Telehealth's Double-Edged Sword: Bridging or Perpetuating Health Inequities?

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INTRODUCTION: COVID-19, TELEHEALTH, AND THE DIGITAL DIVIDE

Healthcare inequities among Black, Indigenous, and People of Color (BIPOC),[1] immigrant, and low-income communities are driven in large part by inadequate access to healthcare.[1–4] Telehealth, defined as the "use of electronic information and telecommunication technologies to provide healthcare," offers the promise of increased access to medical care, especially when barriers to care include resource and time scarcity.[5,6] Prior to the COVID-19 pandemic, telehealth encountered multiple barriers to use, including reimbursement, cost, and liability concerns.[7,8] The pandemic forced the dissolution of these barriers for health systems to rapidly deploy telehealth technology, enabling health systems an opportunity to reduce health inequities. However, despite its promise, telehealth has become a "*double-edged sword*": the technology with potential to reduce health inequities by increasing access to healthcare also holds the capacity to exacerbate structural inequities.

A key component of these structural inequities is the digital divide, driven in part by "digital redlining," a system whereby communities that suffer from structural racism also suffer from barriers to technology access, such as incompatible devices and inadequate bandwidth.[9–11] The importance of digital

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[1]*Black, Indigenous, People of Color (BIPOC) is a term to make visible the unique and specific experiences of racism and resilience that the Black/African diaspora and indigenous communities have faced in the structure of racism within the USA.*

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capacity—accessing education, searching for jobs, engaging in healthcare—is well documented and is actively being addressed by federal policy. In November 2021, Congress passed the $1.2 trillion Bipartisan Infrastructure Framework to make historic investments in, among other things, universal broadband infrastructure.[12] As researchers and frontline primary care clinicians at a large safety net hospital, our data and observations indicate that while addressing digital access is *necessary*, it is *not sufficient* in advancing the virtual care that can mitigate health inequities. In this commentary, we build beyond the important theoretical framework of digital redlining and unpack two additional barriers that need to be addressed in order to achieve more equitable telehealth: (1) digital fluency, the ability to use digital tools efficiently and effectively, and (2) the capacity for health advocacy, patients' ability to advocate for their own health needs. Without addressing these critical, less-often-discussed elements of telehealth implementation, it is our belief that telehealth will fall short of its promise and, rather than mitigate health inequities, will serve as a double-edged sword—perpetuating health inequities in the very communities that stand to benefit most from its implementation.

DIGITAL FLUENCY

Effective virtual care is dependent upon digital fluency. To be "fluent," one must have the ability to engage with all aspects of digital technologies from accessing the internet to navigating telehealth applications, and performing basic troubleshooting.

In our own health system, we have found a uniform lack of digital access across races in this low-income population (approximately 80% of our patients live below 200% of the federal poverty limit), and a racial difference in engagement with video telehealth.

From November 2020 to May 2021, all patients scheduling appointments were asked: (1) *Do you have a smartphone or computer with a camera and microphone?* and (2) *Is that*

device connected to the internet? Of the respondents, 21% of Black/African American patients, 20% of Hispanic/Latino patients, and 22% of White patients reported lacking access to a connected device with a camera or microphone. However, while 67% of White patients opted to schedule their telehealth visits by video, only 60% of Black and Latinx did. All groups had fewer telehealth visits completed by video than scheduled, but a racial inequity persisted: 47% of virtual visits for White patients and 40% of virtual visits for Black and Latinx patients were completed by video.

In trying to understand these disparities, we interviewed members of patient-care teams (results forthcoming) who commented on instances of converting appointments scheduled as video into telephone visits. In many cases, despite having the digital access to participate in a video visit, patients often were unable to successfully connect to their provider over video, illustrating the importance of digital fluency. For patients who were able to connect to video visits, many indicated that it was only possible with the help of family members, friends, or even the health center's medical assistants.

Frontline staff identified key barriers to our patients' digital fluency: language (despite extensive interpreter services, they are not trained to assist with troubleshooting technology), age, education levels, and employment status. Our staff's perspectives support literature that indicates that individuals with lower health literacy also tend to have lower digital skills, and that lower health literacy is, in turn, driven by educational attainment, being a minority, limited English proficiency, lower literacy levels, and other measures of lower socioeconomic status.[13,14] Without addressing the digital fluency of the community served, patients with lower health literacy will not be able to effectively engage in the very delivery channel that could reduce their existing healthcare access and outcome disparities.

CAPACITY FOR HEALTH ADVOCACY

The capacity for health advocacy is critical for creating a more equitable health system. Health advocacy depends upon the skills, knowledge, and time of medical teams, patients, and their support systems to address a patient's health-related needs. The Patient Centered Medical Home model was built to expand the healthcare team's capacity for advocacy through its key tenets of patient-centeredness, coordinated care, and accessible services.[15]

Telehealth holds the promise of building upon this medical home model. It allows patients greater control over their own time and promotes an expanded meaning of "home" by improving accessibility of services. Increased access resulting from removing travel time to appointments and expanding operating hours can be critical for patients where competing priorities (e.g., balancing multiple jobs with inadequate dependent care) present barriers to seeking care. Telehealth

provides further insight into the health needs of a patient, giving the provider a look into a patient's environment. Telehealth can even create and expand a "virtual" care team, including caregivers and family members from distant geographies.

Despite telehealth supporting the possibility of greater health advocacy, it also imposes several challenges. As clinics developed new telehealth workflows in response to the pandemic, health advocacy to address needs such as behavioral health, housing, transportation, and food significantly diminished. In traditional medical homes, co-located medical assistants (MAs), community health workers (CHWs), and behavioral health (BH) clinicians have been integral to identifying, addressing, and advocating for patient needs, specifically through "warm handoffs" from the primary care physician (PCP). However, these critical team members were not involved in telehealth early in the pandemic—leaving the care to the dyad of patient and PCP. This diminished both the patient's and physician's ability to advocate for a patient's health needs. Additionally, appointments were only offered if the provider was actively engaged with the patient or patients reached out for care. This led to many instances where patients either delayed care (e.g., patients with diabetes waiting for a year to be seen) or forwent care all together (e.g., patients with opioid use disorder not seen for buprenorphine refills), resulting in dire health consequences.[16]

It is only recently that virtual rooming with MAs has attempted to recreate that touch point.[17,18] However, telehealth platforms have still not been fully adapted to create a space whereby all the important advocates for a patient's health, including CHWs, BH specialists, and pharmacists, interact in a way that best supports and advocates for a patient. Telehealth should not be just a virtual version of the physician-patient portion of an in-office visit, it holds greater promise than that; certain elements must be adapted to effectively deliver patient-centered care via telehealth.

DIGITAL ACCESS, DIGITAL FLUENCY, AND CAPACITY FOR ADVOCACY: CRITICAL FOR EQUITABLE TELEHEALTH CARE DELIVERY

Despite telehealth's potential to increase access to and enhance comprehensive healthcare, it will continue to exacerbate historic and present-day health inequities without specific health policy changes. Digital access to devices and broadband is a necessary, but insufficient, foundation to address healthcare access disparities. To provide quality and equitable care through telehealth, policies must be enacted that (1) ensure adequate digital fluency for patients and providers and (2) provide infrastructural support for patients' health advocacy. Further, it is not enough for systems to address one of these barriers alone. We posit that each of these key factors work in synergy with one another; when any of these

needs are absent, the value and promise of equitable telehealth degrade.

Our experiences working at a safety net hospital point to the need for a three-pronged strategy to reduce digital health inequities: (1) create federal and state policies to operationalize telehealth infrastructure; (2) establish national standards for healthcare access portals to deliver a consistent access experience; and (3) support patients and families during the adoption of these technologies. This strategy only works when reimbursement and regulatory barriers are also addressed.

Federal and state policies need to be developed to eliminate broadband infrastructure disparities for telehealth. While current federal efforts are critical, they are short-term solutions; the $3.2 billion Emergency Broadband Connectivity Fund can only be used during the duration of the state of emergency.[19] State-level policies such as the Massachusetts Lifeline program provide either phone or internet services at low cost, but not necessarily both.[20] The 911 Act, on the other hand, created a nationwide, seamless communication infrastructure, and established policy for underwriting the cost of accessing emergency services.[21] A similar act is needed to establish national infrastructure for telehealth access, whereby cellular spectrum or broadband bandwidth is reserved specifically for healthcare services; access to healthcare personnel (similar to public safety officials) would be consistently available to anyone with a connectable device.

Today, anyone can access care by walking into an emergency room, but when it comes to telehealth, patients have to use a number of proprietary portals and platforms that are health system specific. During the pandemic, patients had to learn multiple technology platforms ranging from commercial off-the-shelf platforms such as Zoom to EHR portal–connected telehealth systems. When our patients transition their insurance coverage, they have to rediscover how to use technology to access care. Creating national standards for these platforms (e.g., accessible by browser or app; easily engage other parties such as family, CHWs, or interpreters; support physical privacy) and best practices for digitally engaging patients in their care creates a consistent patient experience that addresses key barriers, supports the need for a team approach to health advocacy, and allows health systems to create innovative, value-added delivery models such as virtual agents.

Finally, health systems must invest in capabilities for training patients, family members, and healthcare teams to use these technologies. It is not sufficient to hand patients a device. In the same way companies have created "Genius Bars®" to offer troubleshooting support, health systems should also offer extensive and efficient support services for patients lacking the digital fluency to navigate telehealth platforms. Additionally, knowing when to access telehealth is a life skill that can be taught through the educational system, building on life skills such as calling 911.

Our experience has taught us that technology access is a social determinant of health (SDOH), with implications for access to address healthcare and other SDOH. We need to establish standards for patient experience when using telehealth. The three-pronged approach of creating federal and state policies to democratize access to telehealth, establishing platform standards for accessing telehealth, and supporting societal and health system investments to increase health literacy and technology fluency can begin to address the disparities in telehealth engagement.

CONCLUSION

The COVID-19 pandemic further exacerbated access to appropriate care by exploiting the pre-existing digital divide and highlighting the effects of digital redlining.[22–26] As it is currently structured, telehealth builds upon a legacy of unequal access to broadband infrastructure, digital devices, and holistic care team models. These barriers perpetuate the structural inequities (such as redlining) that have resulted in current healthcare access and health outcome inequities in BIPOC communities. Nevertheless, these barriers are not insurmountable. Implementing the above strategies would promote equitable virtual healthcare delivery models and are of the highest priority in moving healthcare forward.

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Declarations:

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