Assessing the Impact of a Pre-visit Readiness Telephone Call on Video Visit Success Rates

BACKGROUND

During the COVID-19 pandemic, the Veterans Health Affairs (VA) prioritized the use of video-based over telephone-based interactions given the perception of higher quality care. Recognizing that many patients may lack the digital literacy needed to complete video-based visits, the San Francisco VA Medical Center (SFVA) instituted a pre-visit telephone call initiative, aimed at preparing patients for scheduled video-based visits to improve success rates (i.e., not converting video interactions to telephone calls).

METHODS

Between June 1 and September 30, 2021, we prospectively evaluated the impact of an unscheduled pre-visit telephone call on video-visit success rates in a SFVA virtual care clinic. Structured telephone calls were made 1–3 days prior to a video-based visit by one trained medical assistant (MA) who reviewed with the patient how to log onto the virtual medical room, tested audio and video connections, and answered any technical questions. If the MA was unable to solve these issues or if the patient requested, the video-based visit was preemptively converted to a telephone visit. Patients with visits scheduled on Monday, Wednesday, and Friday were allocated to receive a telephone call, while those with a visit scheduled on a Tuesday or Thursday did not receive a call. A template was added to all providers' notes prior to the intervention which allowed for chart extraction of patient characteristics and the outcomes (video-to-telephone conversion rates and time spent troubleshooting). This work was deemed quality improvement by the SFVA institutional review board.

RESULTS

A total of 243 patients were seen, with 103 in the usual care group and 140 receiving a pre-visit telephone call. Patient characteristics were similar between the two groups, though a greater proportion in the intervention group were White (59% vs. 49%, p <0.02). Among the intervention group, two-thirds required a single pre-visit call from the MA, while one-third needed two or more calls. Most pre-visit calls (91%) lasted <5 min. One-in-six scheduled video visits were preemptively converted to a telephone call by the MA (Table 1).

Compared to usual care, use of a pre-visit telephone call reduced the number of failed video calls by one-third, 14% vs. 22% (p=0.02). Additionally, pre-visit telephone calls significantly reduced the time providers spent troubleshooting technical issues during video visits, with most providers reporting spending <5 min (90% vs. 61%, p=0.01), compared to the control group (Table 2).

CONCLUSION

In this single-center, prospective assessment of a pre-video visit phone call initiative, we found that a pre-visit telephone call decreased the number of video visits that were converted to telephone visits and decreased the amount of time clinicians and patients spent troubleshooting technical issues during their video visit. These findings coincide with similar interventions and illustrate that structured pre-visit telephone calls may be an important tool to improve the quality of video-based care.[1]

While this study did not assess the impact on digitally vulnerable populations, such an intervention may be particularly helpful in addressing digital inequities. For instance, several studies have found that older age, Black race, Hispanic ethnicity, Medicaid insurance coverage, and living in zip codes with low broadband access are associated with the following: (1) lower probability of using video-based care, and (2) greater conversion of video visits to telephone visits.[2–4] Focusing this type of intervention on digitally vulnerable populations could be one simple, system-based way to bridge the digital divide. Moreover, a recent study found that practice- (38%) and clinician-level (26%) factors drove more of the variation in video visit use than patient-level factors (9%)[3]—illustrating that health care providers and systems have significant control over the modality through which they deliver care.[5] We speculate that conversion to telephone call even

Table 1 Patient and Intervention Characteristics

	Usual telemedicine care (*n*=103)	Pre-visit telephone call (*n*=140)	p-value
Age, years	59.3 (±16.2)	58.1 (±17.2)	0.15
Sex, *n* (%)			0.11
Male	75 (72%)	110 (76%)	
Female	28 (28%)	30 (24%)	
Race and ethnicity, *n* (%)			0.02
White	50 (49%)	83 (59%)	
Black	10 (10%)	8 (6%)	
Asian, Native	6 (6%)	8 (6%)	
American, Pacific Islander	5 (5%)	10 (7%)	
Hispanic			
Location, *n* (%)			0.10
Urban	66 (64%)	92 (66%)	
Rural	37 (36%)	48 (34%)	
Average no. of comorbidities, *n* (±SD)	14 (+8)	11 (+11)	0.07
No. of pre-visit phone call attempts			NA
1	–	92 (66%)	
2	--	43(31%)	
3	--	4 (3%)	
Duration of pre-visit phone call, *n* (%)			NA
<5 min	–	128 (91%)	
5–10 min	--	9 (6%)	
>10 min	--	4 (3%)	
Conversion to phone call prior to video visit, *n* (%)	–	21 (15%)	NA

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Declarations:

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after our intervention (*n*=20) may have been due, in part, to provider-side issues.

Our study is limited as it was performed within a single center in the VA, which may not be generalizable, and appeared to have more White individuals in the intervention group—which historically have higher digital literacy skills.[6] Additionally, we did not assess if patients who were pre-emptively converted to telephone calls had video and/or WiFi-enabled devices—which would limit their ability for video engagement.

In conclusion, as health care systems and clinics continue to use, expand, and optimize video-based technologies, we find that a pre-visit telephone call may be one way to optimize the efficiency and effectiveness of video-based care.

Table 2 Video Conversion Rates and Time Troubleshooting

	Usual telemedicine care (*n*=103)	Pre-visit telephone call (*n*=140)	p-value
Converted from video to phone during appointment			
Yes	22 (22%)	20 (14%)	0.02
Provider time troubleshooting during video visit			0.01
<5 min	63 (61%)	126 (90%)	
5–10 min	27 (26%)	11 (8%)	
>10 min	13 (13%)	3 (2%)	

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