# Health Services Research

# Patient Satisfaction with Telephone Versus Video-Televisits: A Cross-Sectional Survey of an Urban, Multiethnic Population

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OBJECTIVE	To examine differences between telephone and video-televisits and identify whether visit modal-
	ity is associated with satisfaction in an urban, academic general urology practice.
METHODS	A cross sectional analysis of patients who completed a televisit at our urology practice (summer
	2020) was performed. A Likert-based satisfaction telephone survey was offered to patients within
	7 days of their televisit. Patient demographics, televisit modality (telephone vs video), and outcomes
	of the visit (eg follow-up visit scheduled, orders placed) were retrospectively abstracted from each
	chart and compared between the telephone and video cohorts. Multivariate regression analysis was
	used to evaluate variables associated with satisfaction while controlling for potential confounders.
RESULTS	A total of 269 patients were analyzed. 73% (196/269) completed a telephone televisit. Compared
	to the video cohort, the telephone cohort was slightly older (mean 58.8 years vs. 54.2 years,
	P = .03). There were no significant differences in the frequency of orders placed for medication
	changes, labs, imaging, or for in-person follow-up visits within 30 days between cohorts. Survey
	results showed overall 84.7% patients were satisfied, and there was no significant difference
	between the telephone and video cohorts. Visit type was not associated with satisfaction on multi-
	variable analyses, while use of an interpreter [OR:8.13 (1.00-65.94); $P = .05$ ], labs ordered
	[OR:2.74 (1.12-6.70); P = .03] and female patient gender $[OR:2.28 (1.03-5.03); P = .04]$ were sig-
	nificantly associated with satisfaction.
CONCLUSION	Overall, most patients were satisfied with their televisit. Additionally, telephone- and video-tele-
	visits were similar regarding patient opinions, patient characteristics, and visit outcome. Efforts to
	increase access and coverage of telehealth, particularly telephone-televisits, should continue past
	the COVID-19 pandemic. UROLOGY 00: $1-7$ , 2021. © 2021 Elsevier Inc.

Telehealth is the use of technology to deliver, promote, and support remote clinical care and education. Modalities such as live video teleconferencing enable physicians and other health care providers to deliver health care services by means other than seeing a patient face-to-face in the office.<sup>1</sup> Historically, telehealth has predominantly focused on increasing access to health care for patients in remote settings, such

1

as patients living in rural areas or soldiers who are deployed.<sup>2,3</sup> However, the recent COVID-19 pandemic catapulted interest in the use of telehealth, leading Centers for Medicare and Medicaid Services (CMS) to temporarily allow reimbursement for both video and phone-based telemedicine visits (televisits), and waive the site-of-origin stipulation.<sup>4,5</sup>

Previous studies have examined strengths and weaknesses of telehealth for urologic visits; however, few studies have evaluated patient experience and satisfaction with televisits, particularly in the context of the provision of phone visits.<sup>6-15</sup> Patients in prior studies have cited convenience and cost-saving as important benefits of telehealth, and many reports on the subject, performed before and during the COVID-19 pandemic, have found high rates of patient satisfaction with televisits.<sup>8,10,12,13,15-17</sup> Concomitant with the expansion of telehealth coverage by CMS permitting reimbursement for telephone visits, we encountered a significant proportion of our patients

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selecting telephone visits over video televisits for their telehealth modality.<sup>18</sup> Given the novelty of reimbursement for telephone visits, we decided to compare patient satisfaction and demographics associated with each televisit type to better understand the patient experience and perception of these two modalities.

### **MATERIALS AND METHODS**

#### Patient Population and Study Design

We conducted an institutional review board-approved cross-sectional survey-based study of patients who completed a televisit with 1 of 12 full-time adult urologists over a 5 week period in the summer of 2020. All patients who completed a televisit were called by telephone using their preferred contact phone number in the electronic medical record (EMR) by 1 of 3 investigators within 1 week of their televisit. Participants were offered the option to complete a telephone-based survey and were consented to participate over the phone. Non-English-speaking patients were consented and surveyed using a phone-based medical interpreter service utilized by the hospital (Pacific Interpreters, Monterey, CA). We excluded patients <18 years old and those who did not consent to the survey. Patients who partially completed the survey were included in the analysis. Responses were recorded using REDCap electronic data capture tools hosted at Albert Einstein College of Medicine.<sup>19</sup> For all patients who consented and completed surveys, we retrospectively reviewed the EMR to obtain patient characteristics (eg age, insurance, active smoking status), visit characteristics (eg visit modality [video vs phone], urologic subspecialty [general, female pelvic medicine and reconstructive surgery, sexual health, endourology, and urologic oncology]), and visit outcomes (whether labs were ordered, whether imaging was ordered, whether medications were changed or initiated during the visit, whether a procedure was scheduled, and whether in-office follow-up was scheduled within 30 days of the televisit).

#### **Telephone Survey**

We developed a 25 question telephone survey which evaluated patient demographic information, time and cost savings associated with a televisit, and patient opinions of telehealth (Supplementary Form 1). We assessed patient opinions using a Likert-based rating scale, ranging from "strongly agree" to "strongly disagree." Patient responses to the questions assessing patient opinions were divided into an affirmative response ("strongly agree" or "agree") and a non-affirmative response ("neutral," "disagree" or "strongly disagree").

#### **Statistical Analysis**

We classified whether patients were satisfied with their televisit by patients' answers to the statement "Overall, I am satisfied with the telehealth visit." Patients who answered, "strongly agree" or "agree" were considered satisfied, while patients who answered "neutral", "disagree", or "strongly disagree" were considered not-satisfied. We then compared patient characteristics, visit characteristics, and visit outcomes between satisfied and not-satisfied patients, and between patients who had a video or phone televisit, using 2 sided  $\chi^2$ -tests with a significance threshold of  $P \leq .05$ . We used logistic regression models to evaluate the association of visit modality with patient satisfaction (with not-satisfied as reference) as well as identify additional predictors of satisfaction, using all variables that had a  $P \leq .2$ 

on the  $\chi^2$ -test. We first fit models for each main effect separately, then composed multivariate models based on *a priori* hypotheses on patient satisfaction and telemedicine (eg age, visit modality, reported difficulty with transportation to in-office visits), as well as main effects that had significant associations with satisfaction. All analyses were conducted in SPSS v.25.0 (IBM, Armonk, NY).<sup>20</sup>

## RESULTS

Six-hundred-thirty-eight patients who completed a televisit were called within 1 week of their encounter; 269 (42.2%) consented to participate and were included in the study, of whom 8 partially completed the survey.

#### **Patient Satisfaction**

Overall, 221 (84.7%) patients reported being satisfied with their televisit compared to 40 patients (15.3%) who reported non-satisfaction; Table 1 describes the demographics of the satisfied and non-satisfied groups. The following patient characteristics were associated with satisfaction. Women were more likely to be satisfied (114/127 (89.8%)) compared to men (107/134 (79.9%), P = .03). Non-smokers were more likely to be satisfied (186/215 (86.5%)) compared to smokers (26/36 (72.2%), P = .03). Patients who reported transportation to in-office visits being difficult were more likely to be satisfied (40/42 (95.2%) compared to those who did not report this (181/219 (82.6%), P = .04). Patients who reported using a language interpreter service during the televisit were more likely to be satisfied (38/39 (97.4%)) compared to those who did not (183/222 (82.4%), P = .02). Patients who had labs ordered at the visit were more satisfied (82/90 (91.1%) compared to those who did not (139/171 (84.0%), P = .04). Finally, race/ethnicity was potentially associated with satisfaction, with 14/18 (77.8%) Asian patients, 23/32 (71.9%) non-Hispanic White patients, 132/153 (86.3%) Hispanic patients and 52/58 (89.7%) non-Hispanic Black patients being satisfied, P = .11.

Among patient characteristics: age, insurance status, and a prior history of a televisit were not associated with satisfaction. Regarding visit characteristics and outcomes: urologic subspecialty, visit type (new patient vs follow-up), and visit modality (telephone vs video televisit) were not associated with satisfaction. Finally, among the visit outcomes: follow-up visit within 30 days scheduled, procedure scheduled, medications changed, and imaging ordered during the televisit were not associated with satisfaction (P > .05).

Upon multivariate analysis, we found that female gender (OR = 2.28, 95% CI: 1.03-5.03, P = .04), the presence of an interpreter during the televisit (OR = 8.13, 95% CI: 1.00-65.94, P = .05), and whether labs were ordered during the televisit (OR = 2.74, 95% CI: 1.12-6.70, P = .03) were independent predictors of patient satisfaction (Table 2). Furthermore, active tobacco smoking was borderline associated with non-satisfaction (OR = 0.40, 95% CI:0.16-1.01, P = .05). Hispanic and non-Hispanic Black race/ethnicity was initially associated with patient satisfaction on univariate analysis (P = .05 and .04, respectively), but the association no longer persisted in multivariate analysis (P > .05), suggesting that race/ethnicity is not an independent predictor of patient satisfaction.

#### Patient Opinions and Estimated Time- and Cost-Savings Towards Telemedicine

Table 3 describes patient opinions toward telehealth and the patient time and cost savings that were collected from the

**Table 1.** Patient characteristics, visit characteristics, and visit outcomes, stratified by satisfied and not-satisfied patients, and by visit modality (video vs phone)

Characteristic or Outcome	Patient Satisfaction		Visit Modality			
	Satisfied	Not-Satisfied		Video	Phone	
	n = 221	n = 40		n = 73	n = 196	
	n (%)	n (%)	χ <sup>2</sup> - Ρ	n (%)	n (%)	χ <sup>2</sup> - Ρ
Patient characteristics						
Age			0.80			0.04
18-50	67 (30.3)	12 (30.0)		30 (41.1)	53 (27.0)	
51-65	72 (32.6)	15 (37.5)		24 (32.9)	64 (32.7)	
>65	82 (37.1)	13 (32.5)		19 (26.0)	79 (40.3)	
Race			0.13			0.28
Non-Hispanic white	24 (10.9)	9 (22.5)		12 (16.4)	21 (10.7)	
Non-Hispanic black	52 (23.5)	6 (15.0)		15 (20.5)	45 (23.0)	
Hispanic	131 (59.3)	21 (52.5)		38 (52.1)	118 (60.2)	
Asian	14 (6.3)	4 (10.0)		8 (11.0)	12(6.1)	0.00
Gender		10 (00 F)	0.03	07 (50 7)	07 (40 5)	0.86
Female	114 (51.6)	13 (32.5)		37 (50.7)	97 (49.5)	
Male	107 (48.4)	27 (67.5)		36 (49.3)	99 (50.5)	0.05
Insurance	00 (07 0)	10 (00 F)	0.82	00 (07 4)	70 (40.0)	0.05
Medicare	83 (37.6)	13 (32.5)		20 (27.4)	79 (40.3)	
Medicald	69 (31.2)	13 (32.5)		22 (30.1)	62 (31.6)	
Private	69 (31.2)	14 (35.0)	0.00	31 (42.5)	55 (28.1)	0.00
Smoker	26 (12.3)	10 (25.6)	0.03	14(20.3)	23 (12.1)	0.09
Televisit in the past	119 (53.8)	24 (60.0)	0.50	39 (53.4)	109 (55.6)	0.75
Visit characteristics	40 (18.1)	2 (5.0)	0.04	9 (12.3)	35 (18)	0.26
VISIT Characteristics			0.21			0 51
	96 (29.0)	22 (EE 0)	0.31	$\Delta E (24.0)$	OF (42 4)	0.51
General urology	80 (38.9) EE (34.0)	22 (55.0)		20 (34.2)	83 (43.4) 51 (26.0)	
reaspectructive surrany (FDMDC)	55 (24.9)	8 (20.0)		18(24.7)	51 (26.0)	
Sorvel health	26 (11 9)	2(5,0)		10 (12 7)	19 (0.2)	
Sexual fiedluff	20 (11.0)	Z (3.0) E (10.E)		10(13.7)	10(9.2)	
	41 (10.0)	3(12.3)		14 (19.2)	32 (10.3) 10 (5.1)	
Visit Type	13 (0.9)	5(7.5)	0.65	0(0.2)	10(5.1)	0.05
Followup	1/11 (62.9)	27 (67 5)	0.05	17 (61 1)	107 (64 9)	0.95
Follow-up New patient	20 (26 2)	27 (07.3)		47 (04.4) 26 (25.6)	127 (04.0) 60 (25.2)	
Interpreter procent during visit	29 (17 2)	1 (2 5)	0.02	20 (33.0)	24 (17 2)	0.02
Visit modality	36(11.2)	I (2.5)	0.02	5 (0.8)	34 (17.3)	0.03
Phone	163 (73.8)	26 (65)	0.25			
Video	58 (26.2)	20 (05)				
Visit outcomes	56 (20.2)	14 (33)				
Follow-up in-office visit within 30-days	84 (38)	14 (35.0)	0.72	26 (35 6)	76 (38 8)	0.64
Labs ordered during visit	82 (37 1)	8 (20 0)	0.12 0.04	27 (37.0)	65 (33.0)	0.04
Procedure scheduled during visit	65 (29 4)	9 (22 5)	0.37	26 (35.6)	52 (26 5)	0.00
Medications changed during visit	$\frac{100}{29.4}$	7(175)	0.57	18 (24 7)	40(20.3)	0.14
Imaging ordered during visit	66 (29.9)	12 (30 0)	0.99	23(31.5)	56 (28.6)	0.45
	30 (20.0)	±2 (00.0)	0.00	20 (01.0)	00 (20:0)	0.04

Patients were considered satisfied if they answered "strongly agree" or "agree" to the statement "Overall, I am satisfied with the telehealth system," while patients were considered not-satisfied if they answered "neutral", "disagree", or "strongly disagree" to the same statement. *P* value refers to the  $\chi^2$ -test; bolded p-values are considered significant ( $P \le .05$ ). Percentages reported are column percentages. Shaded cells are invalid.

survey. Patients overall found telemedicine to be an acceptable form of healthcare (82.5%), found communication with their physician to be easy (88.2%), and were comfortable sharing sensitive information with their physician (90.8%). The majority of patients found it easy to gain access to a device for their telemedicine visit (96.6%) and found the telemedicine interface simpleto-use (91.6%). A majority of patients (66.2%) reported that the televisit was similar to an office visit, and 78.8% reported that they would preferentially choose a televisit over an in-person visit again.

Patients experienced substantial time and cost savings with telemedicine. Over a third (37.2%) of patients reported typically spending over an hour traveling to and from in-office visits, and over half (51.0%) report typically waiting longer than 30 minutes before seeing their doctor after arriving for an in-office visit. Finally, 22.0% of respondents report spending over \$25 to travel to and from visits.

#### Video vs Phone-Based Telemedicine Visits

Seventy-three (27.1%) patients had a video visit, compared to 196 (72.9%) patients who had a telephone visit. The two groups differed by age, insurance, and the utilization of a language interpreter during the televisit. Patients older than 65 made up a larger proportion of phone visits (79/196

Table 2. Associations of patient characteristics, visit characteristics, and visit outcomes with patient satisfaction

Category	Satisfied Patients, n (%)	Univariate Mod	el	Multivariate Model	
		OR (95% CI)	Р	OR (95% CI)	Р
Patient characteristics					
Age					
18-50	67 (84.8%)	0.88 (0.38-2.07)	0.78	0.55 (0.19-1.54)	0.25
51-65	72 (82.8)	0.76 (0.34-1.71)	0.51	0.68 (0.27-1.68)	0.40
>65	82 (86.3%)	1	ref	1	ref
Race/ethnicity					
Asian	14 (77.8%)	1.37 (0.35-5.30)	0.65	1.23 (0.25-5.88)	0.80
Hispanic	131 (86.2%)	2.46 (1.00-6.04)	0.05	1.49 (0.53-4.23)	0.45
Non-Hispanic black	52 (89.7%)	3.39 (1.08-10.64)	0.04	2.62 (0.76-8.96)	0.13
Non-Hispanic white	24 (72.7%)	1	ref	1	ref
Gender					
Female	114 (89.8%)	2.21 (1.08-4.51)	0.03	2.28 (1.03-5.03)	0.04
Male	107 (79.9%)	1	ref	1	ref
Smoker					
Yes	26 (72.2%)	0.40 (0.18-0.93)	0.03	0.40 (0.16-1.01)	0.05
No	186 (86.5%)	1	ref	1	ref
Transportation to in-office					
visits is difficult					
Yes	40 (95.2%)	4.2 (0.9-18.12)	0.06	3.58 (0.79-16.24)	0.10
No	181 (82.6%)	1	ref	1	ref
Visit characteristics and outcom	mes				
Visit modality					
Phone	163 (86.2%)	1.51 (0.74-3.09)	0.25	1.17 (0.52-2.64)	0.71
Video	58 (80.6%)	1	ref	1	ref
Interpreter present					
during visit					
Interpreter	38 (97.4%)	8.10 (1.08-60.77)	0.04	8.13 (1.00-65.94)	0.05
No interpreter	183 (82.4%)	1	ref	1	ref
Labs ordered during visit					
Labs	82 (91.1%)	2.36 (1.04-5.36)	0.04	2.74 (1.12-6.70)	0.03
No labs	132 (81.3%)	1	ref	1	Ref

Listed are the results of logistic regression models examining the patient characteristics, visit characteristics, and visit outcomes that were associated with patient satisfaction (non-satisfaction is the reference). Patients were considered satisfied if they answered, "strongly agree" or "agree" to the statement "Overall, I am satisfied with the telehealth system," while patients were considered not-satisfied if they answered "neutral", "disagree," or "strongly disagree" to the same statement. The multivariate model was adjusted for all variables listed in the table (age as category (yr.), race/ethnicity, gender, smoking status, reported transportation to in-office visits being difficult, visit modality, presence of interpreter at visit, and whether labs were ordered during the visit). Bolded *P* values are considered significant ( $P \le .05$ ). Percentages (n (%)) reported in the satisfied patients column are listed as the percentage of patients who were satisfied, vs not-satisfied (not shown).

(40.3%)) compared to video visits (19/73 (26.0%), P = .04). Patients with Medicare insurance comprised a larger proportion of phone visits (79/196 (40.3%)) compared to video visits (20/73 (27.4%), P = .05). Finally, patients who needed a language-interpreter comprised a larger proportion of phone visits (34/196 (17.3%)) compared to video visits (5/73 (6.8%), P = .03).

Race/ethnicity, gender, urologic subspecialty, visit type, and visit outcomes including having an in-person follow-up visits scheduled within 30 days did not differ between patients who had phone vs video visits. Finally, there were no significant differences between the phone and video groups regarding satisfaction and patient opinions of telehealth (Table 1).

#### DISCUSSION

The COVID-19 pandemic has provided the medical community with the opportunity to re-evaluate how and when to utilize telemedicine. The expansion to include reimbursement for telephone televisits, initially intended for use only during the COVID-19 pandemic, may actually offer more utility and opportunity for access to quality medical care beyond the period of the pandemic. In our community, where over 27% of the population lives under the poverty line and up to 40% of households do not have broadband internet access, the option for telephone-televisits has been and remains critical for delivering care to our patients.<sup>21</sup> Our comparison of patient satisfaction between telephone and video-televisits revealed that most patients were satisfied with their televisit, and that there was no difference in reported rates of satisfaction between telephone and video-televisit groups.

Studies from other fields of medicine have examined predictors of satisfaction with telehealth and found female gender, having medications prescribed at the televisit, considering telehealth to be convenient, and prior experience with televisits among the variables associated with telehealth satisfaction.<sup>22-24</sup> Similarly, we found that female gender, the use of an interpreter service during the

**Table 3.** Patient opinions of telehealth (A) and self-reported estimated time and cost-savings (B) towards telemedicine, among all patients

Δ	Patient Response			
Statement	Strongly Agree or Agree n (%)	Neutral, disagree, or strongly disagree n (%)		
Overall, I am satisfied with the telehealth system. I found my telehealth visit to be an acceptable form of healthcare. I received similar care from my telehealth visit as an in-office visit. It was easy for me to gain access to a device to use for my telehealth visit. I could easily communicate with my doctor using the telehealth system. I was comfortable sharing sensitive and/or personal information with my doctor. It was simple to use this telehealth system on my device. It was easy to schedule my telehealth visit. I would choose a telehealth visit again.	221 (84.7) 217 (82.5) 174 (66.2) 254 (96.6) 232 (88.2) 238 (90.8) 239 (91.6) 234 (89.7) 205 (78.8)	40 (15.3) 46 (17.5) 89 (33.8) 9 (3.4) 31 (11.8) 24 (9.2) 22 (8.4) 27 (10.3) 55 (21.2)		
Estimated length of televisit	n (%) > 15 min. 114 (43.8)	n (%) ≤ 15 min. 146 (56.2)		
Estimated wait time prior to in-office visit	> 30 min.	$\leq 30 \text{ min.}$		
Travel time to/from in-office visit	> 60 min. 96 (37.2)	$\leq 60 \text{ min.}$ 162 (62.8)		
Cost of traveling to in-office visit	> \$25 58 (22.4)	≤ \$25 200 (77.6)		

visit, and having labs ordered during the televisit were significant predictors of satisfaction in our multivariate model. We hypothesize that patients who had labs ordered during the visit were perhaps more likely to be satisfied because there was a concrete action that resulted from their visit. Additionally, in our patient population that is comprised of many people who do not speak English, patients who required an interpreter may be grateful that steps were taken to allow more fluid communication during the televisit.<sup>18</sup> Further investigation is needed to understand why these variables, along with female gender, were predictive of visit satisfaction.

Prior to this study, we were concerned that elderly patients, who may be less acquainted with using technology, would be less satisfied with the transition to virtual care. While the average age of the telephone cohort was slightly older than that of the video televisit group, our finding that there was no significant difference in satisfaction when stratified by age supports the notion that elderly patients may be well-adapted to new modalities of healthcare delivery. This older cohort was largely satisfied with the transition to telehealth, a finding echoed in other reports across fields in the literature.<sup>25,26</sup>

Telehealth is traditionally associated with reduced time and financial costs to patients. Zholudev et al. found an average \$124 cost reduction for patients that had televisits for a hematuria work-up at a VA medical center compared to the cost of in-office visits.<sup>17</sup> Much of the cost, both in time and money, was due to transportation to and from the clinic. In our analysis, where over a third of patients spent over an hour traveling and over a fifth of patients spend over \$25 on travel for face-to-face visits, telehealth offers a cheaper and more efficient option for patients.

In this study, the telephone cohort and video cohort differed slightly, with older patients and those requiring an interpreter comprising a larger proportion of the telephone cohort. It is worth noting, though, that while the mean age was significantly different in the two cohorts, the numeric difference is small (4 years). Furthermore, the two groups did not differ significantly, with regards to actions taken at the visit: changing medications, ordering labs, ordering imaging, scheduling procedures, and scheduling an in-person follow-up visit within 30 days. Although this is not a conclusive outcome, these results may suggest that the modality of the televisit did not impact the functional outcome of care, with orders placed as a proxy for this measure. Similarly, there was no difference reported between the telephone and video-televisit groups with regards to satisfaction or regarding the patients' opinions of telehealth.

There are some limitations to our study to acknowledge. The telephone-based patient survey was subject to voluntary participation and, given that our participation rate was less than 50% of the patients contacted, is potentially subject to a participation bias favoring individuals who responded to phone calls. This rate, however, is comparable to similar urological patient satisfaction-with-telehealth survey projects that have previously been published.<sup>10,15</sup> Additionally, while the survey was formulated by a group of telehealth investigators from across the country, it was not a standard validated survey; however, the previously mentioned studies on urological patient satisfaction-with-telehealth similarly used study-specific surveys.<sup>10,15</sup> Questions asked in the survey concerning wait times, travel times, and costs were asked retrospectively, and patients' responses are estimates, not directly measured values. Furthermore, all of the visits captured in

this study occurred in the context of the ongoing COVID-19 pandemic, where patients may have been more forgiving and appreciative about the change to virtual care; however, this phase in medicine also presents the opportunity to critically evaluate and refine the methods by which we deliver healthcare. Additionally, this study was performed in a largely urban population and did not examine the experience of rural patients, so generalizability of the results to broader patient populations must be considered in this context. Also, when we analyzed predictors of satisfaction, we chose not to control for specific physicians in order to avoid over adjustment of our model. Finally, data about patient characteristics and past medical history was retrospectively obtained from the electronic health record, which may not be complete.

A particular strength of this study is our inclusion of an analysis on predictors of satisfaction. While previous studies have demonstrated high rates of satisfaction with telehealth for urologic visits, we add to previous knowledge by proposing patient characteristics that may predispose patients to being satisfied. This can help identify groups that may be less likely to be satisfied as well, so that physicians caring for those patients might anticipate and address concerns. Additionally, unlike many of the previously referenced studies on patient satisfaction with televisits that focus on a specific chief complaint, we included patients from all of the subspecialties we manage at our institution, providing a cohort representative of a general urology practice. Our cohort will be most generalizable to practitioners working with an urban, largely low-income population. Finally, we directly compare telephone and video-televisits and provide evidence supporting the strength of telephone-televisits. This has seldom been studied in the urology literature, and the data can be used to advocate for an expanded role of telephone-televisits, especially in other low-income areas and among an elderly population.

As integration of telehealth into medical practices increases concomitant with legislative efforts aimed at encouraging continued reimbursement after the COVID-19 pandemic, there is a continued need for investigation into the modality. A direct comparison of patient satisfaction between televisits and in-office visits would add to the growing body of knowledge on the topic and help to further characterize predictors of satisfaction. It would be helpful to understand with future research which patients might benefit more from televisits compared to in-office visits. Additionally, as this study encompasses patient opinions of televisits in the context of a global pandemic, we hope to see continued investigation into patient satisfaction outside of the COVID-19 pandemic. Finally, future research should include rural populations, who may be experience significant time and financial barriers to attending clinic visits.

### CONCLUSION

In conclusion, the majority of patients surveyed were satisfied with their televisit and would choose a televisit again. In addition, telephone-televisits were comparable to video-televisits in the previously described ways, including satisfaction. As legislation is introduced to expand access to telehealth beyond the COVID-19 public health crisis, our study provides support to include reimbursements for telephone-televisits. With a growing shortage of urologists throughout the country, we hope telehealth will continue to grow and provide access to care for millions of Americans who will benefit from it.

### **ETHICS**

The institutional review board (IRB) of the Albert Einstein College of Medicine and Montefiore Medical Center (AECOM-MMC) approved of this study under protocol # 2020-11681.

## DATA AVAILABILITY

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to their containing information that could compromise the privacy of research participants.

## PRESENTATIONS

Data from this work has not been previously presented

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## SUPPLEMENTARY MATERIALS

Supplementary material associated with this article can be found in the online version at https://doi.org/10.1016/j.urology.2021.05.096.

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