

Healthcare System and Patient Factors in Adoption of Telemedicine

Gary Chien W¹, Trevor Cesar¹, Nathan Goharderakshan¹, Qiaowu (Zoe) Li², and Stephanie Tovar²

¹Kaiser Permanente Los Angeles Medical Center

²Kaiser Permanente Southern California Department of Research & Evaluation

March 1, 2023

Abstract

Objective: To evaluate patient and healthcare system factors in telemedicine utilization in a large, diverse population. **Data Sources and Study Setting:** Retrospective study of patient visits across Kaiser Permanente Southern California between January 1, 2019, and June 30, 2021. **Study Design:** Patient factors included age, gender, ethnicity, median household income, primary spoken/written language, marital status, and registration on kp.org. Healthcare factors included type of visit, provider age, gender, specialty, number of years in practice and primary language. **Data Collection/Extraction Methods:** Rates of utilization compared between office and virtual visits, prior to and after March 2020, with an interrupted time series and slope analysis. **Principal Findings:** There were 177,171,288 visits during the study period. There was a decrease in patient visits after March 2020 (lockdown), driven by a sharp decline in office visits. Within three months of lockdown, total visits increased until the end of study, at 2.8 million/month, compared to 2.5 million/month prior to lockdown, driven by office visits that approached pre-lockdown and high telemedicine visits. In a multivariate regression analysis, there were no significant differences in patient age, race, gender, income, marital status, language, and kp.org registration in telemedicine utilization. Providers with 6-10 years in practice, aged < 30 utilized the most telemedicine ($p=.01$). General surgery, medical specialties, OBGYN, pediatrics and psychiatry utilized more telemedicine compared to primary care, but podiatry and surgical specialties utilized less ($p < 0.01$). **Conclusions:** In a large, diverse patient population, no significant healthcare disparities were found in telemedicine utilization, contrary to what most current literature shows. Results of this study may prompt more investigation to the role of telemedicine in various populations.

Hosted file

Healthcare System and Patient Factors in Adoption of Telemedicine - 02.28.2023_ blinded.docx available at <https://authorea.com/users/591201/articles/627256-healthcare-system-and-patient-factors-in-adoption-of-telemedicine>