

# Beyond COVID-19: The State of Telehealth Equity and Best Practices in Underserved Populations

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**Abstract:** Telehealth is now a fundamental health approach to address health-related needs in a way that is consistent with the restrictions imposed by the coronavirus pandemic (COVID-19) globally.

COVID-19 is causing the world to embrace telehealth like never before. The state of telehealth among vulnerable populations globally provides best practices and examples for telehealth implementation. From live-interactive video conferencing to remote patient monitoring, many different types of care settings benefit from telehealth technology.<sup>1</sup> In underserved populations, particularly low-income urban and rural US, African American communities, and developing countries, telehealth can help expand access to health care by connecting patients to pro-

viders and services from a distance while promoting patient-centered care.<sup>2</sup> With improved widespread broadband connectivity and large use of mobile phones and social media in underserved populations, the opportunity to grow telehealth seems ripe and exponential. To combat the COVID-19 outbreak and health disparities in vulnerable communities, offline telehealth and mobile social media should be safely expanded and normalized.

## The US and Telehealth

One fifth of Americans live in rural areas and are at increased risk of losing access to some type of health care.<sup>3</sup> Without sufficient capacity due to provider recruitment/retention difficulties, low patient volume, or inadequate local resources to provide access to crucial services, rural communities are not adequately equipped to address their unique health needs.<sup>4</sup> Low-income populations in cities live in poverty with few affordable healthy alternatives for food and diet (food deserts), and difficulty accessing quality health-care facilities and telehealth services. Hospital emergency rooms and urgent care centers are often utilized for primary care, which lead to hefty patient expenses. These obstacles inhibit this vulnerable population from seeking initial and follow-up care.<sup>5</sup> Therefore, the ability to receive care in rural and low-income urban communities that avoid long travel times and exorbitant costs are extremely valuable. Telehealth expands access to services and addresses health-care disparities including those based on socioeconomic status, geographic isolation, an aging population, and race and ethnicity. With greater acceptance of health-care delivery through virtual connections, the utiliza-

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tion of telehealth services has dramatically increased in the US.

In rural Maryland, Frederick Memorial Hospital has launched a remote patient monitoring telehealth platform to improve care management for chronically ill patients. Before the COVID-19 pandemic, the program had decreased ER visits and cost of care by half, and reduced hospitalizations by nearly 90% among chronically ill patients.<sup>6</sup> In addition, enrolled patients receive a tablet with mHealth software and connectivity to Bluetooth-enabled digital health devices; hospital care providers collect, monitor, and communicate information to their patients through video, phone, or text. This initiative is successful and enables providers to identify health issues before they become emergent.<sup>7</sup>

online-offline focused plan should play a central role in ensuring underserved communities can routinely access the care they need through telehealth.

On April 22, 2020, the Health Resources and Services Administration (HRSA) at the U.S. Department of Health and Human Services (HHS) received nearly \$165 million to combat the COVID-19 pandemic in rural communities. Some of this funding is earmarked to support 14 HRSA-funded Telehealth Resource Centers (TRCs) for telehealth technical assistance to help rural and underserved areas during the pandemic.<sup>11</sup> Additionally, the US Centers for Medicare & Medicaid Services (CMS) has pledged to expand Medicare's telehealth benefits to cover emergency needs. Under this provision, healthcare providers in a physician's office, hospital, nursing home or rural health clinic, as well

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Philadelphia's Jefferson Health Hospital uses Jeff-Connect telemedicine platform to successfully cut health care costs. The program has found new utilization of the platform was uncommon because most health concerns could be resolved in a single consultation. Each Jeff-Connect visit is a \$49 flat fee, leading to cost savings ranging from \$300 to more than \$1,500 for 650 patients.<sup>8</sup> Before the coronavirus pandemic, no insurer covered Jeff-Connect charges, but that has since changed. Now, insurers are covering the telemedicine bills. This serves as a cost prevention measure and enables urban-based patients to participate in a health-care system they would not otherwise.<sup>9</sup>

Unfortunately, in the wake of the COVID-19 outbreak, barriers to widespread use of telehealth still remain. Many factors such as statutory and regulatory restrictions on how Medicare covers telehealth, inadequate broadband connectivity, cross-state practitioner licensure hurdles, and cost of equipment acquisition and maintenance have been illuminated during this pandemic. According to the Federal Communications Commission (FCC), 34 million Americans still lack access to quality broadband and affordable infrastructure that impedes health care delivery.<sup>10</sup> Given the shortage of health and medical resources, a mixed

as from their own homes can offer telehealth to Medicare beneficiaries, of whom 23% are rural Medicare beneficiaries.<sup>12</sup>

Recently, Congress also passed the \$2 trillion Coronavirus Aid, Relief, and Economic Security (CARES) Act, allocated \$200 million for the FCC to expand telehealth services nationally. This monetary support allows for the purchase of medical devices and telecommunications equipment to enable remote care. An additional \$100 million from the Universal Service Fund administered by the FCC will finance the Connected Care Pilot program to expand connectivity for health-care providers.<sup>13</sup> This federal funding recognizes that telehealth plays a significant role in the response to COVID-19 and health care resilience in rural and low-income urban US populations.

### **African Americans and Telehealth**

There is a critical need to understand how African Americans perceive health services and digital solutions. Current research on routine medical care suggests that African Americans are less likely to engage in health-seeking behavior. While health insurance coverage can play a role, other factors such as low trust in providers, high stress, high daily discrimination,

and burden of lifetime discrimination influence this behavior.<sup>14</sup> Notably, only 8% of adults over 35 years old in the US have received all high-priority, appropriate clinical preventive services recommended for them.<sup>15</sup> Therefore, the US generally does poorly with individuals accessing clinical preventive services. Solutions to help get individuals to access important preventative services, particularly those covered by insurance, are key.

Smartphone use is widespread in the US at 81%, with the share of African Americans owning them at a similar level.<sup>16</sup> Social media use among African Americans is high and also reflects the rate of use among US adults at 69% vs. 72%, respectively.<sup>17</sup> At the same time, African Americans are less likely to report owning a home desktop or laptop computer (58% vs. 82% for Whites) or having high speed internet at home (66% vs. 79% for Whites).<sup>18</sup> As a result, African Americans tend to rely more heavily on their smartphones for accessing the internet, for example, 23% of Blacks are “smartphone only” internet users — meaning they lack traditional home broadband service but do own a smartphone. Meanwhile, 12% of Whites are in this “smartphone only” internet category.<sup>19</sup> With these differences in reliance on smartphones for internet access, it is not surprising that there are racial and ethnic differences in how individuals use mobile technology.

Data shows that African Americans are more likely than whites to use their phone to seek information about a health condition (67% vs. 58%).<sup>20</sup> The prevalence of online health information-seeking, and existing health disparities inspired an examination of health information on the internet targeted at African Americans; it suggested the importance of not just access to information, but the significance of quality in helping to address the digital divide.<sup>21</sup> Social media can provide health consultations or appointments for patients, instant non-contact doctor-patient communication, quick decision-making, and follow-up services. High telehealth utilization acceptance among African American women suggests the need for additional research into its use, affordability, accessibility, and convenience going forward.<sup>22</sup> Coupled with the high ownership of smartphones and underrepresentation in clinical trials and research studies, African Americans are in a unique position to be recruited into eHealth and mHealth interventions. “According to World Health Organization, eHealth is the cost-effective and secure use of information and communications technologies in support of health and health-related fields; and mHealth is the use of mobile and wireless technologies to support the achievement of health objectives. A systematic review of African Americans’ participation in such studies revealed low

representation and the need to engage African Americans by going beyond a one-size fits all approach.<sup>23</sup> The increased likelihood of seeking health information and services through mobile means is promising for African Americans, especially in light of studies that have demonstrated the efficacy and impact of mobile health programs grounded in behavioral theory to effect changes in beliefs among all who seek health services.<sup>24</sup>

### Telehealth Global Implementation and Its Future

The emergence of telehealth has aided an increase in access to care. Typically, a conversation via social media concerning health begins with a user contacting a health provider or the health provider providing information about acquired symptoms via mobile application. Thereafter, the mobile application or the health provider acknowledges the inquiry by providing a response, which may include one of the following: (1) a request for a photo which captures the problem described; (2) a recommended course of action or treatment; or (3) a referral or transfer to visit a clinic or hospital. A user, in sharing such individualized health information, avails oneself to privacy and data protection concerns that lead to the need for protective measures.<sup>25</sup>

Nonetheless, nations must strike a balance between the positive effects and the safeguards to implementing telehealth through policy and legislation. Globally, privacy and data protection laws influence how mHealth applications are developed.<sup>26</sup> In the United States, consumers are protected by health privacy laws at both the federal and state levels. The US has made efforts to exceed the parameters of protecting health information in health-care settings by implementing the use of supplemental upstream protective methods in addition to the Health Insurance Portability and Accountability Act of 1996 (HIPAA),<sup>27</sup> a downstream protective method. In other words, there is a chain of policies from health-care providers to the state government to federal government and so forth.

Although HIPAA and additional protections provided by state law exist in the US, resource-constrained areas face significant barriers in the implementation of mHealth applications in the absence of privacy and data protection laws. South Africa has taken the lead in Africa in its efforts to recognize the right to privacy in healthcare and telehealth in part to its thriving telecommunication industry.<sup>28</sup> Nonetheless, challenges including cost, education, and cross-cultural perspectives of the right to privacy persist. Many other nations are forced to either diminish health privacy laws to address emergency circumstances or simply continue

using unregulated and unprotected telehealth applications. The U.S. Department of Health and Human Services (HHS) has issued rulings to address the immediate needs of COVID-19, broadening the scope of providers that may offer services.<sup>29</sup> Additionally, HHS has “relaxed” HIPAA requirements allowing for the use of devices and systems such as Skype which would otherwise be prohibited. These measures risk violating patient privacy when health professionals exceed their privileges with patient medical care data.

In the first quarter of 2020, Nigeria ranked 6th among the top 20 countries with the highest number of internet users.<sup>30</sup> The use of mHealth through informal platforms such as WhatsApp has become more common.<sup>31</sup> Stigmas associated with diagnoses of diseases such as HIV and sickle cell disease and natural cure beliefs have led many to rely on social media platforms. Currently, new mothers have formed groups on Facebook Messenger and WhatsApp to exchange information on postnatal care in order to learn how to properly feed and clean their newborn babies. Such support groups assist in risk reduction of disease and infection in youth. These groups also provide mothers in remote areas access to a doctor, who may be located far away. Not only are patients using these platforms, but health professionals are using these networking tools to disseminate information to their patients and amongst provider team members in hospitals or during emergencies.<sup>32</sup> Sessions facilitated by health professionals combat potential advancement of harmful misinformation.

In underserved populations, the widespread use of telehealth can deliver quality health care by connecting providers and services to patients remotely. Despite the benefit and convenience of telehealth, sharing health information offline, on social media, and via mobile increases privacy and data protection concerns. As immediate COVID-19 concerns encourage greater telehealth access, safe and uniform implementation is necessary to combat the COVID-19 outbreak and general health disparities going forward. Studies on understanding how to fully engage underserved populations in telehealth are critical to expanding equity in telehealth usage.

#### Note

The authors have no conflicts to disclose.

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