

Research Article

Casual Behaviors in Telemedicine

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Abstract

Background: Telemedicine is emerging as a new way for patients to access medical care. When patients are allowed to conduct video or audio visits from home, it can empower them to be more casual in their interactions with their providers.

Objective: The purpose of this study is to identify provider attitudes regarding various telemedicine situations. From this study, a standard of care for telemedicine scenarios may start to be determined which can empower physicians to deal with various scenarios they may encounter.

Design: A mass survey regarding questions related to certain casual patient behaviors and provider comfort and acceptance of these behaviors was sent out to providers at the Primary care, Family medicine, and Internal medicine departments at Loyola University Medical University.

Results: 42 providers responded to the survey who was predominantly white female physicians at the medical center. In regards to patient behaviors, there was a significant difference between the levels of casualness providers ranked themselves versus their comfort level with various patient behaviors. More than half of the respondents had a difficult telehealth encounter but only half of the providers actually attempted to rectify the patient behavior.

Conclusion: Problematic patient behavior during telehealth encounters poses a new challenge to many providers. A better understanding of which patient behaviors and activities cause providers distress is important to assess. However, the next step involves creating set guidelines and protocols to empower providers to speak up during difficult telehealth visits.

Keywords: Telemedicine; Provider comfort; Behaviors; Provider acceptance

Introduction

Telemedicine is a relatively vast field where patients can receive care in various formats from office-based telemedicine to hospital-based telemedicine. Subtypes of telemedicine such as teleradiology, telepharmacology, and telepathology are also in practice to offer patients a broad range of services [1]. Historically, different forms of telemedicine have been documented as early as the 1920s [1]. During those times, ships with clinics onboard would utilize radio to obtain medical advice from physicians at shore. The overall goal of telemedicine has always been a simple one: making care more accessible to patients.

Recently, telemedicine has helped office-based practices overcome challenges in many areas where healthcare is inaccessible. For instance, villages in Alaska have been using telemedicine by sending results of otoscopy and audiometry to specialists [1]. Not only that, but a recent study done in Madagascar proved telemedicine to be just as effective in diagnosing cervical neoplasia as an on-site in person diagnosis [2]. In addition, hospital-based telemedicine is now used for stroke care and even ICU management [3]. Even surgical fields are now experimenting with the concept of telesurgery which can help surgeons perform procedures at a distant site.

In general, telemedicine is defined as “the use of electronic information and communications technologies to provide and support health care when distance separates the participants” [3]. This also

applies to a time of crisis such as the covid-19 pandemic which introduced a unique set of challenges for both providers and patients. During this time, telemedicine allowed patients to seek care from the comforts of their home while also adhering to social distancing [4].

Physicians in primary care fields have particularly expressed an increasing interest in telemedicine. Per the American Academy of Family Physicians, at least 63% of the pediatrics-primary care physicians surveyed in 2019 wanted to use telemedicine [5]. Overall, as a whole, physicians reported that they believed telemedicine improved access while providing better healthcare outcomes for their patients. Even physicians who did not previously use telemedicine reported that they were likely to begin using it within the coming three years [5]. A larger survey done by the Robert Graham Center, particularly targeting family physicians, showed that amongst primary care providers who used telemedicine, 75% of them believed it also improved continuity of care [6].

In the same survey, physicians have expressed lack of training and reimbursement as significant barriers [6]. Additionally, patients have expressed concerns related to privacy issues, especially when undergoing a video visit at work [7]. Despite these concerns, many patients have also expressed an interest in telemedicine. A study interviewing a group of patients in a primary care setting indicated that patients preferred video visits given that they could get care in the comfort of their homes [7]. Similar interviews were conducted

in pediatric subspecialty settings. During these interviews, it was discovered that patients and parents preferred to use telemedicine in addition to in-person visits [8]. Even in more acute settings which conventionally require physicians to be present, telemedicine has begun to play a larger role. Studies comparing physicians using telemedicine for stroke showed that patients did not perceive any empathy difference between an in-house physician versus a physician over telemedicine [9].

However, challenges arise as telemedicine becomes increasingly integrated into healthcare. Even before the increased prevalence of telemedicine, certain patient encounters have proven to be challenging for many physicians. It has been shown that up to 15% of encounters can be classified as a difficult patient encounter for various reasons [10]. These visits tend to lead to poorer health outcomes for patients; however, long term outcomes were not necessarily addressed in this cohort study [10]. Similar studies showed that physicians who had more difficult patients were more likely to face burnout [11]. These physicians also believed they were not providing patients with the best care possible, but this was shown to be false as there was no difference in care provided by these physicians [11]. When telemedicine is introduced into these difficult scenarios, a new challenge arises.

Difficult telemedicine patient encounters have yet to be truly studied or classified. Limited research exists on providers' attitudes towards various telemedicine scenarios, such as patients being in public settings and patients being partially undressed during the encounter. Provider comfort level with these scenarios has not been addressed.

Materials and Methods

A survey which included questions regarding patient comfort with chaperone use and telehealth and with casual patient behaviors and telehealth was sent out to invited participants via email using an online survey platform. The survey-maintained anonymity, but the email contained information to consent participants.

Invited participants included Loyola Departments of Primary Care, Family Medicine, and Internal Medicine ((n of 345 IM=253, PC = 92). After about 1 month, due to low response rate, the email with the survey link was sent out again. Any Loyola physician, physician's assistant, or nurse practitioner with internet access and an email in one of the three listed departments were eligible to participate. The research study was approved by the Loyola University Chicago Health Sciences Campus Institutional Review Board (IRB).

Statistical Analysis included Using SAS Studio, descriptive statistics were obtained. The frequency counts for all descriptive data were obtained. ANOVA tests were used to determine the relationship between provider acceptance levels regarding patient behavior. ANOVA tests were also used to determine the relationship between provider comforts conducting the telehealth visit when experiencing different patient behaviors. All tests were calculated at the $\alpha=0.05$ level, in conjunction with estimated 95% confidence intervals.

Results

Characteristics of Respondents: Initially, 345 practitioners which included physicians and nurse practitioners were sent out the survey. 42 providers responded to the survey of which 85.71%

Table 1: Demographics of Respondents.

		N	Percentage
Degree	Physician (MD/DO)	36	85.71%
	Nurse Practitioner	6	14.29%
Age	31-39	14	33.33%
	40-49	9	21.43%
	50-59	12	28.57%
	60+	7	16.67 %
Gender	Male	13	30.95%
	Female	29	69.05%
Race	White	35	83.33%
	Hispanic		
	Black/African American		
	Native American		
	Asian	5	11.90%
	Middle Eastern	1	2.38%
	Multicultural		
	Other/Not listed	1	2.38%
Years Out from Training	1-5 Years in Practice	9	26.19%
	5-10 Years in Practice	7	19.05%
	10-20 Years in Practice	10	23.81%
	20+ years in Practice	16	38.10%
	Retired or No Longer in Clinical Practice		
Specialty	Family	14	33.33%
	Internal Medicine (General and Primary Care)	15	35.71%
	Pediatrics	2	4.76%
	Internal Medicine Specialty	9	21.43%
	Other	2	4.76%
Modesty	Very Conservative	2	4.76%
	Conservative	20	47.62%
	Neutral	14	33.33%
	Liberal	6	14.29%
	Very Liberal		
Casualness with Patients	Very Casual		
	Casual	19	45.24%
	Neutral	18	42.86%
	Formal	5	11.90%
	Very Formal		
Experiences in Telehealth	started around April 2020 (1)	33	78.57%
	1-12 mo. Experience (2)	8	19.05%
	< 1 mo. Experience (3)	1	2.38%

were physicians practicing in family medicine, internal medicine, pediatrics, internal medicine subspecialty, and other specialties. The remaining 14.29% of respondents were nurse practitioners also practicing in the respective specialties. Family medicine and

Table 2: Provider acceptance level regarding behavior.

Behavior	Acceptable	Unacceptable	Depends on the situation / patient
In public area	1 (2.38%)	23 (54.76%)	18 (42.86%)
Frequently speaking to others in the room to discuss topics unrelated to visit.	1 (2.38%)	38 (90.48%)	3 (7.15%)
In/driving a vehicle	0	25 (59.52%)	17 (40.48%)
Eating/Drinking	6 (14.29%)	28 (66.67%)	8 (19.05%)
In bed	14 (33.33%)	6 (14.29%)	22 (52.38%)
In bathroom	33 (78.57%)	0	9 (21.43%)
Partially undressed not during physical exam	1 (2.38%)	39 (92.86%)	2 (4.76%)
Suspected to be fully undressed but no sensitive areas are visible on video	2 (4.7%)	38 (90.4%)	2 (4.76%)
Fully undressed with sensitive areas visible	0	42 (92.86%)	3 (7.14%)
Patient is clothed but someone in the background is undressed to some degree	0	44 (97.62%)	1 (2.38%)

Table 3: Provider comfort conducting the telehealth visit.

Behavior	Very Uncomfortable	Uncomfortable	Neutral	Comfortable	Very Comfortable
In public area	13 (30.95%)	11 (26.19%)	11 (26.19%)	6 (14.29%)	1 (2.38%)
Frequently speaking to others in the room to discuss topics unrelated to visit.	16 (38.10%)	18 (41.86%)	4 (9.52%)	2 (4.76%)	2 (4.76%)
In/driving a vehicle	18 (42.86%)	15 (35.71%)	2 (4.76%)	2 (4.76%)	5 (11.90%)
Eating/Drinking	10 (23.81%)	11 (26.19%)	10 (23.81%)	3(7.14%)	8 (19.05 %)
In bed	5 (11.90%)	8 (19.05%)	15 (35.71%)	7 (16.67%)	7 (16.67%)
In bathroom	20 (47.62%)	11 (26.19%)	3 (7.14%)	5 (11.90%)	3(7.14%)
Partially undressed not during physical exam	22 (52.38%)	11 (26.19%)	4 (9.52%)	3 (7.12%)	2 (4.76%)
Suspected to be fully undressed but no sensitive areas are visible on video	23 (52.38%)	9 (21.43%)	6 (14.29%)	2 (4.76%)	2 (4.76%)
Fully undressed with sensitive areas visible	30 (71.43%)	8 (19.05%)	1 (2.38%)	1 (2.38%)	2 (4.76%)
Patient is clothed but someone in the background is undressed to some degree	28 (66.67%)	10 (23.81%)	1 (2.38%)	1 (2.38%)	2 (4.76%)

internal medicine physicians were the primary respondents being 33.33% and 35.71% respectively. The age distribution was divided by decade with most of the respondents being in their thirties at 33.33% in comparison to the other age groups. More than half of the participants were female at 69.05% in comparison to males at 30.95%. The majority of participants were white at 83.33% while a little more than half of the participants were in practice for more than 10 years.

Almost all of the providers had greater than 1 month of telehealth experience at the time of the survey. Majority of them had started using telehealth in April 2020. Survey participants were also asked to rank their own modesty as well as attire. Providers typically ranked themselves as neutral or conservative with almost 80.95% identifying in one of these two categories in comparison to being liberal or very conservative. None of the survey members identified as being very liberal. Our data also showed that there was a significant difference between the provider age and how they ranked their own modesty with older providers identifying as being more conservative. Providers were also asked to rank their own casualness with patients. 88.09% of them considered themselves neutral or casual while none of the providers considered themselves as very casual or very formal. There was a significant difference between how providers ranked their casualness versus their comfort level with behaviors such as eating and drinking, being partially undressed, being fully undressed, and another person aside from the patient being undressed during the encounter.

Acceptance of Patient Behaviors: Provider acceptance levels were assessed for various behaviors patients exhibited during telemedicine encounters. Survey participants were asked to identify these encounters as acceptable, unacceptable, or dependent on the situation. A little more than half of the providers believed that it was unacceptable to conduct tele health visits in public. 92.85% or almost all of the providers believed that it was unacceptable for patients to speak to others in the room about unrelated topics during the visit. Similarly, the majority of providers viewed being partially undressed, fully undressed, suspected being fully undressed, and someone other than the patient being undressed in the background to all be unacceptable behaviors. There was a significant age difference between providers who found patients being partially undressed during the tele health encounter unacceptable versus providers who believed it depended on the situation. Older providers deemed this behavior as dependent on the situation. 78.57% viewed patients being in the bathroom during encounters as acceptable and no one believed it was unacceptable behavior. Eating or drinking and driving were generally considered unacceptable behaviors at 66.67% and 59.52% respectively. Responses towards patients being in bed were the most widespread with the majority of the providers believing that it was dependent on the situation at 52.38%.

Overall, the data was overwhelmingly skewed towards providers deeming behaviors such as speaking to another person in the room, being partially undressed, fully undressed, or someone else being

undressed in the room as unacceptable behaviors. This also correlated with providers feeling overwhelmingly uncomfortable with these behaviors. On the other hand, eating or drinking and being in bed were moderately skewed meaning provider responses were more distributed.

Provider Comfort: Providers were asked to rank their comfort level regarding various behaviors on a 5 point scale from very uncomfortable, uncomfortable, neutral, comfortable, and very comfortable. With regards to being in the bathroom or driving, most providers felt very uncomfortable or uncomfortable. Comfort level for patients being in public settings were more distributed given 30.95% felt very uncomfortable, 26.19% neutral, and 26.19% uncomfortable. Eating or drinking during an encounter generally led to greater levels of discomfort. Most providers remained neutral regarding patients being in bed. Overall, more than half of the providers were very uncomfortable with patients who were partially undressed, fully undressed, or had other people in the background suspected to be undressed.

Of respondents, 64% (27 respondents) had one of the situations occur. 13 respondents stated they had encounters with patients in public areas, 11 reported that patients spoke to another person during the encounter. 22 respondents had patients who were driving during the visit, 8 had patients who were eating or drinking, 18 had patients in bed, while 2 had patients in the bathroom. 2 participants did have patients who were undressed when the exam was not being performed and 1 had someone other than the patient undressed present during the visit.

Of the 27 respondents who had the situation occur, 51.85% (14) addressed the situation in the visit, and the other 48.15% did not address the issue and continued the visit as is. 20 (47.62%) of respondents had more than one of the scenarios occur to them, 7 (16.67%) had one situation occur, 15 (35.71%) had none of the situations occur.

Discussion

Findings from this survey help classify difficult patient encounters and how providers feel about these various scenarios specific to telemedicine. This survey was done during the early stages of telehealth; hence providers now likely have greater experience using telehealth. Previous surveys done such as the national surveys done by the Covid-19 Healthcare Coalition showed that healthcare providers across various specialties significantly increased their use of telemedicine during the pandemic. In fact, the majority of the participants anticipated increasing the use of telemedicine overall [4]. Hence, it has become ever increasingly important to identify the unique challenges that telehealth encounters pose to providers.

Difficult in-person patient encounters have already been extensively studied and classified previously by multiple institutions. For example, the Journal of Family Practice has studied patients who ignored medical advice, those who had unrealistic expectations, verbally abusive, and demanding patients to name a few [11]. In other instances, difficult patient encounters have been classified as patients who have multiple concerns requiring increased services to patients with certain mental disorders [10]. Our survey has attempted to classify which encounters could be considered difficult over telehealth.

Visits involving patients being undressed or someone else possibly being undressed can be considered difficult patient encounters given providers felt the most uncomfortable during these scenarios.

Not only have difficult in-person patient encounters been identified, but there are many guides and protocols present to help physicians navigate these scenarios. These guides include management techniques such as planning the interaction in advance to noting nonverbal cues [12]. In particular, Cleveland Clinic has specifically produced a communication guide on dealing with hard patient situations that arise [13]. Even a large part of medical school curriculums now includes preparing students for future challenging patient-physician encounters. Tufts University School of Medicine has implemented such workshops which have served as a role model for the creation of guidelines to help students develop these communication skills for the future [14]. While there are ample resources for inpatient encounters, there seems to be a lack of guidelines for managing difficult telehealth visits.

Per our survey, more than half of the providers faced a difficult telehealth encounter to some degree. Yet, only half of the providers who found themselves in a challenging situation actually spoke up to rectify the behavior. This begs the question if more providers would speak up if telehealth protocols and guidelines existed. Perhaps the other half of the providers who did not speak up did not feel equipped with techniques that would enable them to handle these scenarios.

The typical demographic of a respondent in our survey was a white female physician. In general, many studies have demonstrated that female providers more often face various forms of sexual harassment in real life encounters. It is considered an ongoing issue which many female providers have learned to adapt to [15]. Male and female providers experience sexual harassment differently from patients. While both male and female providers are aware of sexual harassment, men rarely felt concerned for their own safety in these situations [16]. This difference could also translate to female providers facing more issues during telehealth visits. Since our study predominantly included female providers, it could explain why certain behaviors such as patients being undressed were met with higher levels of feeling uncomfortable. However, since there were not enough male respondents, it is difficult to tell if being a female can correlate to facing more difficult patient encounters overall while using telehealth. Given this limitation of our study, in the future, larger studies with a wider range of demographics will need to be studied to see if other demographics find different telehealth scenarios challenging.

In general, the providers considered themselves neutral or conservative when it came to their modesty levels. Given the fact that no provider considered themselves extremely liberal, this could explain why the highest number of unacceptable behaviors included patients being undressed, suspected to be undressed, partially undressed, or suspecting someone else in the room to be undressed. This can also play a role in why providers were the most uncomfortable with activities related to being undressed. The activity that had the highest number of providers feeling uncomfortable with was suspecting someone other than the patient to be undressed in the room. Similarly, the most unacceptable behavior was someone else being suspected of being undressed.

With regards to patients being undressed or partially undressed, discomfort amongst providers can also stem from having no set protocol regarding how to deal with these incidents. It is also possible that given this survey predominantly included females, they encountered more of this type of behavior. Typically, during in person encounters, chaperones can be used for sensitive exams. The American Medical Association has even published about the use of chaperones in their code of medical ethics opinion while places like University of Michigan have included the use of chaperones in their policy statements [17,18]. Creating a specific policy for sensitive exams or an undressed patient during telehealth encounters can help make providers feel more comfortable.

For the most part, our data showed that activities providers generally found unacceptable were also activities that made them feel uncomfortable or very uncomfortable. For instance, being in a public setting, driving during the encounter, and speaking to others during the encounter criteria were all met with higher unacceptance scores correlating to higher total combined uncomfortable and very uncomfortable scores. On the contrary, being in the bathroom was met with 78.57% acceptance and no provider finding that behavior unacceptable, but providers generally felt uncomfortable or very uncomfortable. In fact, being in the bathroom during the encounter was the most acceptable form of behavior in comparison to all other behaviors listed. This perhaps alludes to the fact that there might be discrepancy between what a provider thinks is acceptable versus feels comfortable with in this one instance.

The two most common activities that happened to survey participants were reported to be patients driving during the visit (22) and patients in bed (18). It is possible that some of these patients may have been bed bound which could explain the reason lying in bed was the activity that was met with the most neutrality. This correlated with providers feeling that they could accept patients in bed depending on the situation.

Limitations in our study include a small response rate with only 42 survey respondents in total. The study also only focused on one major hospital in the Chicago land area. The demographics were more or less homogenous with the majority of respondents being white female physicians in primary care. Finally, the survey was sent out in July 2020 so it is likely that many providers had not fully immersed telehealth into their practices and so since then more providers likely have been exposed to these situations. Furthermore, the analysis done for this study can only show associations rather than actual cause and effect.

Conclusion

Our study showed that different types of encounters led to varying acceptance and discomfort/comfort levels amongst providers. Typically encounters related to being undressed or someone else in the room suspected of being undressed led to the highest levels of discomfort and lowest acceptance rates. It is quite plausible that legal issues can arise from such situations and protection for providers and patients alike is necessary in this case. While there are chaperones who offer a level of protection for the patient and provider in person, telemedicine offers no such protection during these types of visits.

Not only that, but our survey showed that the most common activity encountered by providers was a patient driving during the encounter. Again, this leads to unaddressed patient safety concerns especially if providers do not feel empowered enough to speak up. There are no set protocols or guidelines in place to help address this type of encounter or any difficult telehealth encounters we listed in our survey. Development of such protocols will serve as a guide for future providers and hopefully help them feel confident enough to directly voice their concerns to patients during problematic visits.

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