



Tackling the Digital Divide by Improving Internet and Telehealth Access for Low-Income Populations

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INTRODUCTION

The COVID-19 pandemic has led to an increase in telehealth utilization in order to still provide care and keep patients safe by reducing contact with potentially infected individuals and stemming the spread of the virus. A digital divide already existed pre-COVID and the pandemic exacerbated it by making health care access more dependent on reliable and affordable high-speed internet and digital devices, including cell phones and other electronic devices with cameras for phone and video visits. In 2019, [22% of adults with an income of less than \\$30,000/yr did not own a smartphone](#) and [44% did not have broadband access at home](#). Without these points of access, many low-income individuals are unable to receive quality healthcare during the pandemic and forgo care. Unmanaged chronic conditions are the “[collateral damage](#)” of COVID-19 and these impacts disproportionately impact low-income families.

In order to ensure that low-income populations are not further left behind due to the pandemic, several actions need to be taken.

CONTINUE WITH AND DON'T REVERSE COVID-ERA ADVANCES.

COVID-19 has [massively increased telehealth use](#) and [increased the ability to bill for it](#), especially in [federally qualified health centers \(FQHCs\)](#). FQHCs are an indispensable resource when it comes to providing healthcare and other resources to low-income populations. It is important that we do not lose advancements in the ability to use and bill for telehealth that have been supported by emergency policy, especially as we move forward in the future post-COVID-19. These advancements have helped increase access, although more testing and research needs to be done in order to ensure efficacy. Ensuring policies will be continued to healthcare providers (as well as ensuring quality and user experience) [will encourage investment in perfecting telehealth as well as building infrastructure to ensure future access](#).

ENFORCE LEGISLATION.

There are many policies that have aided in the ability to reimburse telehealth services for FQHCs. The [FCC Over-the-Air Reception \(OTARD\) device rule](#) has also aided low-income individuals in accessing stable and reliable internet by allowing tenants to use their rooftops to install antennas for broadband access. There have been instances of private and community partnerships taking advantage of policies such as the OTARD device rule to deliver affordable access to disadvantaged communities. An example that comes out of California is [the partnership between Sail Internet and Gardner Family Health in Alviso, CA](#). However, many of these policies are not adequately enforced, disallowing them to catalyze the change they were written to create. Engaging in advocacy to increase enforcement of policies that increase internet and telehealth access for low-income communities may be an effective strategy to help close the digital divide.

[A great resource to keep track of relevant laws and policies surrounding telehealth](#) has been put out by the Center for Connected Health Policy (CCHP).

ADDRESS LANGUAGE BARRIERS/ENGAGE WITH COMMUNITIES.

Individuals with limited English proficiency [are at particular risk for being left behind or receiving inadequate care with the increased implementation of telehealth as many telehealth services are designed with fluent English-speakers in mind](#). In addition to being able to adequately communicate care through shared language, language is often a barrier to the also important goal of leveraging community resources to provide telehealth. There is a paucity of evidence about how to make telehealth work best for patients with limited English proficiency. More needs to be done to enhance communication, address communication and leverage community resources to increase the use and efficacy of telehealth.

MAKE SURE RESOURCES ARE BEING UTILIZED.

As we work together to create resources to increase telehealth access for low-income communities, it is important that we focus on their dissemination and not just their development. Underutilization of resources due to providers being unaware they exist is an all too common story of intervention implementation. When creating a resource, it is [important to also come up with a strategy to ensure relevant stakeholders will be aware of what you create, how to use it effectively, and who they can best use it with](#). This can be addressed by using principles from human-centered design from more public/private sector settings and implementation science frameworks from more academic settings to guide thinking during development.

LEVERAGE ORGANIZATIONAL PARTNERSHIPS.

One successful way that could help increase internet and telehealth access for low-income communities is directly working with private sector partners. This often includes working with internet service providers (ISPs) and providers of cellular services and mobile technologies, such as [what has recently happened in Alviso, CA](#). Creating partnerships between communities organizations/entities that engage in community research and private companies may be an effective method to make desires and evidence-based strategies a reality. Private partnerships can create access to resources and infrastructure that communities would otherwise be unable to obtain themselves, especially if they receive inadequate aid from other resources.

Nonprofit organizations can also assist in outreach, training, and creating a non-profit partnership can be the first step in building trust in a community. As a new entity entering an established community, [partnering with an organization that has already become part of that community can help accelerate trust-building, which in turn can accelerate adoption, implementation, and dissemination of key telehealth interventions](#).

Leveraging [a combination of private and nonprofit partnerships can greatly enhance the viability of attempts to increase telehealth use and access](#) in low income communities.

STREAMLINE WORKFLOWS & ENGAGE IN TEAM-BASED CARE.

Telehealth offers new opportunities and flexibility to deliver care to patients, [many clinical personnel](#) will have to grapple with shifted, rather than streamlined, responsibilities. For example, key components of an appointment (i.e. scheduling, documentation, obtaining vital signs, previsit and postvisit duties) will still need to be performed through [adjusted processes](#) on a telehealth platform. Practices and health systems must [clearly define roles](#) for traditional care team members such as physicians, nurses, and support personnel, while also developing workflows for staff such as informational technology personnel who might work more closely with the telehealth care team. As learned from models of specialty care such as [teledermatology](#) and [telepsychiatry](#), [robust templates](#) embedded into the EHR can optimize telehealth care coordination and [workflows](#) can be utilized by primary care physicians as a tool to delegate which team members will be accountable for collecting and documenting key patient information.

[Successful integration](#) of telehealth services relies on shared workload, established partnerships, and common goals for successful implementation. Any successful integration of telehealth relies on the willingness of providers and staff to [adjust key roles and responsibilities](#) to new technology. When care-team members' [fundamental needs](#) of [relatedness, competence, and autonomy](#) are satisfied, motivation to utilize new telehealth workflows will ensue. In a period of time where key clinical and support personnel in health systems and physician [practices face lay-offs](#), a commitment to these [ideals](#) at the foundation of any workflow redesign is critical to optimizing telehealth implementation and team-based care.

ADDRESS HOUSING INSTABILITY.

Patients who utilize shelters and homeless services have [disproportionately high rates](#) of chronic illness and are at [increased risk](#) of COVID-19 exposure due to crowding and lack of proper ventilation in many shelters. Homeless patients are more likely to have no or [limited access to the internet and high turnover](#) in phones and/or phone numbers compared to low-income patients of any age. By [facilitating telehealth appointments](#) through local supportive housing, shelters, and community drop-in centers, providers and health systems can provide their patients with [dependable access to mobile phones](#).

Because patients facing homelessness and housing instability face higher turnover in phones and phone numbers, providers might consider expanding offerings for [open access appointment scheduling](#). By allowing for same day telehealth appointments, this intervention can lower barriers for individuals who have limited or often interrupted access to mobile phones and internet. Finally, health systems and providers must consider how to [adapt their telehealth strategies](#) for older adults experiencing homelessness, who are more likely to experience impairments in [activities of daily living and executive functioning \(ADLs\)](#) that decrease the likelihood of mobile phone use.

CONCLUSION

In conclusion, the increase in telehealth services due to COVID-19 has exacerbated the existing disparity in internet access within low-income communities. The barriers to access must be met with the appropriate modifications to policy and management. COVID-era policy adjustments must be enforced and exist post-COVID-19 to observe the progress made. While policy improves telehealth billing for providers, it is important to consider changes to Telehealth platforms to enhance patient accessibility. Telehealth platforms must be designed with the community they are serving in mind; whether that be one with language barriers or housing instability. By partnering with community organizations, private companies can bridge the gap between provider and patient. Once created, it is important to keep the relevant parties informed about the new Telehealth resources and the best way to apply them, preventing the underutilization of resources. While implementing new technologies, it is important to shift workflow design to accommodate the new technology. Flexibility in process and team responsibilities can facilitate streamlined telehealth integration. Low-income patients are frequently left behind when it comes to telehealth access and design and they must be considered as we advance in telehealth implementation.

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Aaron A. Tierney is a PhD student in Health Policy (Organizations and Management specialty field) at the UC Berkeley School of Public Health and researcher at the UCSF Center for Clinical Informatics and Improvement Research. He earned his B.A. in Psychology at Columbia University as a Kluge Scholar and a Frank W. Chambers Scholar, where he focused his research on cognitive aging and illicit drug use. He previously worked for Stanford University School of Medicine and the Palo Alto VA Health Care System, using implementation science methods to create interpersonal interventions in primary care settings to improve the relationship between doctors and patients, as well as shared medical appointments and support groups for veterans with diabetes. His current research examines the impact of implementing health information technologies on patient outcomes and clinician professional burnout in diverse care settings.

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Martin J. Kyalwazi is a health policy analyst for the Center for Healthcare Organizational and Innovation Research and (CHOIR) and the California Initiative for Health Equity and Action (Cal-IHEA) at the UC Berkeley School of Public Health. He earned his Neuroscience at Columbia University and has previously worked with the New York City Department of Health and Mental Hygiene, Ariadne Labs of Harvard T.H. Chan School of Public Health and Brigham and Women's Hospital, and ICAP at Columbia's Mailman School of Public Health. His research interests include examining the impact of broad-based payment and delivery system reform on cost, chronic and transitional care management, and quality of primary care.

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Anna Lockhart is an undergraduate student pursuing a Bachelor of Science in Anthropology with a minor in Spanish at UCLA. Her work at COANIQUEM, a burned children's center in Santiago, Chile, inspired her to pursue a career aiding underserved populations, specifically increasing access to health care. Her research interests include bridging the gap between disparities in low income and racially segregated communities throughout health care systems. She strives to advocate for increased transparency of health care institutions to better serve those in underserved communities.

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