Knee and Hip Osteoarthritis Patient Experience with Telemedicine During the COVID-19 Pandemic

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OBJECTIVE AND BACKGROUND

- **The purpose of this study is to examine patients' experience and satisfaction using telemedicine for knee and hip osteoarthritis care during the COVID-19 pandemic**
- On March 11, 2020, the World Health Organization declared COVID-19 a pandemic. Mass enforcement of quarantine orders and social distancing. regulations were undertaken, and telemedicine was brought to the forefront of healthcare as a means of connecting patients with providers.
- Studies evaluating the use of telemedicine in sports and musculoskeletal clinics, however, have been limited. Among these studies, even fewer have assessed both subjective and objective measures of the patient experience with telemedicine.

DESIGN

- Adult patients seen via a telemedicine appointment for knee and/or hip osteoarthritis pain were recruited by electronic medical record (EMR) to complete surveys through the REDCap online survey platform or via pen/paper evaluating their experiences and satisfaction with telemedicine.
- Assessments included yes/no and Likert scale questions.
- Demographic information, including patient age, gender, primary location of pain, cancellation-rescheduling lag time, and distance from patient's home to the clinic building, was also collected.

RESULTS

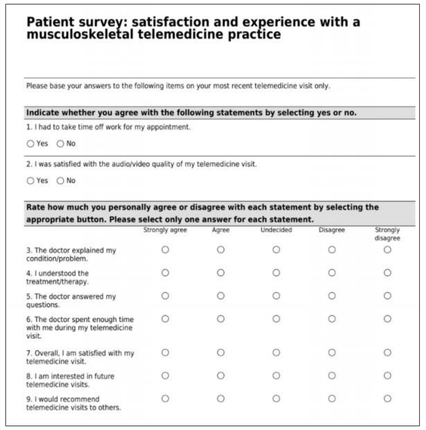
We identified 102 patients who were seen for a telemedicine visit for knee of hip osteoarthritis during the study target period. Out of these, 32 subjects completed surveys (31.3% completion rate), with a mean age of 63.2 years (standard deviation [SD] = 12.2 years).

Figure 1 displays the survey items, including yes/no question and Likert scale questions.

Table 1 displays demographic data for the surveyed population. Subjects lived an average (mean) of 14.7 miles away from clinic (SD = 16.0 miles). No subjects required an urgent in-person clinic visit after their most recent telemedicine visit. Nineteen subjects (59.4%) had been rescheduled for a telemedicine visit after a cancelled in-person clinic visit, with a mean wait time of 17 days (SD = 24 days).

Table 2 displays the results of the study population's responses to survey questions. Overall, 90.6% of subjects stated that they were satisfied with their telemedicine visit, and the majority of subjects responded favorably ("Agree" or "Strongly agree") to survey statements asking about different elements of their telemedicine experience.

Subject age (p = 0.155), gender (p=1.000), pain location (p = 1.000), video vs. phone visit (p = 1.000), new vs. established visit (p = 0.536), home-to-clinic distance (p = 0.399), or rescheduling status (p = 1.000) or lag time (p = 0.840) were not associated with differences in favorable survey answers regarding overall satisfaction with their telemedicine visit.



Patient survey: satisfaction and experience with a musculoskeletal telemedicine practice

Please base your answers to the following items on your most recent telemedicine visit only.

Indicate whether you agree with the following statements by selecting yes or no.

1. I had to take time off work for my appointment.
○ Yes ○ No

2. I was satisfied with the audio/video quality of my telemedicine visit.
○ Yes ○ No

Rate how much you personally agree or disagree with each statement by selecting the appropriate button. Please select only one answer for each statement.

	Strongly agree	Agree	Undecided	Disagree	Strongly disagree
3. The doctor explained my condition/problem.	○	○	○	○	○
4. I understood the treatment/therapy.	○	○	○	○	○
5. The doctor answered my questions.	○	○	○	○	○
6. The doctor spent enough time with me during my telemedicine visit.	○	○	○	○	○
7. Overall, I am satisfied with my telemedicine visit.	○	○	○	○	○
8. I am interested in future telemedicine visits.	○	○	○	○	○
9. I would recommend telemedicine visits to others.	○	○	○	○	○

Figure 1: Patient satisfaction and experience survey items

Variable		Number of subjects (Percent of surveyed population)
Category	**Subcategory**	
Gender		
	Male	9 (28.1)
	Female	23 (71.9)
Visit type		
	New	7 (21.9)
	Follow-up	25 (78.1)
Appointment status		
	Originally scheduled as telemedicine visit	13 (40.6)
	Rescheduled after cancelled in-person visit	19 (59.4)
Telemedicine type		
	Video	17 (53.1)
	Telephone	14 (43.8)
	Scheduled as video and switched to telephone	1 (3.1)
Primary pain location		
	Hip	3 (9.4)
	Knee	29 (90.6)

Table 1: Demographic information of surveyed population (n = 32)

Survey statement	Response	Number of subjects (Percent of surveyed population)
I had to take time off work for my telemedicine appointment	Yes	5 (15.6)
	No	27 (84.4)
I was satisfied with the audio/video quality of my telemedicine visit	Yes	29 (90.6)
	No	2 (6.3)
	Did not answer*	1 (3.1)
The doctor explained my condition/problem during my telemedicine visit	Agree/Strongly agree	30 (93.8)
I understood my treatment/recommendations	Agree/Strongly agree	31 (96.9)
The doctor answered all my questions	Agree/Strongly agree	30 (93.8)
The doctor spent enough time with me during my telemedicine visit	Agree/Strongly agree	30 (93.8)
I was satisfied with my telemedicine visit	Agree/Strongly agree	29 (90.6)
I would be interested in future telemedicine visits	Agree/Strongly agree	22 (68.8)
I would recommend telemedicine visits to others	Agree/Strongly agree	25 (78.1)

Table 2: Responses to survey assessment of subject telemedicine experience. Only "Agree/Strongly agree" percentages displayed.

DISCUSSION AND CONCLUSION

- Survey respondents expressed overall satisfaction and positive experience with seeing a physiatrist for knee or hip osteoarthritis via telemedicine visit.
- There were no significant differences in survey responses between subjects who were seen via telephone visit versus those who were seen via video visit.
- A lower percentage of subjects agreed that they would be interested in future telemedicine visits or would recommend telemedicine visits to others, despite the greater than 90% positive response to the other survey questions. One reason for this may be that by the time subjects began completing this study's surveys, clinics had begun to open, and some subjects may have preferred to follow-up in-person rather than via telemedicine despite having a positive experience with their prior telemedicine visit.
- This study did not evaluate how the experiences of patients receiving care via telemedicine compares to those patients via standard in-office appointment. Future areas of research would include comparison of patient experiences to such a control group.

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