

# Client satisfaction with telemedicine services during COVID-19 pandemic: A cross-sectional survey from a teaching institute of North India

Jitender Aneja<sup>1#</sup>, Tarun Goyal<sup>2#</sup>, Madhur Verma<sup>3#</sup>, Gurpreet Kaur<sup>4</sup>,  
Moonis Mirza<sup>5</sup>, Satish Gupta<sup>6</sup>

Departments of <sup>1</sup>Psychiatry, <sup>2</sup>Orthopedics, <sup>3</sup>Community and Family Medicine, <sup>5</sup>Hospital Administration, <sup>6</sup>Additional Medical Superintendent and Department of Dental Surgery, and <sup>4</sup>Medical Social Worker, All India Institute of Medical Sciences, Bathinda, Punjab, India  
#Equal contributors

## ABSTRACT

**Introduction:** Telemedicine has emerged as an essential interface between health care providers and patients during the pandemic. The present study was done to assess this technology's level of acceptance and satisfaction amongst the patients. **Methods:** We did a retrospective study amongst patients >18 years ( $n = 300$ ) who had availed telemedicine services in different departments of a tertiary care hospital between May and August 2020. The patients were interviewed telephonically using a pre-tested semi-structured tool that collected information about the socio-demographic and clinical characteristics of the patients, and satisfaction was measured on a 5-point Likert Scale. **Results:** Fifty-five percent patients received teleconsultation via a telephone call, while the others preferred video calling services on WhatsApp messenger. Overall, more than 97% of the clients depicted satisfaction with the telemedicine services in three major domains: registration/appointment services, consultation with the doctor and post-consultation services. Some of the common feedback included difficulty in getting medicine using the scanned copy of prescription slip generated by the hospital, problems faced in reimbursement of the bills, long waiting period, and poor quality of video calls due to slow internet. **Conclusion:** Telemedicine proved to be an efficient means of communication for many patients during the pandemic. Though patient satisfaction was high with the services received by them, timely assessment of the problems encountered in the implementation of telemedicine services will help evolve the services not just during the pandemic but even after that.

**Keywords:** Health system research, pandemic, patient care, satisfaction, telemedicine

## Introduction

Telemedicine has emerged as an important interface between health care providers and patients after most countries saw

major lockdowns and restrictions on people's movements during the COVID-19 pandemic.<sup>[1]</sup> Telemedicine combines enhanced hardware, digital medicine, image capture and disease diagnosis and has the potential to ameliorate the limitations of distance by providing high-quality expert services.<sup>[2]</sup> Tele-consultations can be done from the safety and comfort of one's own home and thus can be a major mode of health care not only during this time but also for the future. In the face of deficiencies in the availability of healthcare providers in rural and semi-urban areas, this option of reaching out to the masses has not been utilized

**Address for correspondence:** Dr. Madhur Verma, Assistant Professor, Department of Community and Family Medicine, All India Institute of Medical Sciences Bathinda, Bathinda, Punjab, India.  
E-mail: drmadhurverma@gmail.com

Received: 10-11-2021  
Accepted: 11-02-2022

Revised: 06-02-2022  
Published: 14-10-2022

### Access this article online

#### Quick Response Code:



Website:  
www.jfmpc.com

DOI:  
10.4103/jfmpc.jfmpc\_2217\_21

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

For reprints contact: WKHLRPMedknow\_reprints@wolterskluwer.com

**How to cite this article:** Aneja J, Goyal T, Verma M, Kaur G, Mirza M, Gupta S. Client satisfaction with telemedicine services during COVID-19 pandemic: A cross-sectional survey from a teaching institute of North India. J Family Med Prim Care 2022;11:5187-93.

to its full potential.<sup>[3]</sup> This has been attributed to differential perceptions about its utility. Many find it useful from the patient's perspective as it saves time, causes less exposure to infections, and gets basic primary care from their home.<sup>[4]</sup> But, there are questions raised about the follow-up visits, lack of therapeutic relationships, depersonalized care, and concerns about data safety and confidentiality.<sup>[5,6]</sup> Similarly, many health care workers find it useful in terms of improved access, remote triage of patients, routine follow-up care, remote diagnosis, and remote patient care, especially for the vulnerable population like the elderly and people living in far-off areas with low socio-economic status.<sup>[7,8]</sup> However, many professionals also question its usage in establishing a reliable diagnosis, lack of examination, and certain forms of care practices like comprehensive psycho-social counseling. Also, it is believed that telemedicine is heavily dependent on technology and requires special hardware and software. Thus, it cannot be started in a routine hospital or clinic.<sup>[9]</sup> Before the pandemic, telemedicine was uncommonly utilized to deliver health services in India due to the lack of statutory guidelines and government policies, financial incentives, acceptance by healthcare workers and patients, and integration with in-person healthcare services.<sup>[10,11]</sup>

COVID-19 pandemic presented a unique situation as it overwhelmed our health system. Mobility was restricted, public places, including hospitals, were shut down across the world and India was not an exception. The Government of India enforced a lockdown to contain the spread of the COVID-19 pandemic, which restrained people to their houses.<sup>[12]</sup> This abrupt measure was beneficial, but it did not give any time for preparation for medical contingencies during this pandemic.<sup>[13]</sup> As the health resources were diverted towards management of the evolving pandemic and hospitals were closed for the general public with ailments other than COVID-19, many people lost access to their doctors, even for medical emergencies. Therefore, various countries, including India, relaxed the existing laws applicable to telemedicine. On March 25, 2020, the Government of India released the Telemedicine Practice Guidelines.<sup>[14]</sup> This provided a significant push for the utilization of telemedicine in India, and many non-government/government healthcare centers initiated teleconsultation for their patients.<sup>[15]</sup> Within this mandate, we initiated the telemedicine services in our tertiary care teaching institute with minimal logistic support. This was possible as the last decade saw a stupendous digital growth in India and the availability of cheap data services to even the remotest locations. Many virtual platforms are already available to the masses. Of these, WhatsApp messenger™ proved to be the most widely utilized platform to connect through messages, audio or video calls, in addition to the simplicity of its use. This paper intends to demonstrate that telemedicine services can be initiated with bare minimum IT support, and primary care physicians can adopt the model. However, with the evolution of telemedicine services at such a fast pace, healthcare providers were compelled to adapt rapidly in a context where they and their patients had little prior experience with virtual consultations, similar to experience from previous studies done during the time of the pandemic.<sup>[2,8,16,17]</sup> Though the theoretical benefits of telemedicine services have been widely elaborated, the

level of acceptance and satisfaction of this technology among patients is not precise. This study aims to report patients' perception and feedback of the telemedicine services initiated during the lockdown enforced during the pandemic of COVID-19.

## Methodology

### Study design

This was a retrospective study conducted between May and August 2020. The study was approved by the Institutional ethics committee of All India Institute of Medical Sciences, Bathinda (Punjab) wide letter number IEC/AIIMS/BTI/127 dated 18/08/2021.

### Study setting

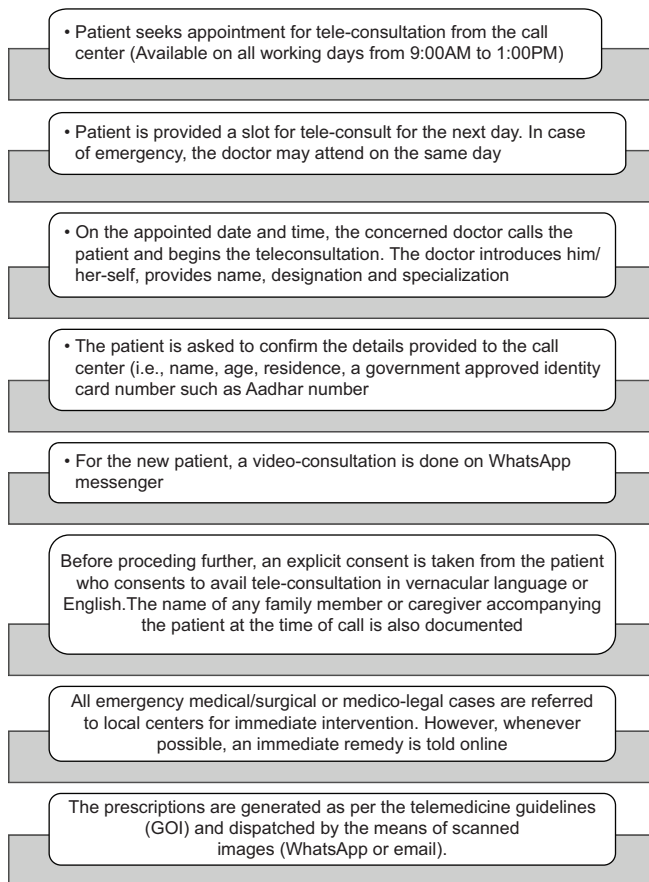
The telemedicine services under review in this study were started in a tertiary care teaching institute in North India on April 18, 2020, following the government's mandate after the implementation of lockdown due to the COVID-19 pandemic in March 2020. Before lockdown, the institute was providing routine OPD services to patients. The institute caters to patients from a radius of about 150 km. Due to delays in the procurement process of logistics required for initiating the telemedicine services because of the pandemic, it was decided to start the services through Whatsapp messenger.

### Study population

All the patients aged 18 years and older who had received telemedicine consultation services from the various departments of the institute and were willing to participate in the study were included. Patients of either sex were included. The flowchart of the process of telemedicine service is presented in Figure 1.

### Data collection

The patients were interviewed telephonically using a semi-structured tool. The semi-structured questionnaire used had 36 items in total. The first 19 items included basic details about the patient, such as age, sex, address, educational status, family background, monthly income and the department to which the patient presented for consultation. The following section dealt with their ease of obtaining an appointment for teleconsultation services, followed by their satisfaction with these services. The subsequent section dealt with satisfaction levels with post-consultation services and overall satisfaction with the teleconsultation services and their willingness to use such services in the future. Open-ended feedback about the services was also offered to the patients. The questionnaire was developed in English and was later translated into Punjabi using the WHO standard translation methods. It was pre-tested in 20 subjects for ease of delivery and comprehension in English and Punjabi by two separate interviewers, and appropriate changes were introduced. Patients were asked about the choice of language, and the tool was delivered accordingly. Intra-observer reliability was measured by delivering the questionnaire to the same patient after two weeks by the same interviewer. The patients were interviewed within one week of attending the hospital to avoid recall bias. The questionnaire



**Figure 1:** Flow chart depicting the process of seeking telemedicine consultation in a tertiary care institute in North India

was administered by a medical social worker who was not directly involved in the patient's treatment. Informed consent was taken from all the participants before the questionnaire was delivered.

## Data analysis

Data was collected in Microsoft Excel for analysis. The level of satisfaction was assessed on a five-point Likert scale. The distinction was also made between the patients who sought telemedicine using audio only or both audio and video during the call. Descriptive statistics were used to summarise the demographic details of the patients. The statistical significance of the total score difference between the audio-only or audio and video calls was compared using the Mann-Whitney U test. Significance levels of less than 0.05 were considered statistically relevant.

## Results

From a total of 389 patients who were given consultation through the telemedicine services during this period, we could contact 320 patients for feedback. Finally, 300 of them gave their consent to assess the satisfaction and were included in the analysis [Table 1]. Fifty-five percent ( $n = 165$ ; 55%) received teleconsultation via telephone call (landline or WhatsApp audio call), while the other 45% ( $n = 135$ ) preferred video calling services (on WhatsApp messenger). Most of the participants

were females (53%), more than 40 years (45%) and from urban areas (52%). A higher number of patients from rural areas sought help on audio calls, while video calls were preferred by the urban patients ( $P < 0.05$ ). Preference was not observed for medical or surgical specialty consultations. The participants were a uniform mix of new and follow-up patients. Most of them (81%) had booked an appointment for discussing their medical problems only.

Overall, more than 97% of the clients were satisfied with telemedicine services [Table 2]. The satisfaction was assessed on the Likert scale, and most of them expressed their satisfaction regarding the telemedicine services offered to them in all three major domains: registration/appointment services, consultation with the doctor and post-consultation services. However, when they were asked about their overall experience with telemedicine services, most of them stayed neutral, especially when inquiries were made in the form of questions such as "Do you think that telemedicine session was as good as an ordinary in-person visit?" (53%), and "In future, would you prefer the regular visit or just avail the telemedicine services?" (46%).

We compared the satisfaction scores between the patients who consulted using the audio or the video calling facilities [Table 3]. However, it was observed that the satisfaction scores differed non-significantly in the two groups, and no benefits were observed for video calls over audio calls in all the three major domains assessed for satisfaction. The only difference observed was a narrower range of total scores in video calls compared to audio calls, but the differences were statistically non-significant on the Mann-Whitney U test ( $P > 0.05$ ).

Some of the common feedbacks in the open-ended section of the questionnaire included difficulty in getting medicine using the scanned copy of the prescription slip generated by the hospital, problems faced in reimbursement of the bills, long waiting period, poor quality of video calls due to slow internet, difficulty in meeting the same doctor during the follow-up visits, cumbersome process of registration especially for the non-smartphone users and possible breach of information leading to loss of patient's privacy and confidentiality.

## Discussion

In compliance with the national mandate to implement telemedicine services, we also endeavored in this field. In our experience, we found it to be a feasible and readily acceptable service to mitigate issues related to the accessibility of health services. In addition to the provision of teleconsultation services, efforts were made to further improvise the services by first assessing the satisfaction of the patients who utilized teleconsultation services of our institute. Specific key findings emerged from our study. Overall, more than 97% of the clients depicted satisfaction with the telemedicine services. Satisfaction was high irrespective of the type of teleconsultation (Audio or video). Some problems were faced by the patients that can help in improving the system.

**Table 1: Background characteristics of the study participants who received the treatment via telemedicine services**

Variable	Audio call only	Audio + Video call	Total	Chi-square (P)
<b>Number of teleconsultations</b>	165 (100)	135 (100)	300 (100)	
<b>Gender</b>				2.52 (0.28)
Female	89 (55.9)	70 (51.9)	159 (53.0)	
Male	76 (46.1)	65 (48.1)	141 (47.0)	
<b>Age category of the patients</b>				0.42 (0.93)
≤20 years	13 (7.9)	12 (8.9)	25 (8.3)	
21-40 years	65 (39.4)	56 (41.5)	121 (40.3)	
≥41 years	75 (45.5)	59 (43.7)	134 (44.7)	
Did not disclose	12 (7.3)	8 (5.9)	20 (6.7)	
<b>Residence</b>				2.91 (0.08)
Rural	86 (52.1)	57 (42.2)	143 (47.7)	
Urban	79 (47.9)	78 (57.8)	157 (52.3)	
<b>Specialty category</b>				0.67 (0.88)
Medicine and allied branches	84 (50.9)	63 (46.7)	147 (49.0)	
Surgery and allied branches	81 (49.1)	72 (53.4)	153 (51)	
<b>Education of the service user</b>				1.49 (0.68)
Illiterate	23 (13.9)	16 (11.9)	39 (13)	
Less than primary	14 (8.5)	8 (5.9)	22 (7.3)	
Less than high school	72 (43.6)	58 (43)	130 (43.3)	
Graduate and above	56 (33.9)	53 (39.3)	109 (36.3)	
<b>Monthly income of the user</b>				3.12 (0.21)
< 20,000	64 (38.8)	43 (31.9)	107 (35.7)	
> 20,000	57 (34.5)	60 (44.4)	117 (39)	
NIL	44 (26.7)	32 (23.7)	76 (25.3)	
<b>Number of Family members</b>				1.88 (0.17)
<4	81 (49.1)	77 (57)	158 (52.7)	
>4	84 (50.9)	58 (43)	142 (47.3)	
<b>Type of consultation</b>				0.40 (0.93)
Follow-up consultation	83 (50.3)	67 (49.6)	150 (50.0)	
New consult	82 (49.7)	68 (50.4)	150 (50.0)	
<b>Tele-consultation sought for</b>				0.91 (0.63)
Family member	35 (21.2)	23 (17.0)	58 (19.3)	
Self	130 (78.8)	112 (83)	242 (80.7)	
<b>How did you come to know about telemedicine services?</b>				2.79 (0.59)
Hospital Staff	46 (27.9)	32 (23.7)	78 (26)	
Family and Friends	77 (46.7)	64 (47.4)	141 (47)	
IEC Material Given by Hospital Staff	9 (5.5)	13 (9.6)	22 (7.3)	
Newspaper/televised advertisement	11 (6.7)	11 (8.1)	22 (7.3)	
Social Media	22 (13.3)	15 (11.1)	37 (12.3)	

A high level of satisfaction was observed in all the domains, including seeking appointments, consultation and post-consultation services. Despite a high level of satisfaction, only 53% of the patients believed telemedicine was as good as a routine face-to-face visit. Most of the patients would have preferred to visit the hospital personally. Nevertheless, during the pandemic's peak, they were satisfied with the medical attention they received via these services. This may be probably because similar teleconsultation services were not available before. This high satisfaction rate corroborates previous studies, most of which were conducted in developed countries.<sup>[16,18-20]</sup> Brown-Connolly reported high satisfaction rates among the patients from California for the ease of access, patient preferences for a face-to-face or a telemedicine consult, general satisfaction, transfer of educational information by specialist and primary

care provider, and administrative care processes.<sup>[18]</sup> Nearly two-thirds (61%) felt that they would not receive better care in person in comparison to teleconsultation, 85% acknowledged having received necessary information from specialists and 89% had their questions answered by a primary care provider or nurse. Also, there was a significant decline in travel distance, and many patients saved a significant amount of time and costs incurred on travel. Another study from rural California communities that had sought telemedicine consultation depicted a favorable impression of the service.<sup>[19]</sup> The majority of the patients rated the skill of the medical staff at the clinic or the remote consultant to be excellent or very good, and 99% indicated that they would either definitely or probably be willing to use telemedicine again. Polinski *et al.*<sup>[16]</sup> also reported high satisfaction, and almost all the participants (100%) recorded either a "definite" or "probable"

**Table 2: Satisfaction of the clients with the teleconsultation services on a Likert scale**

Questions related to satisfaction	Very dissatisfied	Dissatisfied	Neutral	Satisfied	Very satisfied
<b>Registration/Appointment services</b>					
Ease of seeking appointment	3 (1.0)	1 (0.3)	-	155 (51.7)	141 (47.0)
Were you satisfied with the manner the receptionist talked to you?	2 (0.7)	1 (0.3)	-	155 (51.7)	142 (47.3)
<b>Consultation with the doctor</b>					
The voice/video quality of the service	5 (1.7)	1 (0.3)	2 (0.7)	153 (51.0)	139 (46.3)
How much did the doctor show concern towards your problems?	2 (0.7)	3 (1.0)	3 (1.0)	150 (50.0)	142 (47.3)
Do you feel relaxed during the telemedicine session?	1 (0.3)	2 (0.7)	2 (0.7)	150 (50.3)	145 (48.3)
Time was given to listening to your problems	-	2 (0.6)	3 (1.0)	152 (50.7)	143 (47.7)
The explanation of your problem by the doctor	1 (0.3)	3 (1.0)	1 (0.3)	149 (49.7)	146 (48.7)
The explanation of the treatment	1 (0.3)	5 (1.6)	2 (0.7)	146 (48.7)	146 (48.7)
The advice for follow up	1 (0.3)	4 (1.3)	2 (0.7)	147 (49.0)	146 (48.7)
<b>Post consultation services</b>					
The clarity of the prescription provided to you	1 (0.3)	5 (1.7)	1 (0.3)	147 (49.0)	146 (48.7)
The ease of getting medicines with the help of that prescription slip	1 (0.3)	6 (2.0)	2 (0.7)	148 (49.3)	142 (47.6)
<b>Overall satisfaction:</b>					
Overall, how satisfied do you feel with the role of telemedicine in relieving your present medical problem?	1 (0.3)	4 (1.3)	3 (1.0)	146 (48.7)	146 (48.7)
Would you like to use telemedicine again?	2 (0.7)	4 (1.3)	5 (1.7)	144 (48.0)	145 (48.3)
Overall, how satisfied were you with the last telemedicine session?	1 (0.3)	3 (1.0)	46 (15.3)	123 (41.0)	127 (42.3)
Do you think your telemedicine session was as good as a regular in-person visit?	1 (0.3)	2 (0.7)	159 (53.0)	69 (23.0)	69 (23.0)
In the future, would you prefer the regular visit or just avail the telemedicine services	1 (0.3)	1 (0.3)	138 (46.0)	95 (31.7)	65 (21.7)
Would you recommend this service to your knowns?	1 (0.3)	1 (0.3)	270 (90.0)	14 (4.7)	14 (4.7)
<b>Overall satisfaction score</b>	1 (0.3)	0	6 (2.0)	195 (65)	98 (32.7)

Figures in parentheses depict percentages

**Table 3: Comparison of the client's satisfaction based on the type of call**

Questions related to satisfaction	Median (range)			P (Mann-Whitney U test)
	Audio call	Video call	Total	
<b>Registration/Appointment services</b>				
Ease of seeking appointment	4 (1-5)	4 (1-5)	4 (1-5)	0.898
Were you satisfied with the manner the receptionist talked to you?	4 (1-5)	4 (1-5)	4 (1-5)	0.948
<b>Consultation with the doctor</b>				
The voice/video quality of the service	4 (1-5)	4 (1-5)	4 (1-5)	0.765
How much did the doctor show concern towards your problems?	4 (1-5)	4 (1-5)	4 (1-5)	0.802
Did you feel relaxed during the telemedicine session?	4 (1-5)	4 (2-5)	4 (1-5)	0.980
Time was given to listen to your problems	4 (2-5)	4 (2-5)	4 (2-5)	0.860
The explanation of your problem by the doctor	4 (1-5)	4 (2-5)	4 (1-5)	0.986
The explanation of the treatment	4 (1-5)	4 (2-5)	4 (1-5)	0.717
The advice for follow up	4 (1-5)	4 (2-5)	4 (1-5)	0.934
<b>Post consultation services</b>				
The clarity of the prescription provided to you	4 (1-5)	4 (2-5)	4 (1-5)	0.932
The ease of getting medicines with the help of that prescription slip	4 (1-5)	4 (2-5)	4 (1-5)	0.926
<b>Total score</b>	44 (23-55)	44 (26-55)	44 (23-55)	0.932
<b>Overall satisfaction</b>				
Overall, how satisfied did you feel with the role of telemedicine in relieving your presenting problem?	4 (1-5)	4 (2-5)	4 (1-5)	0.981
Would you like to use telemedicine again?	4 (1-5)	4 (2-5)	4 (1-5)	0.950
Overall, how satisfied were you with the last telemedicine session?	4 (1-5)	4 (2-5)	4 (1-5)	0.884
Do you think your telemedicine session was as good as a regular in-person visit?	4 (1-5)	3 (2-5)	3 (1-5)	0.992
In the future, would you prefer the regular visit or just avail the telemedicine services?	4 (1-5)	4 (3-5)	4 (1-5)	0.280
Would you recommend this service to your knowns?	3 (1-5)	3 (3-5)	3 (1-5)	0.005
<b>Overall satisfaction score</b>	23 (6-30)	23 (15-30)	23 (6-30)	0.681

for the future use of teleconsultation or recommendation to someone else.

Our patients faced problems with the receipt of the prescription slips. This was due to the government's mandate of not



issuing certain medicines without a written prescription, and the authenticity of a prescription issued through telemedicine was questioned by many pharmacists across the state of Punjab and Haryana, especially for drugs used in Psychiatry. In contrast to this, Martinez *et al.*<sup>[20]</sup> analyzed the pattern of use and the correlates of patient satisfaction with a national direct-to-consumer service available to the consumers round the clock and across the regions in the US. As per the study, 85% of the patients rated 5-star satisfaction from their physician. The receipt of a prescription predicted higher satisfaction from telemedicine consultation. The reasons for lower ratings included teleconsultations from non-US physicians, longer wait times, and an inability to receive any diagnosis. A recent systematic review of telemedicine services delivered through video conferencing also depicted high satisfaction from the telehealth experience. However, most of the studies included in this review focused on studies done in a particular specialty.<sup>[21]</sup>

In our study, many participants were from rural areas (48%), meaning that these services could be utilized equally by both the rural and the urban population. This is primarily due to the utilization of patient-friendly technology for the telemedicine services at our institute, which was easily accessible from a smartphone. Although various non-governmental/governmental hospitals have provided telemedicine services in India since the 1990s, most of these telemedicine services include interaction between the health care worker in a remote or resource-constraint setting and a secondary or tertiary care setup.<sup>[22]</sup> Direct interaction, similar to a face-to-face physical session, between the doctor and the patient has not been prevalent in this country before. None of the platforms reached the magnitude achieved during the current pandemic. Moreover, data on patient satisfaction from such services are unavailable in India.

Teleconsultation services could be helpful for patients with minor ailments, where they could be prescribed their routine medications, and for patients with more severe medical conditions to avoid delays in medical opinions.<sup>[23]</sup> Tele-consultation could be used to evaluate these patients and form a treatment plan. This could also be used to streamline the hospital visits of the patients.<sup>[24]</sup> Patients needing more urgent attention could be arranged a physical visit. The patients needing to attend the hospital in person for interventions or specific investigations could be called at intervals avoiding crowding of common areas. Telemedicine services were also seen as an essential tool for effectively utilizing human resources in health. Many doctors were quarantined at different points of time due to suspected contact with the positive patients. These quarantined individuals were otherwise physically capable of performing their duties, and teleconsultation is an effective tool to engage these people in inpatient care gainfully.

The present study had several limitations. Satisfaction was measured when major medical facilities were shut, and this scenario increased the acceptability of telemedicine services.<sup>[25]</sup> Thus, this may not reflect the true satisfaction of the patients with the telemedicine services when routine medical services would

be available after the pandemic is over. Patients attending several departments and several consultants were included. The sample size was relatively small. The responses of the patients who have sought medical consultation may be affected by the social-desirability bias during this extraordinary situation. Thus, high satisfaction levels may not reflect satisfaction rates during everyday situations. A high ceiling effect of this questionnaire was noticed since most of the patients reported a high level of satisfaction. Since the number of unsatisfied patients was less, the results could not be further analyzed to look into factors leading to poor satisfaction.

## Summary and Conclusions

Telemedicine proved to be an efficient means of communication for many patients during the pandemic. It significantly reduced the need to visit the hospital in person and reduced pressure on the frontline medical staff actively involved in COVID-19 management. Using telemedicine to establish a real-time, efficient and convenient platform will comprehensively improve our ability to deal with public health emergencies, which will also improve the time to diagnose and treat critically ill patients, coordinate and optimize resource allocation and avoid the spread of diseases caused by the transfer of patients. Telemedicine can provide patients with more regular and efficient care than traditional models of care. A more effective telemedicine system should be established by promoting such medical services. Though patient satisfaction was high with the services received by them, timely assessment of the problems encountered in the implementation of telemedicine services will help evolve the services not just during the pandemics but even after that.

## Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. Informed consent was obtained from all study participants before the interview. The consent had two parts: information for the participant and the actual consent form, which were verbally agreed upon by the participant. Confidentiality was maintained and data is accessible only to the investigators.

## Financial support and sponsorship

Nil.

## Conflicts of interest

There are no conflicts of interest.

## References

1. Monaghesh E, Hajizadeh A. The role of telehealth during COVID-19 outbreak: A systematic review based on current evidence. *BMC Public Health* 2020;20:1193.
2. Wang Y, Li B, Liu L. Telemedicine experience in China: Our response to the pandemic and current challenges. *Front Public Health* 2020;8:549669.
3. Panagariya A. The challenges and innovative solutions to

- rural health dilemma. *Ann Neurosci* 2014;21:125-7.ober
4. Breton M, Deville-Stoetzel N, Gaboury I, Smithman M, Kaczorowski J, Lussier MT, *et al.* Telehealth in primary healthcare: A portrait of its rapid implementation during the COVID-19 pandemic. *Healthc Policy | Polit Santé* 2021;17:73-90.
  5. Deldar K, Bahaadinbeigy K, Tara SM. Teleconsultation and clinical decision making: A systematic review. *Acta Inform Med* 2016;24:286-92.
  6. Bergman D, Bethell C, Gombojav N, Hassink S, Stange KC. Physical distancing with social connectedness. *Ann Fam Med* 2020;18:272-7.
  7. Breton M, Sullivan EE, Deville-Stoetzel N, McKinstry D, DePuccio M, Sriharan A, *et al.* Telehealth challenges during COVID-19 as reported by primary healthcare physicians in Quebec and Massachusetts. *BMC Fam Pract* 2021;22:192.
  8. Smith AC, Thomas E, Snoswell CL, Haydon H, Mehrotra A, Clemensen J, *et al.* Telehealth for global emergencies: Implications for coronavirus disease 2019 (COVID-19). *J Telemed Telecare* 2020; 26:309-13.
  9. Brebner JA, Brebner EM, Ruddick-Bracken H. Accident and emergency teleconsultation for primary care-A systematic review of technical feasibility, clinical effectiveness, cost effectiveness and level of local management. *J Telemed Telecare* 2006y; 12 (1\_suppl):5-8.
  10. Kichloo A, Albosta M, Dettloff K, Wani F, El-Amir Z, Singh J, *et al.* Telemedicine, the current COVID-19 pandemic and the future: A narrative review and perspectives moving forward in the USA. *Fam Med Community Health* 2020;8:e000530. doi: 10.1136/fmch-2020-000530.
  11. Hashiguchi TCO. Bringing health care to the patient: An overview of the use of telemedicine in OECD countries. *OECD Health Work Pap* OECD Publishing; 2020.
  12. Ministry of Home Affairs; Government of India. Government of India issues orders prescribing lockdown for containment of COVID-19 epidemic in the country. Press Information Bureau. Available from: <https://pib.gov.in/newsite/PrintRelease.aspx?relid=200655>. [Last accessed on 2022 February 5].
  13. Kishore K, Jaswal V, Verma M, Koushal V. Exploring the utility of google mobility data during the COVID-19 pandemic in India: Digital epidemiological analysis. *JMIR Public Health Surveill* 2021;7:e29957.
  14. Ministry of Health and Family Welfare; Govt. of India. Telemedicine Practice Guidelines. 2020 Available from: <https://www.mohfw.gov.in/pdf/Telemedicine.pdf>. [Last accessed on 2022 February 5].
  15. Indian Pharmaceutical Alliance. Healthcare goes mobile: Evolution of teleconsultation and e-pharmacy in new Normal. 2020. Available from: [https://assets.ey.com/content/dam/ey-sites/ey-com/en\\_in/topics/health/2020/09/healthcare-goes-mobile-evolution-of-teleconsultation-and-e-pharmacy-in-new-normal.pdf](https://assets.ey.com/content/dam/ey-sites/ey-com/en_in/topics/health/2020/09/healthcare-goes-mobile-evolution-of-teleconsultation-and-e-pharmacy-in-new-normal.pdf). [Last accessed on 2022 Feb 05].
  16. Polinski JM, Barker T, Gagliano N, Sussman A, Brennan TA, Shrank WH. Patients' satisfaction with and preference for telehealth visits. *J Gen Intern Med* 2016ch; 31:269-75.
  17. Wijesooriya NR, Mishra V, Brand PLP, Rubin BK. COVID-19 and telehealth, education, and research adaptations. *Paediatr Respir Rev* 2020;35:38-42.
  18. Brown-Connolly NE. Patient satisfaction with telemedical access to specialty services in rural California. *J Telemed Telecare* 2002;8 (2\_suppl):7-10.
  19. Nesbitt TS, Marcin JP, Daschbach; MM, Cole SL. Perceptions of local health care quality in 7 rural communities with telemedicine. *J Rural Health* 2005;21:79-85.
  20. Martinez KA, Rood M, Jhangiani N, Kou L, Rose S, Boissy A, *et al.* Patterns of use and correlates of patient satisfaction with a large nationwide direct to consumer telemedicine service. *J Gen Intern Med* 2018ober; 33:1768-73.
  21. Orlando JF, Beard M, Kumar S. Systematic review of patient and caregivers' satisfaction with telehealth videoconferencing as a mode of service delivery in managing patients' health. *PLoS One* 2019;14:e0221848. doi: 10.1371/journal.pone. 0221848.
  22. Dasgupta A, Deb S. Telemedicine: A new horizon in public health in India. *Indian J Community Med* 2008;33:3-8.
  23. Corbett JA, Opladen JM, Bisognano JD. Telemedicine can revolutionize the treatment of chronic disease. *Int J Cardiol Hypertens* 2020;7:100051.
  24. Bhaskar S, Bradley S, Chattu VK, Adishes A, Nurtazina A, Kyrykbayeva S, *et al.* Telemedicine as the new outpatient clinic gone digital: Position Paper From the Pandemic Health System RESilience PROGRAM (REPROGRAM) International Consortium (Part 2). *Front Public Health* 2020tember; 8:410.
  25. Lahiri D, Mitra S. COVID-19 is accelerating the acceptance of telemedicine in India. *J Family Med Prim Care* 2020;9:3785-6.