

# Patient Satisfaction with Postoperative Telemedicine versus In-Office Visits after Hip Arthroscopy: A Prospective Observational Study Before and During the COVID-19 Pandemic

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## INTRODUCTION:

The onset of the COVID-19 pandemic in March 2020 accelerated the adoption of telemedicine-based postoperative care by orthopaedic clinics due to concerns about disease transmission during in-office visits. While several comparative analyses conducted in various orthopaedics populations have found no significant differences in patient satisfaction between telemedicine and in-office postoperative visits, patient satisfaction with telemedicine services has not been well-assessed in the hip arthroscopy population specifically. The purpose of the current study was to compare satisfaction with postoperative telemedicine visits versus in-office visits among patients undergoing primary hip arthroscopy.

## METHODS:

A prospective cohort study was conducted involving subjects  $\geq 18$  years old undergoing primary hip arthroscopy at a single center from January 2020 to February 2021. Subjects chose between a telemedicine or in-office visit for six-week follow up. Patient satisfaction after the six-week visit was assessed using an electronic survey. The primary outcome was satisfaction on a scale from 0-10. Other secondary outcomes included total duration of visit including time spent travelling to/from the surgeon's office or setting up the video call (1-20 minutes, 21-40 minutes, 41-60 minutes, 61-80 minutes, 80+ minutes), time spent with the surgeon during the visit (none, 1-5 minutes, 6-10 minutes, 11-15 minutes, 20+ minutes), and which modality the patient would have preferred, in retrospect, for their second postoperative visit. Subjects participating in telemedicine visits were required to have access to a computer, tablet, mobile phone, or other camera-equipped device capable of supporting video conferencing software as well as a reliable source of internet access. Patients were excluded if they were involved in workers' compensation claims or spoke English as a second language. Inter-group comparisons of outcomes were performed using Student's t-test, Mann-Whitney U test, or Fisher's exact test. P-values  $< 0.05$  were considered significant.

**RESULTS:** Seventy-five patients (28M, 47F) were enrolled in the study with mean age  $41.2 \pm 12.7$  years. Forty-four patients (58.7%) attended in-office visits and 31 (41.3%) attended telemedicine visits. There were no significant inter-group differences in age, sex, BMI, or ASA classification ( $p > 0.05$ ). There were no significant inter-group differences in satisfaction with overall care (in-office 9.6 vs. telemedicine 9.3,  $p = 0.08$ ) or the six-week visit (in-office 9.0 vs. telemedicine 8.0,  $p = 0.06$ ). The telemedicine group more frequently reported visits taking  $< 20$  minutes ( $p = 0.002$ ) and spending  $> 10$  minutes with their surgeon ( $p = 0.01$ ). However, 51.6% of the telemedicine group and 74.7% of the entire cohort expressed a retrospective preference for in-office visits.

## DISCUSSION AND CONCLUSION:

There were no significant differences in satisfaction scores between hip arthroscopy patients assigned to telemedicine versus in-office visits for six-week follow up, but most patients expressed a preference for in-office visits. Patient satisfaction with telemedicine care is an important metric to assess, independent of pain, physical function, and mobility, since it may influence patient satisfaction with the procedure as well as willingness to engage in telemedicine visits in the future. These factors may in turn influence the likelihood of orthopaedic practices continuing to offer telemedicine services and of insurance companies offering coverage for telemedicine visits.

Table 1. Demographic characteristics.

Variable	All subjects (N=75)	Telemedicine (N=31)	In-office (N=44)	P-value*
Age†	41.2 ± 12.7	42.3 ± 10.0	39.3 ± 15.3	0.23
Sex	M: 28 (37.3%) F: 47 (62.7%)	M: 12 (38.7%) F: 19 (61.3%)	M: 16 (36.4%) F: 28 (63.6%)	0.88
BMI	26.9 ± 5.7	25.3 ± 4.3	27.3 ± 6.8	0.06
ASA status	ASA I: 22 (29.3%) ASA II: 53 (70.7%)	ASA I: 11 (35.5%) ASA II: 20 (64.5%)	ASA I: 11 (25.0%) ASA II: 33 (75.0%)	0.13

\* Fisher's exact test for categorical variables.  
† Mean ± standard deviation.

Figure 1. A flowchart of patient enrollment in the study.

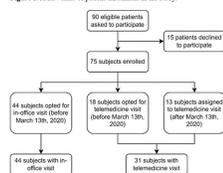


Figure 2. Patient satisfaction with telemedicine (black) and in-office (grey) visit modalities for overall care.

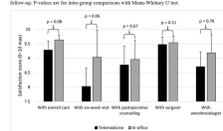


Figure 3. Duration of six-week follow-up visit between telemedicine (left) and in-office (right) visits.

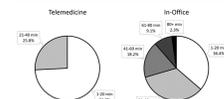


Figure 4. Time spent with the surgeon during the six-week follow-up visit between telemedicine (left) and in-office (right) modalities.

