

Interest in Telemedicine for Orthopaedic Clinic Visits in an Underserved Population

Mallory Crawford¹, Claudia Leonardi², Murphy P. Martin², Michael J. Heffernan², Anna R. Cohen-Rosenblum²

Louisiana State University Health Sciences Center School of Medicine¹, Department of Orthopaedics²



Introduction

Since the onset of the COVID-19 pandemic, telemedicine has been an increasingly popular modality for patient encounters¹, and may be especially beneficial for patients living in rural areas or with difficulty accessing transportation². However, there are many perceived barriers to telemedicine for underserved patients, including lack of internet access and lack of facility with the necessary technology^{3,4}. With the increasing access⁵ and ability to use telemedicine for orthopaedic clinic visits⁶, we felt that it was important to assess the population at our hospital. The purpose of this study was to characterize our primarily Medicaid patients' interest in utilizing telemedicine visits for orthopaedic surgery clinic visits. We hypothesized that patient interest in telemedicine would be associated with higher education level, lower age, private insurance, and access to internet.

Methods

All patients who called the multispecialty orthopaedic surgery clinic between October 2020 and February 2021 were asked to participate in the study. Those who agreed were administered a 5-question phone survey by clinic scheduling staff, which included questions on willingness to participate in a telemedicine visit, highest level of education, employment status, internet access, and social media use. Following survey completion, demographic information was collected on participants using electronic medical records. Data analysis was performed using SAS/STAT software version 9.4 (SAS Institute Inc., Cary, NC). The univariate association between willingness to use telemedicine and other variables was determined using either Chi-Square test, Exact test or logistic regression.

Results

Demographics	
Age	
Mean	49
Range	18-83
Gender	
Male	126
Female	130
Race	
Black	147
White	95
Other	13
Insurance	
None	28
Private	15
Public	213

Table 1. Patient demographics collected using EMR.

Questionnaire	
Interested in Telehealth Visit	
Yes	196
No	60
Employed	
Yes	106
No	145
Internet Access	
Yes	225
No	29
Social Media	
Yes	148
No	104
Education	
High School	178
College	46
Graduate School	9

Table 2. Questionnaire results. Five questions were asked of each participant.

Willingness to Use Telehealth by Demographics and Questionnaire Answers		
Age	Less than 40	p=0.0004
Employment Status	Employed	p=0.013
Internet Access	Have Access to Internet	p<0.0001
Social Media Use	Use Social Media	p<0.0001

Table 3. We found that patients who were younger than 40, employed, had internet access, and who used social media were more willing to have a telemedicine visit than their counterparts.

Discussion and Limitations

- 256 patients completed the survey
- Patients were predominantly female, Black, and 50-60 years old, with Public insurance
- 76.6% of all participants expressed willingness to use telemedicine for an orthopaedic clinic visit
- No significant association was observed between interest in telemedicine and sex, race, education level, and insurance type
- Patients who were younger, employed, had internet access, and used social media were significantly more willing to utilize telemedicine services.
- Our hypothesis was correct about patients who had internet access would be more likely to want to use telehealth
- Our hypothesis was incorrect in thinking that younger patients, patients with private insurance, or the patients with a high education level would be more interested in telehealth

References

1. Bokolo Anthony Jnr. Use of Telemedicine and Virtual Care for Remote Treatment in Response to COVID-19 Pandemic. J Med Syst. 2020;44(7):132. Published 2020 Jun 15. doi:10.1007/s10916-020-01596-5
2. Kichloo A, Albosta M, Dettloff K, et al. Telemedicine, the current COVID-19 pandemic and the future: a narrative review and perspectives moving forward in the USA. Fam Med Community Health. 2020;8(3):e000530. doi:10.1136/fmch-2020-000530
3. Smith A. U.S. smartphone use in 2015. Pew Research Center. Published April 1, 2015. <https://www.pewinternet.org/2015/04/01/us-smartphone-use-in-2015/>
4. Anderson M, Kumar M. Digital divide persists even as lower-income Americans make gains in tech adoption. Pew Research Center. Published May 7, 2019. <https://www.pewresearch.org/fact-tank/2019/05/07/digital-divide-persists-even-as-lower-income-americans-make-gains-in-tech-adoption/>
5. Parisien RL, Shin M, Constant M, et al. Telehealth Utilization in Response to the Novel Coronavirus (COVID-19) Pandemic in Orthopaedic Surgery. J Am Acad Orthop Surg. 2020;28(11):e487-e492. doi:10.5435/JAAOS-D-20-00339
6. Laskowski ER, Johnson SE, Shelerud RA, et al. The Telemedicine Musculoskeletal Examination [published correction appears in Mayo Clin Proc. 2020 Oct;95(10):2299]. Mayo Clin Proc. 2020;95(8):1715-1731. doi:10.1016/j.mayocp.2020.05.026

Acknowledgments

We would like to thank the UMC Orthopaedic clinic staff for their help in distributing and administering the surveys to patients. We would also like to thank Mona Chawla and Hannah Cheramie for their help in collecting the surveys and their knowledge of insurance systems.