



Analyzing and Addressing Telemedicine Barriers Among Lubbock Medicaid Patients

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Abstract

There has been a widespread demand for virtual medicine since the COVID-19 pandemic. However, there are pertinent limitations, such as reliable internet, Zoom-capable technology, and technological literacy. Using retrospective chart review, a survey questionnaire was sent using Qualtrics Software to Medicaid patients seen at the Texas Tech Physicians Family Medicine Clinic from 2020 - 2022 with the goal of identifying potential barriers that may exist regarding telemedicine access in Lubbock, TX. More than half of the respondents (57%) reported never participating in a telemedicine visit, even though most respondents (76%) are semi-proficient with the use of technology. Almost half of respondents cited the COVID-19 pandemic as the reason why they began utilizing telemedicine (47%). Respondents did not use telemedicine because they were unaware that the service was an option or available for them specifically (43%). The underutilization of virtual medicine can, in large part, be attributed to a lack of publicity on the availability of telemedicine as a source of medical care. We sent virtual flyers to all Lubbock Medicaid patients to increase awareness and education on the benefits and practical uses of telemedicine in a wide variety of medical conditions. Additionally, we sent virtual flyers to physicians to help increase the number of practitioners offering telemedicine services. By increasing the usage of virtual medicine and diminishing the effects of associated barriers, telemedicine has the potential to create greater equity in access to health care.

Keywords: Telemedicine, Medicaid, West Texas, Survey

Background

Teleservice is how one can receive a service remotely. In the context of health care delivery, teleservice can be further broken down into several subcategories: telehealth, telemonitoring, and telemedicine. Telehealth is the delivery of services to patients by nonmedical healthcare professionals, such

as psychologists and social workers.¹ Home telemonitoring is the remote collection of data from patient monitoring devices, such as blood pressure cuffs and glucometers. Telemedicine is the delivery of remote medical care by healthcare professionals, such as physicians, nurse practitioners, and physician assistants.

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Telemedicine has many benefits that make it a favorable option for patients in contrast to in-person care. The ability to avoid the hassle of waiting rooms and the trouble of finding a parking spot at a busy medical facility makes telemedicine a convenient alternative. If a patient is forced to move to a different location, continuity of care with their long-time physician can continue with telemedicine. Even with limited time, patients are empowered to take command of their health by accessing their physician from any location with an internet connection. By reducing exposure to infectious microbes, telemedicine can reduce the transmission of communicable diseases, to which immunocompromised patients are susceptible. With the use of HIPAA (Health Insurance Portability and Accountability Act)-compliant technology, telemedicine can ensure the protection of private medical information in ways that are comparable to in-person encounters. Lastly, with transportation no longer being necessary, saving money on gas as well as time away from work makes telemedicine a more cost-effective option, which is especially important for low-income families.

Between 2019 and 2021, there was a 500% increase in the number of teleservices being offered to Texas Medicaid patients, as reported by the Texas Health and Human Services biannual report on Telemedicine, Telehealth, and Home Telemonitoring in Texas Medicaid.² This is likely a result of the COVID-19 pandemic and dedicated efforts at increasing funding and resources to telemedicine, such as the Texas House Bill 4 that passed unanimously in June of 2021.

As a result, over 3.7 million telemedicine services were delivered to Texas Medicaid patients, with the most popular diagnoses being behavioral health (304,674), respiratory disease (211,770), and abnormal laboratory/clinical findings (206,761). With reimbursement being an early concern during the pandemic, an increase of over 100 million dollars was paid to Texas Medicaid telemedicine providers between 2020 and 2021.²

Of note, the number of Texas Medicaid telemedicine providers increased from 455 in 2019 to 7,505 in 2021, representing the drastic allocation of attention and assets to telemedicine during the pandemic. There was a slight decrease in the number of Texas Medicaid telemedicine providers from 2020 to 2021 across all county types (urban, suburban, and rural), likely reflecting a reduction in the pandemic response and a steady return to previous forms of healthcare delivery. However, the number of Texas Medicaid patients receiving telemedicine continued to increase by sizable margins between 2020 and 2021, possibly representing maintained efforts at avoiding COVID-19 transmissibility and a dedicated effort by healthcare providers to offer telemedicine services.

Even with there being a large influx of Texas Medicaid patients receiving telemedicine services in response to the pandemic, the question remains if healthcare disparities exist related to telemedicine access and usage. By addressing any inequities, the number of Medicaid patients receiving telemedicine services during the pandemic can be sustained or even possibly increased. Families of low socioeconomic status, particularly Lubbock Medicaid patients, were the focus of this project. Our goal was to determine if there are any identifiable barriers to access to

telemedicine services that could then be addressed with easy-to-implement interventions.

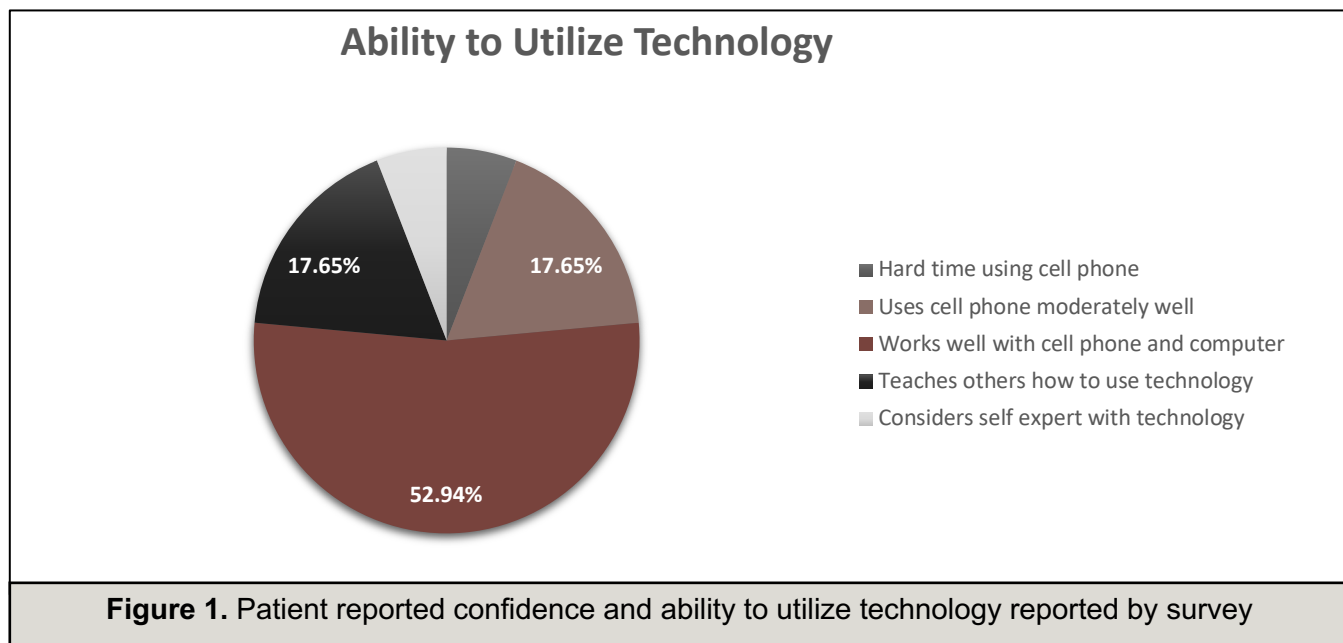
Potential barriers that have been suggested are as follows: 1. Access to reliable internet or cellular service may be difficult in certain circumstances, such as low-income families or residents of rural Texas. 2. Zoom-capable devices are expensive, making it a potential limiting factor for Medicaid patients in receiving telemedicine services. 3. Even if a Zoom-capable device is obtained, technological fluency is required to mediate the telemedicine encounter, which can be difficult for geriatric or disabled patients. 4. If the patient’s condition requires a physical exam, laboratory orders, or imaging services, an in-person encounter is required. 5. Certain providers may not provide virtual medical services, limiting their patient pool only to in-person encounters. 6. Unawareness and poor public understanding of the functions and practical uses of telemedicine could be a reason why more Medicaid patients have not tried telemedicine.

Methods

The studied demographic was Medicaid patients seen at Texas Tech Physicians Family Medicine Clinic from 2020 - 2022. A retrospective chart review was performed, and IRB approval was granted. A 15-item Qualtrics questionnaire was then sent to 6,585 Lubbock Medicaid patients through their email with options in both English and Spanish.

Results

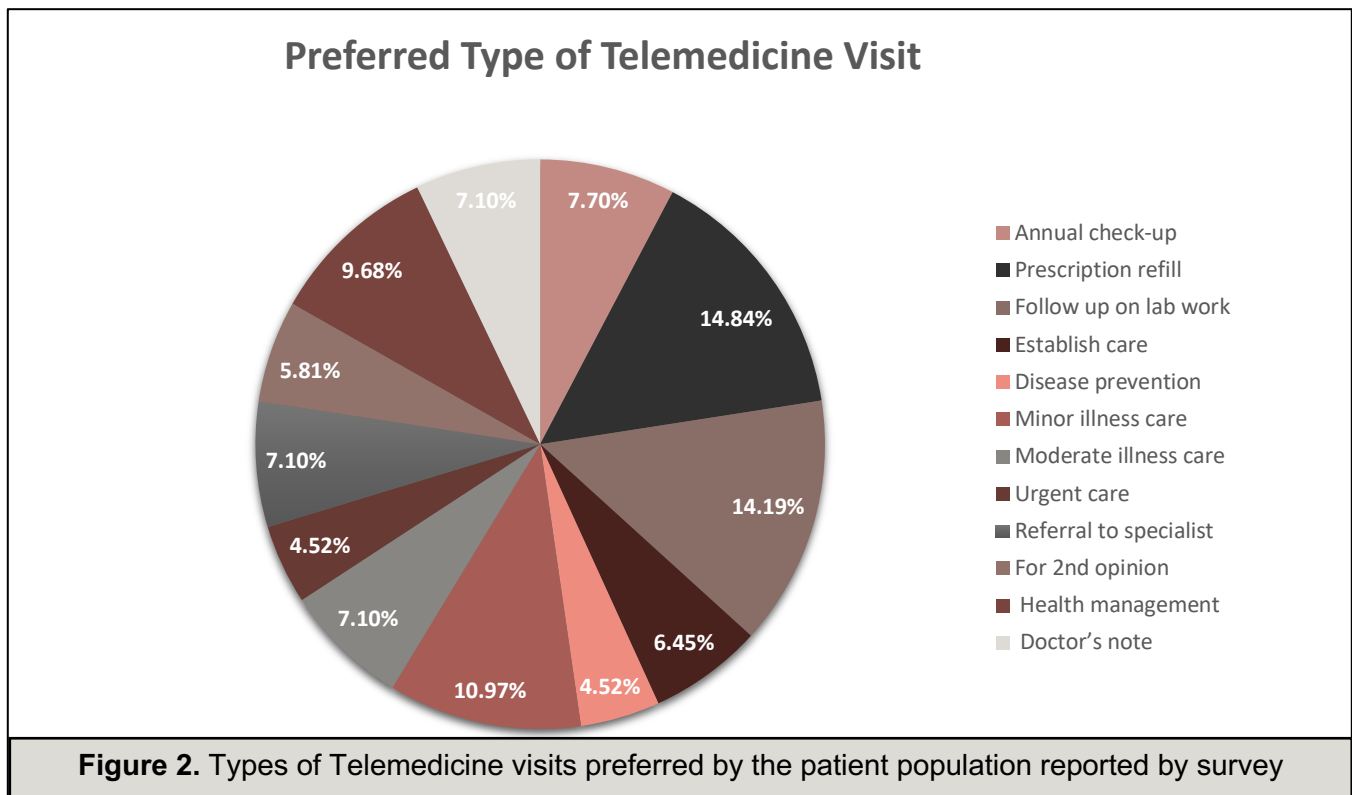
The 15-item survey had a 0.76% response rate with a total of 50 respondents that began the questionnaire. The majority of patients were English-speaking (98%) and one patient was Spanish-speaking only (2%). In terms of annual income, 69% of respondents reportedly earn less than \$15,000, 18% earning between \$15,000 - \$24,999, 7% earning \$25,000 - \$34,999, 2% earning \$35,000 - \$49,999, and 4% earning over \$75,000 annually. Over half of the patients (53%) consider themselves proficient in utilizing both a cell phone and a computer (Figure 1).



A large majority of respondents have heard about telemedicine (94%). However, less than half of patients surveyed (43%) have participated in a telemedicine visit before. Reasons for telemedicine visits included: concerns regarding COVID-19 exposure, possible COVID-19 infection, psychiatry follow-up, ability to be seen quickly, and overall convenience. Interestingly, most responses declined that COVID-19 impacted their use of telemedicine when directly asked.

Overall telemedicine experience was reported to be a mean of 9.14/10 with a standard deviation of 1.51. Most patients participated in telemedicine appointments via their cell phone devices (76%). Tablets (12%) and computers (12%) were also reportedly used. Disclosed Wi-Fi/cellular services used include Verizon, Suddenlink, Cricket Mobile, AT&T, Grande, Boost, and Sparklight.

Patients who have not utilized telemedicine before (57%) attributed their reasons to not having thought about it, not knowing it was an option, uninsured, or simply not wanting to talk on the phone. Despite this, most patients (74%) are open to using telemedicine in the future. Participants then ranked reasons to participate in telemedicine from highest priority to lowest priority. Saving transportation costs was the highest priority with 32% of respondents ranking first, followed by avoiding the waiting room (39%), avoiding the hassle of parking (39%), avoiding the hassle of finding a clinic location (26%), staying in a comfortable environment (23%), immunocompromised (32%), lack of transportation methods (39%), and unable to find childcare or miss work ranking last (68%). When asked what services patients would be willing to receive, most respondents preferred telemedicine appointments for prescription refills and follow-ups on lab work (Figure 2).



There are several limitations present in this study. The results are unlikely to be generalizable to the entire target population due to a large non-response rate (99.24%). Additionally, there is potential for nonresponse bias in survey-based research, especially with a high non-response rate. Other limitations include the inability to reach patients in remote areas with no access to the internet and the potential lack of technological literacy to be able to access the survey and respond. In a study accessing technology while also utilizing technology as the means of distribution of a questionnaire, this introduces bias in responses. Patients may have changed their email addresses or do not regularly check their emails further contributing to a high non-response rate. Furthermore, questions were intentionally formulated to combat “survey fatigue” to encourage responses. The possibility of respondents “misreading” questions or selectively leaving questions unanswered also introduces the possibility of skewed results.

Intervention

A patient-targeted flyer (in both English and Spanish) was constructed to describe telemedicine, highlight the advantages of its use, and how to schedule a visit. A QR code was included on the flyer for patients to be able to efficiently schedule appointments. For patients not familiar with QR codes, both a phone number and a website link were included to schedule virtual appointments. The flyer was distributed digitally through email as well as physically displayed in patient rooms at Texas Tech Physicians Family Medicine clinic. Because there is a limit to the number of posters and flyers located in clinic rooms, this flyer was displayed centrally on its own to increase the chance of patients taking notice.

Due to a slight decrease in the number of physicians offering telemedicine services, we also sent a specialized virtual flyer to physicians outlining the benefits for their practice and their patient base.

Conclusions

Even though questionnaire results were limited by a high non-response rate, the information obtained is an important step to better understand Lubbock Medicaid patients' attitudes and understanding of telemedicine. Future construction of a brief in-clinic electronic survey displayed at check-in would increase the response rate and obtain data that is likely to be more representative of the target population.

The timing of the questionnaire distribution is beneficial as it was sent out during the Fall of 2022, nearly 2.5 years after the beginning of the COVID-19 pandemic. Telemedicine is widely known to have experienced a drastic increase in use during the pandemic, but there is limited knowledge about whether it will continue to be a desirable option for Lubbock Medicaid patients. This survey demonstrated that COVID-19 was a reason why many patients initially participated in telemedicine services. Reported data confirms that telemedicine appears to be a desirable option for patients even post-pandemic. Surveyed patients who have used telemedicine through the clinic before reported high satisfaction with their visit experience. It is evident that the system was working well for respondents. The most significant reason reported for patients not utilizing telemedicine services was due to a lack of awareness. Future steps involve increasing clinic advertising and focusing on patient education regarding the benefits of telemedicine and services that can be offered from the first clinic visit.

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