ORIGINAL ARTICLE

Patient Satisfaction with Telemedicine Services in Obstetrics and Gynecology during the COVID-19 Pandemic

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Abstract

Aim: This study aims to explore the patient's experience with telemedicine (TM) as a method of care as well as its long-term implications for the Department of Obstetrics and Gynecology during the COVID-19 pandemic.

Methods: Telephonic interview was conducted for 78 patients who had availed TM services from April 23, 2020, to June 30, 2020. A predetermined indigenous questionnaire was used to evaluate patient's experiences with TM. Primary outcome was the measurement of level of patient satisfaction and secondary outcome was evaluating the demographic profile of patients.

Results: Most respondents were of 21–30 years (42.3%) and 64.1% of respondents were from urban areas. 87.1% respondents were satisfied with the medical care they received; 94.8% respondents did not feel that their doctors hurried through their consultation. 19.2% respondents had encountered difficulty in using smartphones. 70.5% respondents perceived a positive role of TM in reducing their risk of contracting COVID-19. 62.8% respondents showed willingness to continue using TM services after the resumption of routine OPD services. 76.9% respondents felt that currently provided TM services did not need any improvements. 25.6% respondents needed physical visits to doctors even after availing TM services, for routine or emergency complaints.

Conclusion: Patient satisfaction is high with TM services, and it can be adopted and incorporated into routine patient care especially in low-resource countries.

Clinical significance: TM is expected to increase access to healthcare, while limiting patients' geographic mobility. The implications and full potential of this service will be clear with long-term studies.

Keywords: COVID-19, Obstetrics and gynecology, Patient satisfaction, Telemedicine.

Journal of South Asian Federation of Obstetrics and Gynaecology (2021): 10.5005/jp-journals-10006-1974

Introduction

COVID-19 has turned out to be the biggest global health crisis humanity has witnessed in the past 100 years. To limit the spread of this pandemic, a nationwide lockdown was implemented and routine health services were shut down overnight on March 25, 2020.[1] This led to a restriction in mobility of patients and posed challenges to patients' access to healthcare. The Indian Ministry of Health and Family Welfare along with NITI Aayog has fostered first practice guidelines on telemedicine (TM) on March 25, 2020, for providing continued care to patients in this crisis.[2]

WHO defines telemedicine as "The delivery of healthcare services, where distance is a critical factor, by all healthcare professionals using information communication technology (ICT) for the exchange of valid information for diagnosis, treatment and prevention of disease and injuries, research and evaluation, and for the continuing education of healthcare providers, all in the interests of advancing the health of individuals and their communities".[3] It is expected to improve the healthcare accessibility, equity, quality, and cost-effectiveness among general population. Internationally, the field of TM is still in its infancy and while its promise is great, evaluation of patient outcomes can ensure maximization of benefit. The majority of TM services are routinely offered in the developed regions of the world.[4] The developing countries are bound by resource issues such as high costs, underdeveloped infrastructure, and lack of technical expertise to be barriers to TM.[5] In the field of obstetrics and gynecology (O&G), TM is still in an incipient stage. The possibilities of its use are multifold, including well-woman visits, preconception counselling (PCC), antenatal and postnatal care, preventive care, teleradiology, infertility, and family planning.[6,7] Even so, a WHO report published in 2010 reported that TM services in O&G were being provided by only five participating countries.[8]

Following government guidelines, TM has been widely used nationwide for patient management, but there is sparse literature on the level of patient satisfaction with this mostly new method of dispensing healthcare in the Indian scenario. With the rapid evolution and advancement of internet and ICT in India, and the rising availability of smartphones and internet services in Indian households, TM is expected to become integral in delivering high-quality care.[5]

Our institute started offering TC services to our patients from April 23, 2020, to provide continuous care to those patients who previously were under our care. This was done using real-time phone calls and encrypted WhatsApp messages for sharing of

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How to cite this article: Priyadarshani P, Purwar R, Pipal VR, *et al*. Patient Satisfaction with Telemedicine Services in Obstetrics and Gynecology during the COVID-19 Pandemic. J South Asian Feder Obst Gynae 2021;13(6):382–386.

Source of support: Nil

Conflict of interest: None

information. Patients could avail these services from the comfort and convenience of their own homes. This study aims to explore the patients' experience with this method of care as well as its long-term implications for the department of O&G. To the best of our knowledge, this is the first study assessing patient satisfaction in utilizing teleconsultation services in O&G in the wake of COVID-19.

Methodology

This was a cross-sectional study, done in the Department of O&G at All India Institute of Medical Sciences, Gorakhpur, after getting approval by the Institutional Ethics Committee. All patients who had availed TM services from the Department of O&G and were willing to participate in the study were included. We excluded patients who were previously not registered, those who had not availed TM services from AIIMS, Gorakhpur, or those who were unwilling to participate in the study. A total of 1,954 new patients registered for treatment in the Department of O&G in the months of February and March 2020. We received 164 teleconsultation calls from 105 patients for follow-up from April 23, 2020, to June 30, 2020, among which 80 patients gave consent to participate in the study. After explaining the detailed plan and purpose of the study and obtaining a valid informed consent, these patients were asked a series of questions from a predetermined indigenous questionnaire. In case of minor patients, consent was obtained from their guardians.

The virtual/telephonic interview began by collecting sociodemographic information of patients, including their age, educational status, reason for availing health services, area of residence (rural/urban), and distance of residence from health facility where the study was being conducted. This was followed by eight questions on patients' satisfaction from TM services, to be scored on a five-point Likert scale, from 1 to 5 (Strongly disagree, Disagree, Uncertain, Agree, Strongly agree). The questions were expected to judge their general satisfaction with treatment received, technical competence of patients, communication skills of TM service providers, interpersonal manner, availability of doctors for TM consultation, time spent with the doctor during consultation, convenience to patients seeking care, and ease of access to care. The direction of wording in the question was either positive or negative, reflecting satisfaction or dissatisfaction with the care provided. Following these questions, participating patients were asked to compare their experiences with the new TM services to routine physical OPD services they had attended at the institute prior to implementation of lockdown (better/same/worse). Patients were also asked if they needed extra physical visits to the doctors during routine or emergency hours while availing TM services. The primary outcome of this study was measurement of level of patient satisfaction after using TM services and secondary outcome was evaluating the demographic profile of patients accessing care. All the data were entered in Microsoft excel sheet 2016 and results were analyzed.

Results

A total of 1,954 new patients registered in O&G OPD for treatment during January and February 2020. Following the nationwide lockdown, only 105 patients who were previously under our care availed the newly started TM facility from April 25 till June 30, 2020. Eighty of these 105 patients consented to participate in this study, of which two patients withdrew consent later in the process. Seventy-eight patients completed the interview process and their responses were evaluated.

Sociodemographic Profile

The demographic parameters of respondents are shown in Table 1. Interviewees were from all age-groups, most (42.3%) were young adults of 21–30 years age-group. Eight respondents were <20 years of age, and only three respondents were <18 years. 64.1% of all respondents lived in urban areas while 35.8% in rural areas. A majority of patients availing TM services (51.2%) lived more than 10 km from the facility. Forty-one out of seventy-eight (52.6%) respondents had a college education. The chief complaints of patients who availed TM services are listed in Table 2.

Satisfaction Questionnaire

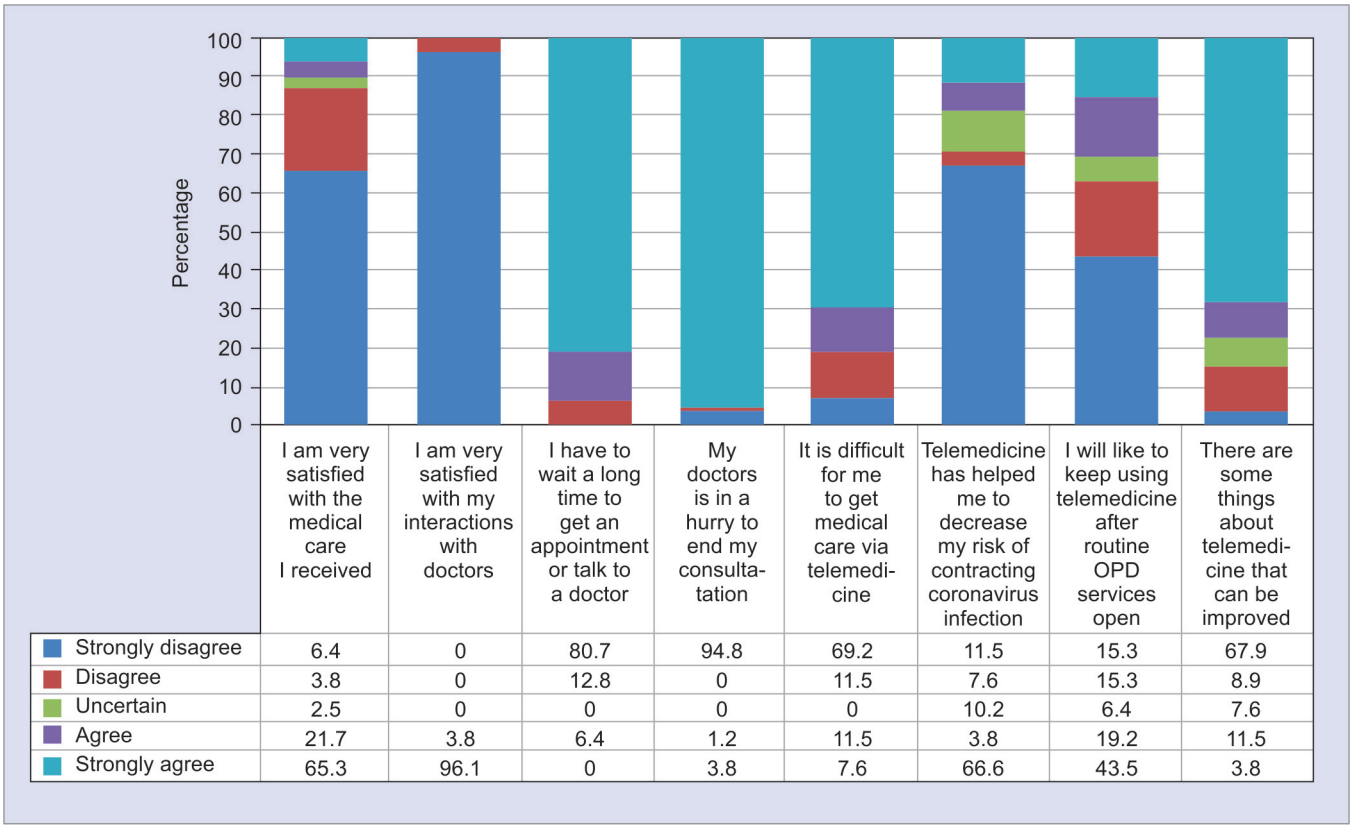
An indigenous questionnaire was developed by the Department of O&G to assess satisfaction of patients receiving care via TM. Assessing patient satisfaction using our questionnaire, as shown in Figure 1, we found that 68 out of 78 respondents were satisfied with the medical care they received. For patient-doctor interaction, all respondents had a positive experience. Patients felt they were being allowed to say all their complaints and received adequate explanation for their

Table 1: Demographic profile of respondents

Parameter	*N = 78*	*%*
Age (years)		
<20	7	8.9
21–30	33	42.3
31–40	21	26.9
41–50	12	15.3
51–60	3	3.8
>60	2	2.5
Area of residence		
Rural	28	35.8
Urban	50	64.1
Distance from health facility		
<10 km	38	48.7
≥10 km	40	51.2
Educational status		
Illiterate	4	5.1
Primary	2	2.5
Middle school	2	2.5
High school	11	14.1
Intermediate	18	23.07
College	38	48.7
Professional	3	3.8

Table 2: Chief complaints of respondents obtaining TM consultations

Chief complaints	*N = 78*	*%*
Menstrual complaints	31	39.7
Antenatal care	23	29.4
Infertility	11	14.1
Pain lower abdomen	10	12.8
Urinary complaints	3	3.8



	I am very satisfied with the medical care I received	I am very satisfied with my interactions with doctors	I have to wait a long time to get an appointment or talk to a doctor	My doctors is in a hurry to end my consultation	It is difficult for me to get medical care via telemedicine	Telemedicine has helped me to decrease my risk of contracting coronavirus infection	I will like to keep using telemedicine after routine OPD services open	There are some things about telemedicine that can be improved
Strongly disagree	6.4	0	80.7	94.8	69.2	11.5	15.3	67.9
Disagree	3.8	0	12.8	0	11.5	7.6	15.3	8.9
Uncertain	2.5	0	0	0	0	10.2	6.4	7.6
Agree	21.7	3.8	6.4	1.2	11.5	3.8	19.2	11.5
Strongly agree	65.3	96.1	0	3.8	7.6	66.6	43.5	3.8

Fig. 1: Bar graph showing patient satisfaction percentages on a Likert scale

conditions. Only 5 (6.4%) respondents felt the waiting time to get an appointment or talk to a doctor was longer than they had anticipated, while 73 (93.6%) respondents did not feel the waiting time was long. Seventy-four respondents (94.8%) strongly disagreed that their doctor was in a hurry to end their consultation and get to the next patient. Regarding the use of ICT, 15 respondents (19.2%) said they encountered difficulty while accessing TM care due to ICT constraints, while 63 respondents (80.8%) strongly disagree. During COVID-19 pandemic, 55 respondents (70.5%) said that availing healthcare by TM helped reduce their risk of contracting coronavirus infection, while 15 (19.2%) respondents disagreed and 8 (10.2%) were not sure. Forty-nine (62.8%) respondents said they would like to continue using TM services after the resumption of routine OPD services, while 24 (30.8%) respondents said they would shift to routine OPD, and 5 (6.4%) respondents were not sure. When questioned about the improvements required in TM services, 60 (76.9%) respondents did not agree to the need of any improvements, 6 (7.7%) were unsure while 12 (15.4%) respondents said they would like to improve certain aspects of TM care. When asked for suggestions for specific improvements that were required, 18.5% women suggested incorporating the facility of video calls to improve interpersonal communication.

When patients were asked to compare TM services with previously received care in routine physical OPDs, 51.2% reported TM to be a better option in this COVID-19 pandemic and 37.1% reported no difference. Sixteen respondents (20.5%) needed physical visits to doctors during routine hours after availing TM services, and four women (5.1%) needed emergency visits to the doctors.

Discussion

Free teleconsultation services were provided at our institute during the nation-wide lockdown. Of the 1,954 new patients registered in O&G OPD in the preceding 2 months, we expected to see a large number of follow-ups using these services. However, only 105 patients availed these services from the Department of O&G. This was after multiple public outreach measures were taken by the hospital to inform the public of the availability of these services, including the use of mass media technology.

The low number of TM consultations in our study suggests reluctance of the patients to shift to a new means of care, even when the care was being provided by their own previous care providers. A previous study offering both virtual and physical care to their antenatal patients found that the desire to see their care providers was the primary reason for refusing virtual care. Other reasons included difficulty with the technology involved and concerns about security.[9] Even then, TC has an important role in settings and populations with barriers to accessing facility-based care.[10]

The interviews were conducted using an indigenous questionnaire, due to a lack of validated published questionnaires for this purpose, which was designed to be short, so that interviews could be conducted telephonically. Similar surveys were used by Bhandari et al. in their study.[11] A majority of respondents (42.3%) were of age 21–30 years, and 26.9% were of age 31–40 years. Even

as there is a rise in internet and smartphone use among patients of older ages, the younger population is more likely to use internet for health-seeking. A majority of respondent who availed these services were residing in urban areas. Respondents with a higher educational background, who are expected to be better versed with the use of smartphones and latest ICT, accessed TM services to a greater extent. This also reflects the greater use of smartphones and better internet access in urban areas and among the educated respondents.[12] The distance of place of residence from the health facility did not seem to be a factor when deciding mode of care, as 38 respondents lived less than 10 km away from the hospital while 40 stayed farther away. This contrasted with the several previous studies where distance from the health facility was a major factor in seeking care via TM.[11,13,14]

TM services were provided for all O&G complaints of patients under our care. Only 23 antenatal women availed these facilities, rest were for follow-up of different gynecological complaints, such as pain abdomen, urinary complaints, infertility, or menstrual complaints. At other centers, TM has previously been used for prenatal and perinatal care, monitoring of pregnancy, infertility, family planning, medical abortion, telesurgery, and other uses.[6,7,11,15]

The interviews showed that TC services were accepted well by our patients and overall patient satisfaction was high. These findings are consistent with other studies in O&G as well as other areas of medicine.[11,13] A systematic review of studies from various specialities also concluded that TC was acceptable to patients. However, no studies from O&G were included in this review.[13,16,17]

Most of our respondents (93.5%) found the waiting times to be shorter when availing TM care. The results are in line with previous studies where shorter wait time was cited as the main reason for opting for telehealth services.[13,18]

TM is expected to benefit the rural and underserved communities who have difficult access to timely care but an increase in number of smartphones and of broadband internet connectivity in rural areas is expected to create a fertile ground for TM consultations.[18] However, in our study TM was used more by urban residents who were well versed with smartphones and ICT. Some respondents (19.2%) in our study struggled with the use of smartphones and ICT, but the repeated use of these devices and improving internet facility even in rural areas are expected to decrease this problem over time.

Over 70% respondents in our study affirmed that TC has made care-seeking safer, and contributed to protecting them from COVID infection. However, 19% respondents felt that coming to crowded areas like hospital waiting rooms was not really a high-risk activity as far as contracting COVID was concerned. This mindset of patients, and of the general public at large, may be responsible for the huge number of COVID cases India has witnessed in the past few months.

A majority of respondents (51.2%) in our study rated their experiences with TM to be better than physical OPDs. More than one-third respondents (37.1%) rated it the same as physical OPDs while 9% rated it worse than physical OPDs and said they would prefer physical OPDs once the facility was made available. Our findings are in keeping with a previous study in USA where 95% respondents rated telehealth as better than or just as good as a traditional visit while only 1% rated it worse.[17] There are, however, many drawbacks of physical OPDs particularly in rural India where patient satisfaction with their local healthcare provider is very low. A survey in Rajasthan state in North-west India found that 10 out of 33 districts scored zero out of a possible five in patient satisfaction.[19]An online survey done on clinicians in India showed that during COVID-19 pandemic period they are shifted more toward the use of TM and they can easily solve complaints of patients in the outdoor department and patient counselling through it.[20]

A randomized control trial found highest patient satisfaction rates by combining routine physical visits with TM consultations.[9] In keeping with this, we plan to continue providing telemedicine services to our patients even as routine OPD services resume.

Our study has several limitations. We could not conduct a regression analysis to determine characters associated with high patient satisfaction due to low sample size. We did not offer TM for initial consultations, only for follow-up. Hence, we cannot comment on its acceptability for first consultations. We are a state-sponsored health facility providing subsidized care to patients; hence we could not evaluate the economic impact of TM vis-à-vis routine care applicable for other centers. The absence of control subjects is also a limitation, as we were providing OPD services only via TM in the study period. The possibility of response bias and recall bias exists in this study due to the method of data collection.

Conclusion

The diffusion of SARSCoV-2 infections has recently increased more interest toward TM and adoption of ICT to assess patient care. High patient satisfaction with this mostly new means of treatment means that it can be adopted and incorporated into routine patient care especially in low-resource countries.

Clinical Significance

As there is high patient satisfaction rate, we plan to continue TM services at our hospital as an add-on to physical OPDs due to the positive results obtained in our study, but the implications and full potential of this service will be clear only with long-term studies.

Acknowledgments

Authors would like to thank all the staff members and patients for their contribution in the study.

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