

# A Patients' Perspective on Telehealth in Outpatient Nephrology Clinic During the COVID-19 Pandemic

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## Background

- COVID-19 pandemic caused a shift in delivery of healthcare from in-person to telehealth to comply with social distancing recommendations.
- Centers for Medicare and Medicaid Services (CMS) introduced policy waivers for reimbursement for telehealth in response to COVID-19 [1].
- Expansion of originating and remote sites for telehealth appointments to include the home.
- States also passed telehealth parity laws [2].
- The aim of the study is to determine patient experiences with telehealth during the COVID-19 pandemic.

## Methods

- Patients of an urban university-based outpatient nephrology clinic who had at least one virtual visit between April 1, 2020 and March 31, 2021 were asked to complete a web-based survey to assess their telehealth experiences.
  - Study data were collected and managed using Research Electronic Data Capture (REDCap) electronic data capture tools [3-4].
  - Patients rated their overall experience with telehealth encounters through a Likert scale.
    - The Likert scale had 5 options: excellent, good, fair, poor, and very poor.
    - Good or excellent options indicated positive patient satisfaction.
- Statistical Analyses
- Chi-square test to compare frequencies of categorical variables.
  - Regression analysis to analyze the relationship between 2 or more independent variables of interest.

## Results

- Patients (n = 166) out of 791 invitees completed the survey.
- Some patients did not answer all questions, hence there is missing data.
- Majority of patients:
  - 83.6% (138/165) reported overall positive experiences with telehealth services.
  - 97.0% (161/166) found their telehealth visits convenient.
  - 80.1% (133/166) wanted to see a hybrid model in the futures.
  - 79.5% (132/166) did not have technical issues.

Statistical Analyses showed

- Technical issues negatively impacted patient satisfaction ratings (p < 0.05)
- The following variables had no impact on patient satisfaction ratings:
  - Ethnicity
  - Age
  - Gender
  - Insurance Type

## Results

Characteristics	Number of patients	Percentages (%)
<b>Gender</b>	N=166	
Males	87	52.4%
Females	79	47.6%
<b>Age (in years)</b>	N=166	
Mean	59.6 ± 15.6	
Median	63	
Range	21-91	
<b>Education Grade Level</b>	N=166	
High School or Less	15	9.0%
Some College	30	18.1 %
College Grad	36	21.7%
Graduate School	77	46.4%
Trade School	4	2.4%
Community College	4	2.4%
<b>Race/Ethnicity</b>	N=166	
Caucasian	70	42.2%
African American	72	43.4%
Asian	5	3.0%
Other	13	7.8%
Decline to respond	6	3.6%
<b>Insurance Type</b>	N=166	
Medicare and/or Medicaid	88	53.0%
Private Insurance	77	46.4%
Uninsured	1	0.6%

**Table 1: Patient Characteristics.**

Independent Variables	p-value
<b>Positive Relationship</b>	
Easy time making telehealth appointment	0.002
Easy time logging in for the appointment	0.008
Willingness to use the video feature	0.002
Okay with not having a physical exam during the appointment	<0.001
Convenience of telehealth encounter	<0.001
Ability to have someone else join in the virtual visit with the patient	0.017
No technical issues	<0.001
Wanting a hybrid model for future appointments	<0.001
Likelihood of Recommending Telehealth to Others (Very Likely and Somewhat Likely)	<0.001
<b>Negative Relationship</b>	
Wanting in-person only appointments	<0.001
Likelihood of Recommending Telehealth to Others (Very Unlikely and Somewhat Unlikely)	<0.001
Likelihood of Recommending Telehealth to Others (Neutral)	0.039
<b>Technical issues:</b>	
Unable to see the provider	<0.001
Unable to hear the provider	<0.001
Provider was unable to see the patient	0.023
Provider was unable to hear the patient	0.001

Statistical significance defined as p < 0.05

**Table 2: Regression analyses correlate patient satisfaction ratings with independent variables.**

## Discussion

- Patients have positive attitudes towards telehealth visits.
- Patients want a hybrid model of healthcare in the future.
- Benefits of telehealth services include:
  - convenience, decrease transportation costs and time, and increased accessibility to healthcare [5-6].
- Challenges exist which include:
  - Access to broadband internet services and devices, digital health literacy, legislations surrounding telehealth and physician licensures, security and privacy concerns [6-7].
- Future studies using CMS claims data need to be conducted to determine whether this new healthcare delivery model is cost-effective.

## References

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