are needed to eliminate disparate video-visit use. (J Am Board Fam Med 2022;35:634–637.)

Keywords: Chronic Disease, COVID-19, Cross-Sectional Studies, Disease Management, Multimorbidity, Pandemics, Primary Health Care, Telemedicine
Table 1. Characteristics of Study Participants, Stratified by Video Visit Status

| Characteristics                                      | Overall (n = 214) | Ever had a video visit? | p-Value |
|------------------------------------------------------|-------------------|-------------------------|---------|
|                                                      | n (%)             | Yes (n = 62)           | No (n = 152) |         |
| Demographics                                         |                   |                        |         |
| Age                                                  |                   |                        |         |
| Under 60                                             | 52 (24.3%)        | 22 (35.5%)             | 30 (19.7%) | 0.008   |
| 60 to 79                                             | 113 (52.8%)       | 33 (53.2%)             | 80 (52.6%) |         |
| 80 or older                                          | 49 (22.9%)        | 7 (11.3%)              | 42 (27.6%) |         |
| Female                                               | 142 (66.4%)       | 45 (72.6%)             | 97 (63.8%) | 0.22    |
| Race                                                 |                   |                        |         |
| Other                                                | 83 (38.8%)        | 27 (43.5%)             | 56 (36.8%) | 0.57    |
| Mixed                                                | 6 (2.8%)          | 2 (3.2%)               | 4 (2.6%)  |         |
| Black                                                | 55 (25.7%)        | 17 (27.4%)             | 38 (25.0%) |         |
| White                                                | 70 (32.7%)        | 16 (25.8%)             | 54 (35.5%) |         |
| Hispanic/Latino                                      | 65 (30.4%)        | 24 (38.7%)             | 41 (27.0%) | 0.090   |
| Insurance                                             |                   |                        |         |
| Other                                                | 35 (16.4%)        | 10 (16.1%)             | 25 (16.4%) | 0.013   |
| Medicare                                             | 142 (66.4%)       | 34 (54.8%)             | 108 (71.1%)|         |
| Medicaid                                             | 37 (17.3%)        | 18 (29.0%)             | 19 (12.5%) |         |
| Social risk factors                                  |                   |                        |         |
| Feel lonely                                          | 34 (15.9%)        | 12 (19.4%)             | 22 (14.5%) | 0.38    |
| Has enough food at home                              | 197 (92.1%)       | 59 (95.2%)             | 138 (90.8%)| 0.41    |
| Has a steady place to live today                     | 200 (93.5%)       | 57 (91.9%)             | 143 (94.1%)| 0.55    |
| Has help in home with daily activities               | 110 (51.4%)       | 35 (56.5%)             | 75 (49.3%) | 0.35    |
| Clinical risk factors                                |                   |                        |         |
| Feel anxious or sad                                  | 42 (19.6%)        | 12 (19.4%)             | 30 (19.7%) | 0.95    |
| Currently has medications that need to be refilled   | 83 (38.8%)        | 24 (38.7%)             | 59 (38.8%) | 0.99    |
| Had symptoms unrelated to COVID (during the COVID    | 102 (47.7%)       | 35 (56.5%)             | 67 (44.1%) | 0.10    |
| pandemic since March 2020)                           |                   |                        |         |
| Number of symptoms unrelated to COVID, median (IQR^) | 0 (0, 2.0)        | 1.0 (0, 3.0)           | 0 (0, 1.0) | 0.011   |
| Practice level and health care system related factors|                   |                        |         |
| Type of primary care provider: Attending             | 109 (50.9%)       | 28 (45.2%)             | 81 (53.3%) | 0.28    |
| Test/Procedure canceled/ rescheduled                 | 68 (31.8%)        | 22 (35.5%)             | 46 (30.3%) | 0.46    |
| Comfort with in-person health visit, median (IQR)    | 1.0 (1.0, 3.0)    | 1.0 (1.0, 3.0)         | 1.0 (1.0, 4.0) | 0.47  |
| Difficulty getting care at our practice (Very/Extremely) | 36 (16.9%)     | 9 (14.8%)              | 27 (17.8%) | 0.60    |
| How well-connected to PCP at WCIMA (Very well/ Somewhat) | 169 (79%)       | 52 (83.9%)             | 117 (77.0%)| 0.26    |
| Experienced any barriers to receiving your medications | 29 (13.6%)       | 3 (4.8%)               | 26 (17.1%) | 0.017   |
| Had a contact with a doctor/ health care system for non-COVID related symptoms | 65 (64.4%) | 28 (80%) | 37 (56%) | 0.017 |

Continued
utilization. As part of this survey, we included questions on access to and attitudes toward video-visit. Twenty-three questions from the larger survey are incorporated into this investigation. Trained medical students and care managers administered the survey using a prewritten script.

To assess differences between video-visit users versus Nonusers we used Chi-Squared, Fisher’s Exact, and Wilcoxon Rank-sum tests as appropriate. To examine which factors were associated with never having a video-visit, we used multivariable robust Poisson regression, including those that were significant at $P < .10$ in the univariate analyses. Model results were significant at $P < .05$. As a quality improvement initiative, institutional review board approval was not required.

### Results

299 high-risk ambulatory patients were identified for outreach. 85 patients were excluded because they were failed to be reached by phone after 3 attempts ($n = 59$), declined to participate ($n = 12$), were seeking primary care elsewhere ($n = 7$), and had passed away ($n = 7$). A total of 214 high-risk ambulatory patients participated in the study. A total of 214 patients participated. The majority were more than 60 years old (75.7%), 66.4% were female, 25.7% were Black, 30.4% were Hispanic/Latino, and 66.4% had Medicare (Table 1). Among them half (51.4%) required help at home, 8% had food insecurity, and 6.5% reported housing insecurity.

Overall, 71% ($n = 152$) of participants reported never having a video-visit. Participants who never had 1 tended to be older, Non-Hispanic/White, and have Medicare insurance. Other factors in the univariate analysis significantly associated with not having a video-visit included having fewer medical symptoms, less contact with the doctor or health care system, more barriers to medication, and less confidence with video software. Social risk factors were not associated with video-visit utilization (Table 1).

### Table 1. Continued

| Characteristics | Overall ($n = 214$) | Ever had a video visit? | | |
|-----------------|---------------------|-------------------------|----------------|----------------|----------------|
|                 | n (%)               | Yes ($n = 62$)          | No ($n = 152$) | p-Value        |

Technology-related factors

- Confidence in installing video software on computer/smart phone
  - Very confident: 75 (35%) Yes 36 (58.1%) No 39 (25.7%)
  - Somewhat confident: 32 (15%) Yes 12 (19.4%) No 20 (13.2%)
  - Not confident/unsure how to install: 107 (50%) Yes 14 (22.6%) No 93 (61.2%)

A value of 1 indicates “Completely comfortable” and 5 indicates “Completely uncomfortable”.

Abbreviations: IQR, Inter-quartile range; PCP, Primary care provider; WCIMA, Weill Cornell Internal Medicine Associates.

### Table 2. Results of Multivariable Robust Poisson Regression Analysis to Identify Factors Associated with Never Having Had a Video Visit

| Characteristics | PR (95% CI) |
|-----------------|-------------|
| Demographics    |             |
| Age (years)     |             |
| Under 60        | 1.06 (0.75, 1.50) |
| 60 to 79        | Reference   |
| 80 or older     | 1.28 (0.95, 1.72) |
| Hispanic        | 0.97 (0.71, 1.33) |
| Insurance       |             |
| Medicare        | Reference   |
| Medicaid        | 0.68 (0.40, 1.16) |
| Other           | 1.32 (0.91, 1.91) |
| Clinical risk factors |     |
| Counts of non-COVID-related symptoms | 0.86 (0.76, 0.99) |

Practice level and health care system related factors

- Experienced barriers to medication receipt: 1.62 (1.22, 2.15)
- Non-COVID: No contact doctor/health care system: 1.20 (0.94, 1.53)

Technology-related factors

- Confidence in installing video software
  - Not confident/unsure how to install: Reference
  - Somewhat confident: 0.80 (0.45, 1.41)
  - Very confident: 0.68 (0.47, 0.99)

Abbreviations: PR, Prevalence ratio; CI, Confidence interval.
In the multivariable analysis, having fewer symptoms the patient identified as unrelated to COVID (PR: 0.86; 95% CI: 0.76, 0.99), more barriers to medications (PR: 1.62; 95% CI: 1.22, 2.15), and less confidence with video-visit software (PR: 0.68; 95% CI: 0.47, 0.99) were significantly associated with an increased prevalence of not having a video-visit (Table 2). In addition, approximately 20% of those who never had a video-visit reported a lack of access to technological resources or other barriers including: lack of awareness about video-visit availability and general discomfort toward using video-visits for health-related problems.

Discussion
Despite efforts to expand video-visit access and utilization, our study suggests that a digital divide persists among our high-risk, multi-morbid patients.\(^4\) In addition, it seems that patients who might benefit from increased access to care – such as those with greater difficulty accessing medications – were less likely to have participated in video-visits.

Our findings expand on a recent study by Wray et al (2021) which found that more than 1 in 6 US adult are not telemedicine ready, with older, minoritized adults with government insurance at even higher risk.\(^4\) We also found that low confidence with video-visit software was associated with decreased video-visit utilization. According to the Pew Research Center, 61% of seniors, 76% of low-income Americans, and most racial and ethnic minorities (83% Black and 85% Hispanic) have smartphones and broadband access. This, along with our findings, suggests that not having hardware may only be part of the problem. Rather, system and clinic level policies that not only advertise video-visit services, but also help with video-visit readiness, are needed to eliminate disparate use of video-visits.\(^5\)

Some limitations of our study should be noted. In addition to a small sample size, participants were from a single practice in NYC, which limits generalizability.

In conclusion, our findings suggest that additional efforts to increase video-visit use among multi-morbid patients in primary care are needed. Focusing outreach strategies on multi-morbid patients with barriers to accessing medications, and those with low confidence with telemedicine software may be warranted.

To see this article online, please go to: http://jabfm.org/content/35/3/634.full.

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