

Application of Telemedicine Video Visits in a Maternal Fetal Medicine Practice at the epicenter of the COVID 19 pandemic



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INTRODUCTION

- Telemedicine (TM) encompasses the use of voice and/or video communication technology to provide direct patient health services when the medical provider and patient are separated by physical distance¹.
- Telehealth (TH) is a similar concept but can provide any health-related service through communication technology to deliver services to a patient in a remote or mobile setting^{1,2}.
- Most of these programs have been implemented to serve rural areas where patients have difficulty accessing these obstetrical services otherwise^{2,3}.
- In response to the Covid 19 pandemic, health systems have been forced to rapidly expand and scale telemedicine services for urgent and non-urgent health care delivery.

PURPOSE

- The primary objective of this study was, through a patient satisfaction survey, to assess factors associated with patient satisfaction for telemedicine.
- Secondary objectives included evaluation of patients' attitudes toward their digital experiences, patients' and visit characteristics that influences their desire for future telemedicine visits as well as assess the provider's digital experience and their attitudes toward telemedicine visits by administering a separate survey to providers conducting the visits.

MATERIALS AND METHODS

- Cross-sectional survey of patients who completed telemedicine video visits through the Maternal and Fetal Medicine (MFM) Division at NYU Langone Hospital- Long Island from March 19, 2020 to May 26, 2020.
- NYU IRB approval and waiver of written consent was obtained.
- Research Electronic Data Capture (REDCap) survey was completed by phone.
- Patient demographics, diagnoses for requiring MFM care and types of visits were collected from the electronic health record (EPIC Verona, WI).
- Survey questions, listed in (Table 1) were designed to assess the patient's digital experience with the sign-up/ check in process, technological tools, and overall satisfaction with the telemedicine visits.
- Survey response scores were converted to a numeric value for quantitation and comparison among survey questions; strongly disagree – 1, disagree – 2, neutral – 3, agree – 4, strongly agree – 5.
- Median scores and demographics were analyzed on the response to the question: "I would like telehealth visit to be an option for future obstetric visit" comparing those that agreed versus those that answered neutral or disagree.
- Eleven physicians and one nurse practitioner from the MFM Division at NYU Langone Hospital- Long Island Hospital who conducted both in-person and telemedicine encounters were also administered a provider survey through a REDCap link.
- Fisher's exact test and Mann-Whitney U test were used where appropriate, p-value <0.05 were considered significant.

FIGURES

Survey Question	Agree	Neutral	Disagree
"Telemedicine sign up process was easy to follow."	157 (95%)	4 (2.5%)	4 (2.5%)
"Telemedicine check in process was easy to follow."	157 (95%)	5 (3%)	3 (2%)
"I had no difficulties with my cellular/wifi connection."	136 (83%)	15 (9%)	14 (8%)
"I was able to see and hear the provider easily."	142 (86%)	10 (6%)	13 (8%)
"I felt the technology was secure."	146 (88.5%)	15 (9%)	4 (2.5%)
"Lack of physical contact was not a problem."	148 (90%)	10 (6%)	7 (4%)
"I think the telehealth visits are as good as in-person visits."	94 (57%)	44 (27%)	27 (16%)
"Telehealth visits saved my time traveling to a hospital or specialist clinic."	157 (95%)	3 (2%)	5 (3%)
"Using telehealth made it easier for me to see doctors and specialists."	143 (87%)	17 (10%)	5 (3%)
"I would like telehealth to be an option for future obstetrical visits."	120 (73%)	30 (18%)	15 (9%)

Table 1. Distribution of patient survey answers by question, n (%).

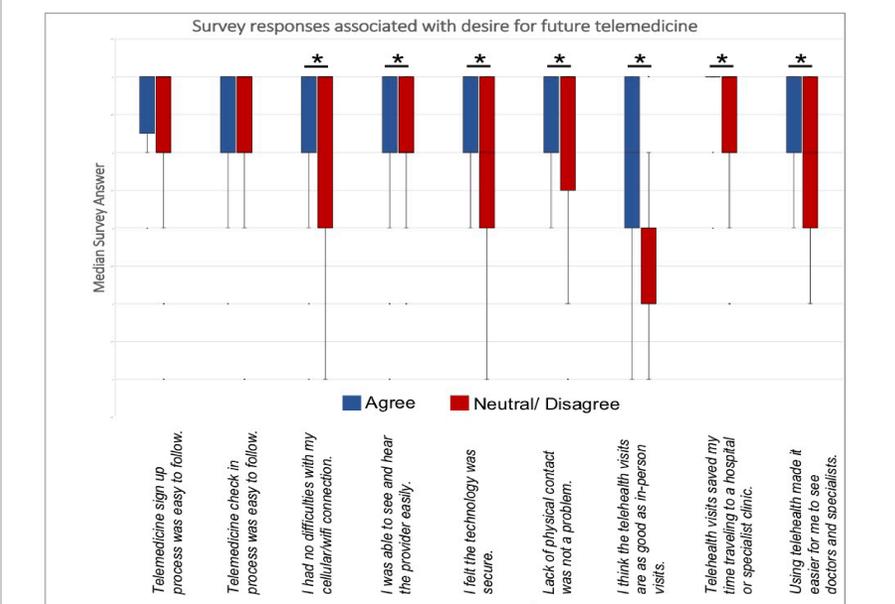


Figure 1. Median survey answers for those that Desire TM vs Neutral/ Disagree by patient survey question found in Figure 1. Values represented as median (25th, 75th percentiles). Desires TM (blue), Neutral/ Disagree (red). (*) p-value <0.05 by Mann-Whitney U test.

RESULTS

- 253 patients participated in 433 telemedicine visits (TMVs) with MFM providers.
- The three most common MFM TM visits were for maternal co-morbidities, poor obstetric history, genetics and preconception counseling.
- The types of visits included: 37% consultations (new patient visit), 48% follow-up visits, and 15% genetic, preconception and nutrition counseling.
- 165 patients participated in the survey resulting in a 65% survey response rate.
- There was a high rate of patient satisfaction in all areas assessed (Table 1).
- 73% reported that they would like telehealth to be an option for future obstetrical visits.
- No difference in demographics, type of visit or reason for visit between those that agreed they would want future TM vs those who chose neutral or disagree.
- Those that desire future TM had significantly increased agreeability in most of the questions, besides the sign-up and check in process which were similar between the two groups (Figure 1).
- Provider survey responses also demonstrated high levels of satisfaction, 83% agreed they would like telehealth to be an option for future obstetrical visits.

CONCLUSIONS

- Patients and providers were satisfied with the TM visits and the majority desired TM to be an option for future visits.
- Patient's digital experience, perception to not need for physical contact, and perceived time saved on travel and access to health care providers significantly impact a patient's desire for future telemedicine visit.
- The need for health systems to continue improvement in telehealth delivery and invest in innovative solutions to conduct physical exams and other assessments remotely.

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